TEAM BUILDING AND PRODUCTIVITY OF SMALL AND MEDIUM ENTERPRISES IN SOUTH EAST NIGERIA

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Abstract

The study investigated team building and productivity of small and medium enterprises in South Eastern Nigeria. It was conducted to ascertain the relationship between brainstorming, Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis and productivity. The study adopted the survey research design.655 respondents were sampled for their opinion on the subject matter. Data were obtained from both primary and secondary sources. The purposive sampling technique was adopted in the study. The Cronbach Alpha statistic was used to obtain a value of 0.77 as the instrument reliability ratio. Data analysis was carried out using descriptive statistics and correlation analysis. The results indicate that brainstorming enhanced output quantity; brainstorming boosted input quantity; SWOT Analysis improved output quantity; SWOT Analysis beefed up input quantity in small and medium enterprises in South Eastern Nigeria. It was concluded that productivity improves greatly whenever brainstorming and SWOT analysis are effectively employed for problem solving in small and medium enterprises. It was recommended that employees in small and medium enterprises should always partner their management by making themselves available for brainstorming for enhanced input quantity. Organizations should consistently evaluate their strengths, weaknesses, opportunities and threats so as to be always strategically positioned for improving output quantity.

Keywords*: Team building, Brainstorming, SWOT Analysis, Productivity, Small and Medium Enterprises*

Introduction

Background of the Study

Team building is important for enhancing corporate productivity. Team building according to Demir and Eubanks (2012) is the ability to identify and motivate individual employees to form a team that stays together, works together and achieves together. There are various reasons for team building and according to Herdez and Mann (2009), they include communication and working better together, collaboration and the fostering of innovation and creativity; celebration,

team spirit, fun, and motivation; competition and bragging rights; teamwork and boosting team performance and networking, socializing and getting to know each other better.

This study concentrates on the following team building skills: brainstorming and SWOT analysis. According to Emera (2021), for decades, people have used brainstorming to generate ideas and to come up with creative solutions to problems. Brainstorming combines a relaxed, informal approach to problem solving with lateral thinking. It encourages people to come up with thoughts and ideas that can, at first, seem a bit crazy. Some of these ideas can be crafted into original, creative solutions to a problem, while others can spark even more ideas. This helps to get people unstuck by "jolting" them out of their normal ways of thinking.

In team building, brainstorming provides a free and open environment that encourages everyone to participate. Quirky ideas are welcomed and built upon and all participants are encouraged to contribute fully, helping them develop a rich array of creative solutions (Emera, 2021). Indeed, Brendan (2021) opines that brainstorming is the bread and butter of ideation. The rules of brainstorming include: defer judgement, encourage wild ideas, build on the ideas of others, stay focused on the topic, allow one conversation at a time, be visual, and go for idea quantity. Ideation is about shared invention. Attaching a single person to a single idea hinders collaboration and greatness. Brainstorming is therefore a group creativity technique by which efforts are made to find a solution for a specific problem by gathering a list of ideas spontaneously contributed by its members.

Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is another team building skill examined in this study. Grant (2020) defines SWOT analysis as a framework used to evaluate a company's competitive position and to develop a strategic planning. SWOT analysis assesses internal and external factors, as well as current and future potentials. A SWOT analysis is designed to facilitate a realistic, fact-based, data driven look at the strengths and weaknesses of an organization or an industry. The organization needs to keep the analysis accurate by avoiding pre-conceived beliefs or gray areas and instead focus on real-life contexts. Identifying core strengths, weaknesses, opportunities and threats lead to fact-based analysis, fresh perspectives and new ideas. SWOT analysis works best when diverse groups or voices within an organization are free to provide realistic data points rather than prescribed messaging (Grant, 2020). Also, Parsons (2021) argues that strengths and weaknesses are internal to the firm. Opportunities and threats are external to the firm.

It is a possibility that brainstorming and SWOT analysis team building skills may improve the productivity of manufacturing firms. Productivity is a ratio between the output volume and the volume of inputs. Shauna (2018) is of the view that when people talk about workplace productivity, they refer largely to how much work is accomplished in a particular work environment, over a particular period of time. In the context of this study, productivity which is conventionally, the ratio of inputs to the quality and quantity of outputs, is the use of brainstorming and SWOT analysis to boost output quantity and input quantity.

Inputs are the resources invested in accomplishing a task, and typically include time, money and effort. Process refers to what is done in order to accomplish a task. The output is obviously, the accomplishment itself (Cragg, 2017). Whiting (2020) is of the view that input is the process of taking something in. For instance, when a company takes in a raw material to make a finished good, it is receiving an input. Output is the exact opposite, in that it is the process of sending something out. When a company finishes a product, it might ship it to a customer, and the product would be an output. This study provides a vital opportunity to the researcher to bridge existing research gaps in the relationship between team building skills and business productivity in small and medium enterprises in South Eastern Nigeria.

