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Organizational Resilience and Effectiveness of Beverage Firms in South-East Nigeria

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Abstract

This study examined the effect of organizational resilience on the effectiveness of beverage firms in South-East Nigeria. Specifically, it investigated how adaptive leadership, operational flexibility, and employee engagement influence organizational effectiveness. The study adopted a descriptive survey research design, and data were collected through structured questionnaires administered to employees of selected beverage firms across Abia, Anambra, Ebonyi, Enugu, and Imo States. Using the Taro Yamane formula, a sample size of 222 respondents was determined from a total population of 500 employees. Data analysis was conducted using descriptive statistics and the Pearson Product Moment Correlation Coefficient (PPMCC) with the aid of SPSS version 26.0. Findings revealed that adaptive leadership has a strong and significant effect on the effectiveness of beverage firms operational flexibility positively and significantly influences organizational effectiveness, and employee engagement has a significant positive relationship with organizational effectiveness. The study concludes that organizational resilience substantially enhances the effectiveness of beverage firms in South-East Nigeria by enabling them to anticipate, adapt, and respond effectively to environmental and operational challenges. Based on the findings, the study recommends that beverage firms promote adaptive leadership development through continuous training, enhance operational flexibility via agile management practices, and strengthen employee engagement through participatory management and motivation strategies.

Keywords: Organizational Resilience; Organizational Effectiveness; Adaptive Leadership; Operational Flexibility; Employee Engagement; Beverage Firms.

Introduction

Background of the Study

In today's dynamic and turbulent business environment, organizational resilience has become a critical determinant of firm survival and long-term effectiveness. Organizational resilience refers to an organization's ability to anticipate, prepare for, respond to, and adapt to incremental change and sudden disruptions in order to survive and prosper (Burnard&Bhamra, 2021). It entails not only the capacity to recover from crises but also to learn from adversity and use such experiences to strengthen future performance (Duchek, 2020). For manufacturing and service firms alike, resilience involves developing robust systems, flexible operations, adaptive leadership, and a culture that supports continuous learning and innovation (Lengnick-Hall, Beck, &Lengnick-Hall, 2021).

The beverage industry in Nigeria, particularly in the South-East region, plays a vital role in industrial growth, employment generation, and economic development. Beverage firms: producing soft drinks, bottled water, fruit juices, and alcoholic beverages contribute significantly to manufacturing output and household consumption (National Bureau of Statistics [NBS], 2023). However, these firms operate in an environment characterized by infrastructural deficits, policy inconsistencies, insecurity, rising production costs, and supply chain vulnerabilities (Amah &Baridam, 2021). These challenges threaten their operational stability, profitability, and sustainability, making organizational resilience a strategic necessity rather than an optional attribute.

Organizational effectiveness, on the other hand, refers to the extent to which an organization achieves its goals efficiently and adapts successfully to its environment (Richard et al., 2009). In beverage firms, effectiveness manifests through sustained product quality, market responsiveness, cost efficiency, customer satisfaction, and profitability. Scholars such as Sutcliffe and Vogus (2003) and Horne and Orr (1998) suggest that resilient organizations tend to be more effective because they possess adaptive routines, proactive risk management systems, and strong internal coordination that enable quick recovery and sustained performance.

In the Nigerian context, empirical studies on organizational resilience remain limited. Existing research has largely focused on service sectors or multinational corporations in stable environments (Akinbode&Alaka, 2019). Few studies have examined how resilience dimensions—such as leadership adaptability, operational flexibility, employee engagement, and innovation—affect the effectiveness of local beverage firms facing infrastructural and institutional constraints. This represents a significant contextual and empirical gap in resilience literature, as findings from developed economies may not apply to firms operating under Nigeria's volatile economic conditions.