Statement of the Problem

Productivity could be enhanced by the ability of firms to apply team building techniques when faced with production problems. Previous studies accessed by the researcher in the area of team building never examined how brainstorming and SWOT analysis impacted on output quantity and input quantity in the Nigerian small and medium enterprises. This situation presents a wide research gap. Jacob, Sababa and Murna(2016) investigated effect of brainstorming learning strategy on Junior Secondary School Students' academic achievement in Social Sciences in Yola Educational Zone, Adamawa State, Nigeria. The study was focused on the education sector while this present study focuses on small and medium enterprises. Also, Anshaj (2018), handled 'a SWOT analysis of Shell Nigeria and the role of its business environment towards CSR'. The study was based in the oil sector while this present study is on the small and medium enterprises. Again, Babalola and Tiamiyu(2013) examined 'SWOT analysis of Nigeria business environment'. Their study is based on the public sector while this present study concentrates on the private sector. None of these studies investigated the relationships which this present study examines as can be seen in the objectives of this present study.

Also, Kim, Choi, Sung, and Park (2018) X-rayed 'the role of problem solving ability on innovative behaviour and opportunity recognition in university students in Korea. This present study focuses on Nigeria with different variables and indices. The present study investigates how brainstorming and SWOT analysis may influence output quantity and input quantity. Again, Abosode and Adesanya (2017) handled 'contributions of self-efficiency and problem-solving skills on secretaries' job performance in Ogun State Public Sector but this present study focuses on Nigeria small and medium enterprises.

Objectives of the Study

The major objective of the study is to investigate the relationship between team building and productivity in small and medium enterprises in South East Nigeria. The specific objectives include to:

i.   examine the relationship between brainstorming and output quantity.

ii. determine the relationship between brainstorming and input quantity.

iii. investigate the relationship between SWOT analysis and output quantity.

iv. determine how SWOT analysis affects input quantity .

Research Questions

Based on the objectives of the study, the researcher developed the following research questions:

i.   What is the relationship between brainstorming and output quantity?

ii.   To what extent does brainstorming influence input quantity?

iii.   To what extent does SWOT analysis influence output quantity?

iv.   What is the relationship between SWOT analysis and input quantity?

Hypotheses

In other to answer the research questions, the researcher developed the following hypotheses:

H_{01}:   There is no significant relationship between brainstorming and output quantity.

H_{02}:   Brainstorming does not significantly affect input quantity.

H_{03}:   SWOT analysis does not significantly influence output quantity.

H_{04}:   There is no significant relationship between SWOT analysis and input quantity.

Scope of the Study

The study concentrates on the following organizations in South Eastern States of Nigeria: Chisco Transport Nigeria Limited, Owerri; Jeobatex Group Limited, Aba; Innoson Nigeria Limited, Nnewi; Indicel Solar, Enugu and Exe Rome Oil Palm, Abakiliki. These constitute the geographical scope of the study.
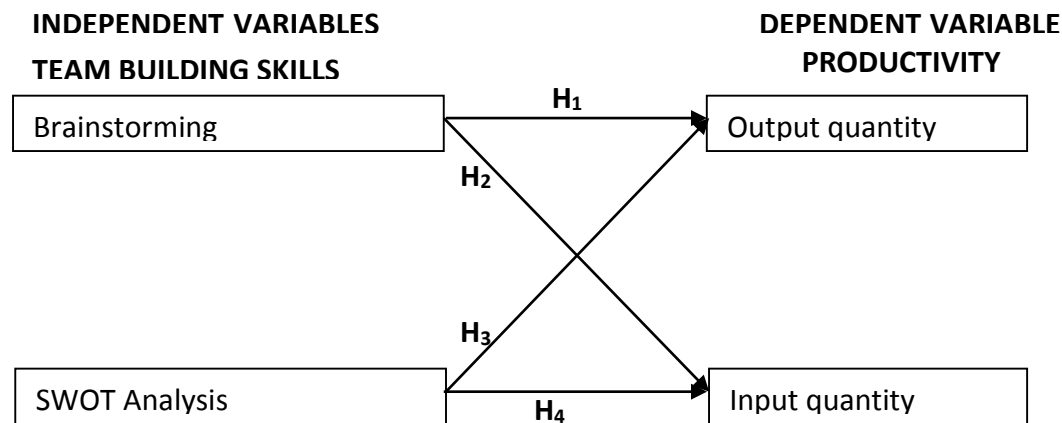
The content scope consists of the link between brainstorming and output quantity, brainstorming and input quantity; SWOT analysis and output quantity; SWOT analysis and input quantity. The unit scope comprises of all the functional units in the study firms apart from cleaners and labourers.

Review of Related Literature

The researcher, in this section, reviews literatures on problem solving skills (brainstorming and SWOT analysis) and productivity of small and medium enterprises in South Eastern Nigeria. The section comprises of conceptual, theoretical and empirical reviews.

Conceptual Review

The researcher used the following operational conceptual model to show the variables covered in the study:

Fig 2: Operational Conceptual Model

INDEPENDENT VARIABLES   DEPENDENT VARIABLE

TEAM BUILDING SKILLS   PRODUCTIVITY

Source: Researcher's Desk (2023)

The above model shows that brainstorming may influence output quantity and input quantity. It also shows that SWOT analysis may influence output quantity and input quantity. The model shows that the link between brainstorming and output quantity gives rise to H_1; the possible relationship between: brainstorming and input quantity resulted in H_2; the possible relationship between SWOT analysis and output quantity resulted in H_3; and the possible relationship between SWOT analysis and input quantity resulted in H_4.

Brainstorming

Agulanna and Madu(2009) see brainstorming as the idea-generating technique wherein a number of persons present alternatives without regard to questions of feasibility or practicality. Webster (2015) defines brainstorming as the mulling over of ideas by one or more individuals in an attempt to devise or find a solution to a problem. Brainstorming successfully is vital to the success of a business. Ideation commonly known as idea generation is something of a commodity business. Brainstorming is a key component of successful idea generation in business. There are a multitude of uses for brainstorming. Most people associate brainstorming with new product ideas or marketing campaigns but brainstorming can also be used for tasks including internal procedures, company structure and written articles. It all depends on the type of business and the approach that business takes to collaborate.

There are reasons for brainstorming. Webster (2015) opines that brainstorming is essential for collecting viewpoints; it encourages thought and it builds team relationships. Mcconnell(2019) reveals that brainstorming originated from an advertising executive named Alex F. Osborne and dates back to around 1939. Frustrated with his employees' ability to generate creative new ideas, Osborne began developing new methods for problem solving that focused on a team-based approach to work. He began hosting group-thinking sessions, and discovered that his approach led to a significant boost in the quality and quantity of new ideas. Osborne coined these group meeting "brainstorm" sessions and wrote about the technique in later publications.

During these brainstorming sessions, ideas are collected and recorded using whatever tool is available to the team. Modern businesses have begun to adopt digital brainstorming tools to speed up the process and make the review phases faster and more productive. Quantity of ideas is usually emphasized over quality, with the goal of generating as many new suggestions as

possible. Once all ideas have been collected, the team then evaluates each of them and focuses on the ones that are most likely to solve the problem. Mcconnell (2019) maintains that brainstorming is important because it allows people to think more freely, without fear of judgment; it encourages open and ongoing collaborations to solve problems and generate innovative ideas; it helps teams generate a large number of ideas quickly which can be refined and merged to create the ideal solution; it allows teams to reach conclusions by consensus, leading to a more well-rounded and better informed path forward. Also, brainstorming helps team members feel more comfortable bouncing ideas off one another, even outside of a structured session; it opens the door to out-of-the box innovations and it is great for team building. It is therefore useful for productivity and innovation.

SWOT Analysis

Parsons (2021) opines that a SWOT analysis is an incredibly simple, yet powerful tool to help one develop one's business strategy whether one is building a startup or guiding an existing company. SWOT stands for Strengths, Weaknesses, Opportunities and Threats.

According to the University of Notre Dame, USA (2020), SWOT analysis is a business analysis process that ensures that objectives for a project are clearly defined and that all factors related to the project are properly identified. In SWOT, the strengths are the attributes within an organization that are considered to be necessary for the ultimate success of a project. Strengths are resources and capabilities that can be used for competitive advantage. Examples of strengths include strong brand names, good reputations, cost advantages of proprietary know-how, etc. Weaknesses are factors within the SWOT analysis formula that could prevent successful results within a project or organization. Weaknesses include factors such as an abundance of rivalry between departments; a weak internal; communication system; lack of funding and an inadequate amount of materials. Weaknesses can derail an organization before it even begins.

Opportunities are classified as external elements that might be helpful in achieving the goals of an organization. These factors could involve arrival of new technology, the positive perception of the company by the general public and favorable market conditions. Threats are external factors that could gravely affect the success of the business. Examples are negative public image, no ready-made market for the final product and the lack of vendors who are able to supply raw materials to the business.

Output Quantity

Output is the outcome of a production process. It is the result. It is the quantity of goods produced in a given time period, by a firm, industry or country whether consumed or used for further production. It is the amount of something produced by a person, machine or industry (www.google.com). Khoa (2019) maintains that outputs include features, products that can be used by users.

Input Quantity

These are the resources invested in accomplishing a task and typically include time, money, and effort. According to Khoa (2019), input includes money, time estimated, people, efforts, plans, documents, etc.

Theoretical Framework

The study employed the John Dewey's Functional theory of Group Decision Making to beef up the study.

John Dewey's Functional Theory of Group Decision Making

The functional group decision making theory refers to a more specific focus on decision making. Groups are always trying to create equilibrium, or balance task concerns and relationship management. A "functional" refers to what communication does, such as an apology, which serves as a means to repair a relationship. Groups make decisions by using four different requisite functions: problem analysis, goal setting, identity alternatives and evaluate and select.

Problem solving is the first function in which the group looks at likely causes of the problem. The group must figure out what the real problems are and what the symptoms of the problems are. For example, if one was in a group with two classmates and they did not know what to do for their project, the first step would be to analyze the problem, which in that case would be to understand that their problem was not having an idea for a project.

Goal setting is when the group identifies what the solution should be. A possible goal for the example used before is coming up with as many ideas as possible and stick with one idea.

"Identify alternatives" is when the group finds many possible solutions. This involves *brainstorming* with the entire group. The next step for the example used above is: ask the teacher for help in choosing a project, ask fellow students, or not do the project. The more ideas the better. It does not matter how good the possible solutions are.

"Evaluate and select" is when the group evaluates each alternative and picks the best option. In this example, the group would choose either asking the teacher, come up with as many ideas as possible, ask a fellow student for ideas or just not do the project. Research suggests that the order of these requisities does not matter.

In small groups, there are three types of communication: promotive, disruptive and counteractive. Promotive – geared toward one of the requisite functions; disruptive – diverts, retards, or frustrates the ability of the group to achieve the requisite functions; counteractive – the message comes back to the requisite functions. If the group, for example, were to brainstorm, pick an idea and stick to it until the project was over, then the end result would be promotive because all the decisions making steps were followed and a good solution found.

SWOT Analysis Model

SWOT Analysis is a useful technique for understanding business strengths and weaknesses, and for identifying both the opportunities open to the business and the threats it faces (Uchegbu, 2019). Originated by Albert S. Humphrey in the 1960s, the tool is as useful now as it was then. A firm can use it in two ways – as a simple icebreaker helping people get together to 'kick off' strategy formulation, or in a more sophisticated way as a serious strategy tool. Strengths and weaknesses are often internal to the organization while opportunities and threats generally relate to external factors. For this reason, SWOT is sometimes called Internal-External Analysis and the SWOT Matrix is sometimes called an IE matrix

Uchegbu(2019) agrees that SWOT Analysis is a basic, analytical framework that assesses what an entity – usually a business, though it can be a place, industry or product, can and cannot do, for factors both internal and external. Using environmental data to evaluate the position of a company, a SWOT analysis determines what assists the firm in accomplishing its objective, and

what obstacles it must overcome or minimize to achieve desired results where the organization is today, and where it may go.

Analysts present a SWOT analysis as a square with each of the four areas making up one quadrant. This visual arrangement provides a quick overview of the company's position. Although all the points under a particular heading may not be of equal importance, there is insight in seeing how the number of opportunities measures up to the number of threats, and so forth.

For the elements of a SWOT analysis, companies must use them as a guide and not a prescription. They are discussed as follows:

a. **Strengths:** They describe what an organization excels at, and separates it from the competition: a strong brand, loyal customer base, a strong balance sheet, unique technology and so on. For example, a hedge fund may have developed a proprietary trade strategy that returns market-beating results. It must then decide how to use those results to attract new investors.

b. **Weaknesses:** They stop an organization from performing at its optimum level. They are areas where the business needs to improve to remain competitive higher than-industry-average turnover, high levels of debt, an inadequate supply chain, or lack of capital.

c. **Opportunities:** They refer to favorable external factors that an organization can use to give it a competitive advantage. For example, a car manufacturer can export its cars into a new market, increasing sales and market share, if a country cuts tariffs.

d. **Threats:** They refer to factors that have the potential to harm an organization. For example, a drought is a threat to a wheat-producing company, as it may destroy or reduce the crop yield. Other common threats include things like costs for inputs, increasing competition, tight labour supply and so on.

A SWOT analysis is a great way to guide business-strategy meetings. It is powerful to have everyone in the room to discuss the company's core strengths and weaknesses and then move from there to defining the opportunities and threats and finally to brainstorming ideas. A company can use a SWOT for overall business strategy sessions or for a specific segment like marketing, production or sales.

Empirical Review

The researcher adopted the following empirical studies to show the relevance of the study:

A study on "effect of brainstorming learning strategy on Junior Secondary School students' academic achievement in Social Studies in Yola Educational Zone, Adamawa State, Nigeria" by Jacob, Sababa and Murna (2016) was reported in the International Journal of Progressive Sciences and Technologies. The study was conducted to find out if the mean score of students taught Social Studies using brainstorming learning strategy and lecture method was significant; and to determine the retention rate of students taught Social Studies using brainstorming learning strategy and lecture method. The study adopted a quasi-experimental design, non-randomized pre-test, post-test control group comprising two groups made up of one experimental group and one control group. Four schools and two hundred and three (203) JSII Social Studies students made up the sample for the study. Four intact classes (two each) were randomly selected and assigned to experimental and control groups. The instrument used for data collection in the study was tagged "Social Studies Achievement Test"(SSAT), constructed by

the researcher but patterned in line with BECE test items in Social Studies. The validity of the instrument was established by two experts in Counseling Psychology and Test and Measurement. The reliability of the instrument was established using Guttmann0s Split-Half statistic which yielded a reliability index of 0.72. Data analysis was committed to t-test and chi-square analysis. The findings showed that there was a significant difference in the mean score of students taught Social Studies using brainstorming learning strategy and lecture method. There was a statistically significant difference in the retention rate of students taught Social Studies using brainstorming learning strategy and lecture method. There was no significant effect of gender on the academic achievement of students taught Social Studies using brainstorming learning strategy.

In a study on "a SWOT analysis of Shell Nigeria and the role of its business environment towards CSR", Anshaj(2018) used extant literature approach in the study. The study was conducted to examine how SWOT analysis enabled Shell Nigeria to handle CSR as in its business environment. It was found that the strengths of Shell Nigeria include strong market position, high revenue growth, and diverse projects. The opportunities include: innovation opportunities, meeting global demand for energy and exploring new energy projects. The weaknesses include: issues of human rights violation, environmental crisis, and unstable relationship with civil society and dealing with oil thefts. The threats include: competitive energy market, unstable government, substitute products and oil thefts. It was found that the internal factors of the company like financial and production resources and innovation have played a big role towards CSR. The payments made to the Nigerian government in the form of tax and royalty would be useful to build the new infrastructures in the country. The use of resources and innovation are shaped towards clean and better energy production. The company was found to have provided human resource development opportunities in the form of training and internship and regularly offer jobs in Nigeria.

In a study of SWOT Analysis of Nigerian business environment, Babalola and Tiamiyu (2013) wrote in Developing Country Studies. They employed extant literature in the study. They discovered that the strengths of Nigeria's business environment include potential for growth and stability and ability to take advantage of going global. For the weaknesses, it was found that Nigeria has two biggest problems of power supply and financial resources which hinder productivity and competitiveness. Nigeria is also deficient in her economies and therefore requires foreign assistance and investments to improve and enhance her managerial and capital base. For opportunities, Nigeria has a high population density with attendant high demands for products; she has opportunities to form good bilateral relations by increasing her export base, diversifying her economy by going global, etc. the threats are enormous as crimes of various degrees are prevalent in Nigeria.

In a study on 'role of problem solving ability on innovative behaviour and opportunity recognition in university students', Kim, Choi, Sung, and Park (2018) wrote in the Journal of Open Innovation: Technology, Market and Complexity. The study was conducted to determine the relationship between problem solving ability and innovative behaviour; how innovative behaviour relates with opportunity recognitions and the relationship between problem solving ability and opportunity recognition. The survey research design was adopted in the study. The respondents for the study were randomly selected from three universities in Korea. Questionnaire was the major instrument for data collection. Data analysis was committed to percentages, multiple regression, standard coefficients obtained from the Principal Component

Analysis, Comparative Fit Index (CFI), the normed fit index (NFI), the Root Mean Square Err of Approximation (RMSEA), the standardized root mean square residual (SRMR) and the Chi-square test statistic, as well as the Cronbach alpha statistic. The results reported positive and significant relationships between problem solving ability and innovative behaviour; innovative behaviour and opportunity recognition; problem solving ability and opportunity recognition.

Abosede, and Adesanya (2017) investigated "contributions of self-efficacy and problem solving skills on secretaries' job performance in Ogun State Public Service, Nigeria". The study ascertained the relationship among self-efficacy, problem solving skills and job performance of the secretaries. The study employed the descriptive research design. The data collected with questionnaire instrument were analyzed using Pearson Product Moment Correlation (PPMC), Multiple Regression, and ANOVA. The result showed that the predictor variables (self-efficacy and problem solving skills) accounted for 61.1% of variance in the job performance of secretaries in the public service of Ogun State. It was recommended that there should be provision for in-service training for secretaries in the public service.

Gap Identified in Literature

Based on the literatures the researcher was able to access, very little or significantly nothing has been done on the link between brainstorming and output quantity, brainstorming and input quantity, SWOT analysis and output quantity; SWOT analysis and input quantity. This study bridges the gap in Nigeria in general and South East Nigeria in particular.

Methodology

The study employed the survey research design in investigating problem solving skills and productivity of manufacturing firms in South Eastern Nigeria. The instruments of questionnaire, observations and interviews were used for the workers in the study organizations except security men, cleaners and labourers who were not surveyed. The population figures were obtained from the study organizations. Accordingly, Comestar Manufacturing Company Limited, Onitsha had a study population of 213; Nigeria Breweries Plc, Aba had 275; DezernNigeria Limited, Enugu had 161; Chois Hair, Owerri had 101. With a total population of 750, the researcher employed the Taro Yamane formula for sample size   as follows: $n = N/1+N(e)^2$

Chisco:	n_1	=	$253/1+253 (0.05)^2$	=	155
Jeobatex:	n_2	=	$295/1+295(0.05)^2$	=	170
Innoson:	n_3	=	$261/1+261(0.05)^2$	=	158
Indicel:	n_4	=	$110/1+110(0.05)^2$	=	86
Exe:	n_4	=	$110/1+110(0.05)^2$	=	86
Sample size (n)		=	**655**		

The purposive sampling method was adopted in the study since some subjects were fit for the research when compared to other individuals. Primary sources of data were used in the study. The primary data were gotten using survey tools especially the questionnaire. The validity of the instrument was done by showing the instrument to the supervisors and other experts for their inputs. The items in the survey instrument were also based on the research questions designed for the study. The use of pilot study was adopted for determination of the reliability of the research instrument. The essence was to determine consistency in responses. Data obtained from pilot survey were committed to test of reliability using Cronbach Alpha statistic thus:

$$\frac{}{} \left[\frac{i}{2} \right]^2$$

α   K $1 - \sum^{k}_{=1}$ $^{0}y_i$
          K-1 $O_{x\,0}$ /

The result reported a Cronbach alpha of 0.83. The instrument was therefore 83% reliable. For the data analysis, the descriptive statistics of mean and standard deviation were adopted to answer the research questions. Correlation analysis was used to test hypotheses. Data were analyzed using SPSS (Statistical Package for Social Sciences). Data were analyzed at 95% confidence level.

The formula for correlation is:

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{[n\sum x^2 - \sum(x)^2]\ [n\sum y^2 - \sum(y)]^2}}$$

The rejection of null hypothesis was based on P<0.05.

Questionnaire Analysis

Out of the 655 copies of the questionnaire distributed, only 403 copies were properly filled and returned. This represents 61.5% return.

Research Question 1:

What is the relationship between brainstorming and output quantity?

Table 1: Respondents' responses on brainstorming and output quantity

Q/No	Item	SA	A	UN	D	SD	N	Mean	Std. Dev.
1	Brainstorming is a technique that greatly enhances output quantity in small and medium enterprises.	168	148	21	24	42	403	3.93	0.721
2	Management gives brainstorming a lot of attention hence improved output quantity.	187	133	24	23	36	403	4.02	0.952

Field Survey (2023)

The table 1 above presents data from respondents under study. The result also disclosed a strong agreement by the respondents on their opinion on the relationship between brainstorming and output quantity. It accounted for a grand mean of 3.975. The results further show that the respondents agreed to the facts that: brainstorming is a technique that greatly enhances output quantity in small and medium enterprises with a $\bar{x} \pm S.D$ of 3.93 ± 0.721; management gives brainstorming a lot of attention hence improved output quantity (with a $\bar{x} \pm S.D$ of 4.02 ± 0.952).

Research Question 2:

How does brainstorming influence input quantity?

Table 2: Respondents' responses on the relationship between brainstorming and input quantity

Q/N	Item	SA	A	UN	D	SD	N	Mean	Std. Dev.
3	Brainstorming helps to get the right number of input items necessary for productivity.	188	154	17	26	18	403	4.16	0.736
4	Brainstorming helps to access the right number of persons that may make quality efforts for boosted productivity.	176	143	44	11	29	403	4.06	0.811

Field Survey (2023)

The table 2 above presents data from respondents on the relationship between brainstorming and input quantity. The results accounted for a grand mean of 4.11 which implies that majority of the respondents affirmed to the statements. There is a high level agreement by the respondents on the opinion that brainstorming helps to get the right number of input items necessary for productivity as the result accounted for a mean of 4.16 and a standard deviation of 0.736. The result has indicated that the majority of the respondents agreed to the item statement that: brainstorming helps to access the right number of persons that may make quality efforts for boosted productivity (with a $\bar{x} \pm \mathrm{S.D}$ of 4.06 ± 0.811).

Research Question 3:
To what extent does SWOT analysis influence output quantity?
Report on Research Question 3 is presented on table 3

Table 3: Respondents' responses on the relationship between SWOT Analysis and output quantity

Q/No.	Item	SA	A	UN	D	SD	N	Mean	Std. Dev.
5	SWOT analysis helps to have sound knowledge of those strengths and weaknesses that may help to improve quantity of output.	167	156	31	32	17	403	4.05	0.773
6	Management uses SWOT analysis to examine the opportunities and threats associated with output quantity.	186	153	26	17	21	403	4.16	0.895

Field Survey (2023)

The table 3 above presents data from respondents under study. The result also disclosed a good agreement by the respondents on their opinion on the relationship between SWOT Analysis and output quantity. It accounted for a grand mean of 4.11. The results further shows that the respondents agreed to the facts that: SWOT analysis helps to have sound knowledge of

those strengths and weaknesses that may help to improve quantity of output with a $\bar{\bar{x}} \pm$ S. D of 4.05 ± 0.773; management uses SWOT analysis to examine the opportunities and threats associated with output quantity (with a $\bar{\bar{x}} \pm$ S. D of 4.16 ± 0.895).

Research Question 4

What is the relationship between SWOT analysis and input quantity?

Table 4: Respondents' responses on the relationship between SWOT analysis and input quantity

Q/No.	Item	SA	A	UN	D	SD	N	Mean	Std. Dev.
7	SWOT analysis helps to evaluate organizational strengths and weaknesses for injection of appropriate input quantity into the organization.	168	157	35	31	12	403	4.09	0.971
8	SWOT analysis helps to expose the opportunities and threats hence informed decision making on the part of management for injection of critical inputs into the organization.	183	163	32	20	5	403	4.24	0.874

Field Survey (2023)

The table 4 above presents data from respondents on the relationship between SWOT analysis and input quantity. The results accounted for a grand mean of 4.17 which implies that majority of the respondents affirmed to the statements. There is a high level agreement by the respondents on the opinion that SWOT analysis helps to evaluate organizational strengths and weaknesses for injection of appropriate input quantity into the organization as the result accounted for a mean of 4.09 and a standard deviation of 0.971. The result has indicated that the majority of the respondents agreed to the item statement that: SWOT analysis helps to expose the opportunities and threats hence informed decision making on the part of management for injection (with a $\bar{x} \pm$ S. D of 4.24 ± 0.874).

Hypotheses

Here the hypotheses associated with the study were tested. The hypotheses were tested in order to find out whether the difference in opinion was significant to draw conclusion.

Test of Hypothesis One

Hypothesis 1: There is no significant relationship between brainstorming and output quantity.

Table 5: Correlation analysis between brainstorming and output quantity

Item	Mean	Standard Deviation	Correlation Coefficient	P-value
Brainstorming	3.93	0.721	0.912	0.001
Output quantity	4.02	0.952		

SPSS Correlation Analysis Output (2023).

The result on table 5 presents the correlation analysis between brainstorming and output quantity. The result shows a p-value of 0.001 and correlation coefficient of 0.912. The result shows a p-value less than 0.05 being the level of significance; therefore rejecting the null hypothesis and accepting the alternative hypothesis. Therefore, the correlation coefficient between brainstorming and output quantity is significant. Therefore, there is a significant relationship between brainstorming and output quantity.

Hypothesis 2: Brainstorming does not significantly affect input quantity.

Table 6: Correlation analysis between brainstorming and input quantity

Item	Mean	Standard Deviation	Correlation Coefficient	P-value
Brainstorming	4.16	0.736	0.951	0.001
Input quantity	4.06	0.811		

SPSS Correlation Analysis Output (2023).

The result on table 6 presents the correlation analysis between brainstorming and input quantity. The result shows a p-value of 0.001 and correlation coefficient of 0.951. The result shows a $p-value \leq 0.05$ level of significance, thereby rejecting the null hypothesis and accepting the alternative which states that brainstorming significantly affects input quantity.

Hypothesis 3: SWOT analysis does not influence output quantity.

Table 7: Correlation analysis between SWOT analysis and output quantity

Item	Mean	Standard Deviation	Correlation Coefficient	P-value
SWOT analysis	4.05	0.773	0.947	0.001
Output quantity	4.16	0.895		

SPSS Correlation Analysis Output (2021).

The result on table 7 presents the correlation analysis between SWOT analysis and output quantity. The result shows a p-value of 0.001 and correlation coefficient of 0.947. The result shows a p-value less ≤ 0.05 level of significance; therefore rejecting the null hypothesis and accepting the alternative which states that SWOT analysis significantly influences output quantity.

Hypothesis 4: There is no significant relationship between SWOT analysis and input quantity.

Table 8: Correlation analysis between SWOT analysis and input quantity

Item	Mean	Standard Deviation	Correlation Coefficient	P-value
SWOT analysis	4.09	0.971	0.983	0.001
Input quantity	4.24	0.874		

SPSS Correlation Analysis Output (2023).

The result on table 8 presents the correlation between SWOT analysis and input quantity. The result shows a p-value of 0.001 and a correlation coefficient of 0.983. The result shows a $p-value < 0.05$ level of significance; thereby rejecting the null hypothesis and accepting the

alternative. Therefore, the correlation coefficient between SWOT analysis and input quantity is statistically significant. This means a positive and a strong relationship existing between SWOT analysis and input quantity.

Findings

Based on the analysis, the researcher found that:

1. Brainstorming significantly improved output quantity in small and medium enterprises.
2. Brainstorming significantly boosted input quantity in small and medium enterprises.
3. SWOT analysis enhanced output quantity significantly in small and medium enterprises.
4. SWOT analysis beefed up input quantity significantly in small and medium enterprises.

Discussion

In this section, the researcher discusses the findings made in the study. The fact that brainstorming is a technique that greatly enhances output quantity in small and medium enterprises as shown on table 1 indicates that generation of ideas through brainstorming is cardinal to productivity. The same table 1 reveals that management gives brainstorming a lot of attention hence improved output quantity. This implies that idea sharing is good for optimality in production. This is in agreement with the empirical studies used in the study.

Also, given that brainstorming helps to get the right number of input items necessary for productivity as shown on table 2, it implies that any factor to be injected into the production process of the organization is often critically deliberated upon. This is why the table 2 shows that brainstorming helps to access the right number of persons that may make quality efforts for boosted productivity. This is in agreement with the empirical studies used in the study.

The fact that SWOT analysis helps to have sound knowledge of those strengths and weaknesses that may help to improve quantity of output as shown on table 3, it implies that management is better positioned to make good use of its abilities, competences, and organizational comparative advantages to increase output quantity. This is supported by the fact that management uses SWOT analysis to examine the opportunities and threats associated with output quantity as table 3 shows. This is in agreement with the empirical studies used in the study.

Given that SWOT analysis helps to evaluate organizational strengths and weaknesses for injection of appropriate input quantity into the organization, it implies that management is quite productivity conscious. This is supported by the fact that SWOT analysis helps to expose the opportunities and threats hence informed decision making on the part of management for injection of critical inputs into the organization as table 4 shows. This is in agreement with the empirical studies used in the study.

Conclusion and Recommendations

The study concludes that productivity improves greatly whenever brainstorming and SWOT analysis are effectively employed for problem solving in small and medium enterprises. Enterprises that neglect brainstorming and analysis of their strengths, weaknesses, opportunities and threats do so at their own peril hence they risk both output and input quantity..

It was recommended that management of small and medium enterprises should always employ brainstorming technique for enhancement of output quantity. Employees in small and medium enterprises should always partner their management by making themselves available

for brainstorming for enhanced input quantity. Organizations should consistently evaluate their strengths, weaknesses, opportunities and threats so as to be always strategically positioned for improving output quantity. Small and medium enterprises should always employ SWOT analysis skill in boosting input quantity and input quality.

References

Abosede,S.C;& Adesanya, A.O.(2017). Contributions of self-efficacy and problem solving skills on secretaries' job performance in Ogun State Public Service, Nigeria. *Journal of Education and practice,8(11);109-116.*

Agulanna, E.C., & Madu, C.M.(2009). Organizational Behaviour: Human Behaviour at Work. Owerri: Reliable Publishers.

Anshaj, U.(2018). A SWOT analysis of Shell Nigeria and the role of its business environment towards CSR". *Developing Country Studies, 3(5): 101 – 105.*

Brendan, B.(2021). "7 simple rules of brainstorming" from www.ideou.com. Retrieved 18/2/21.

Carlile communication.wordpress.com(2021). "Functional Theory of Group Decision Making". Retrieved 2/3/21.

Cragg, N.(2017). "Inputs, processes, outputs: how to improve your field service business" from tractsystems.com. Retrieved 13/1/21.

Emera, W.L.(2021). "Brainstorming: generating many radical, creative ideas" from www.mindtools.com. Retrieved 7/2/21.

Grant, M.(2020). "Strength, weakness, opportunity and threat (SWOT) Analysis" from www.investopedia.com. Retrieved 19/1/21.

Jacob, F., Sababa, L.K., & Murna, D.I.(2016). Effect of brainstorming learning strategy on Junior Secondary Schoolstudents' academic achievement in Social Studies in Yola Educational Zone, Adamawa State, Nigeria. *International Journal of Progressive Sciences and Technologies, 3(2): 108-115.*

Khoa, D.T.(2019). "Input, output, and outcome" from www.business2community.com. Retrieved 11/2/21.

Kim,J.Y.,Choi,D.S., Sung,C.,& Park,J.Y.(2018).The role of problem solving ability on innovation behaviour and opportunity recognition in university students. *Journal of   Open Innovation: Technology, Market and Complexity, 4(4):1-13.*

McConnell, B.(2019). "What is brainstorming? And why is it important?" from blog.mindmanager.com. Retrieved 01/03/21.

Parsons, N.(2021). "What is SWOT Analysis and how to do it right(with examples)" from www.liveplan.com. Retrieved 22/01/21.

Rabha, M.(2021). "Problem solving skills that managers need to have" from blog.vantagecircle.com. Retrieved 2/2/21.

Shauna, H.(2018). "What is workplace productivity and how can it be measured?" from www.texthelp.com. Retrieved 15/2/21.

The Center for Management & Organizational Effectiveness(2021). "Problem solving in business" from come.com. Retrieved 02-03-21.

Uchegbu, M.T.(2019). Micro environmental factors and viability of manufacturing organizations in South Eastern Nigeria. An Unpublished PhD Thesis, Imo State University, Owerri.

University of Notre Dame, USA.(2020). "What is SWOT Analysis" from www.notredameonline.com. Retrieved 25/2/21.

Webster, M.(2015). "Why brainstorming is a crucial element in business" from www.aib.edu.au. Retrieved 2/3/21.

Whiting, B.(2020). "Input-output model" from study.com. Retrieved 28/1/21.

Wood, D.(2021)."Problem solving methods: definition & types" from study.com. Retrieved 3/3/21. www.google.com