Statement of the Problem

The beverage industry in South-East Nigeria continues to operate under severe environmental turbulence arising from infrastructural decay, erratic power supply, inflationary pressures, and fluctuating

government policies. These conditions expose firms to high levels of operational uncertainty, making it increasingly difficult for them to sustain stable production, retain customers, ensure supply-chain continuity, and remain profitable. While some beverage firms have shown an impressive ability to absorb shocks, recover quickly, and maintain functional stability, many others remain highly vulnerable to disruptions, often resulting in production delays, declining market share, and reduced organizational effectiveness (Amah &Baridam, 2021).

Despite the growing recognition that organizational resilience may be the differentiating factor that enables some firms to survive and thrive under such instability, empirical evidence explaining how resilience capabilities drive firm effectiveness in the Nigerian beverage sector remains scarce. Existing studies have largely focused on general organizational performance, crisis management, or survival strategies, without examining the deeper resilience capacities—such as adaptive leadership, operational flexibility, and employee engagement—that enable firms to recover, adapt, and sustain productivity in uncertain conditions (Akinbode&Alaka, 2019).

Furthermore, much of the available resilience literature originates from developed economies with more stable institutional environments. Such research does not adequately reflect Nigeria's unique context characterized by institutional voids, inadequate infrastructure, and persistent economic volatility. Consequently, managers in the Nigerian beverage industry lack context-specific evidence on which resilience strategies most effectively enhance organizational effectiveness.

Therefore, the core problem is the insufficient empirical understanding of how organizational resilience shapes the effectiveness of beverage firms in South-East Nigeria, creating a knowledge gap that limits managers' ability to build resilient systems and sustain firm performance in an increasingly unpredictable business environment.

Objectives of the Study

The main objective is to examine the effect of organizational resilience on the effectiveness of beverage firms in South-East Nigeria. The specific objectives are;

1. To determine the effect of adaptive leadership on the effectiveness of beverage firms in South-East Nigeria.
2. To assess the influence of operational flexibility on the effectiveness of beverage firms in South-East Nigeria.
3. To examine the impact of employee engagement on the effectiveness of beverage firms in South-East Nigeria.

Research Questions

1. To what extent does adaptive leadership affect the effectiveness of beverage firms in South-East Nigeria?
2. What is the influence of operational flexibility on the effectiveness of beverage firms in South-East Nigeria?
3. To what extent does employee engagement impact the effectiveness of beverage firms in South-East Nigeria?

Research Hypotheses

Based on the research objectives and questions, the following hypotheses are formulated and stated in their null form:

H_{01}: Adaptive leadership has no significant effect on the effectiveness of beverage firms in South-East Nigeria.

H_{02}: Operational flexibility has no significant influence on the effectiveness of beverage firms in South-East Nigeria.

H_{03}: Employee engagement has no significant impact on the effectiveness of beverage firms in South-East Nigeria.

Scope of the Study

This study focuses on the **relationship between organizational resilience and organizational effectiveness**within the context of beverage firms in **South-East Nigeria**, which comprises **Abia, Anambra, Ebonyi, Enugu, and Imo States.** The study specifically examines three core dimensions of organizational resilience: **adaptive leadership, operational flexibility, and employee engagement** as predictors of firm effectiveness.

The geographical scope of this study covers selected **beverage firms located in the five states of South-East Nigeria**, namely: **Abia, Anambra, Ebonyi, Enugu, and Imo States**. The South-East region hosts a significant concentration of beverage manufacturing and distribution firms that contribute to Nigeria's food and drinks industry. Prominent examples include:

(i) **Abia State:** 7Up Bottling Company Plc (Aba Plant),
(ii) **Anambra State:** Nigerian Bottling Company (NBC) Plc,
(iii) **Ebonyi State:** Aqua Rapha Investment Ltd (producers of Table Water)
(iv) **Enugu State:** Nigerian Breweries Plc, 9th Mile Corner, Ama Brewery
(v) **Imo State:**Coca Cola Bottling Company Onitsha road Owerri

These firms were selected because they represent both **multinational and indigenous beverage producers**, providing a balanced view of resilience practices within varying operational scales.

REVIEW OF RELATED LITERATURE

Conceptual Review

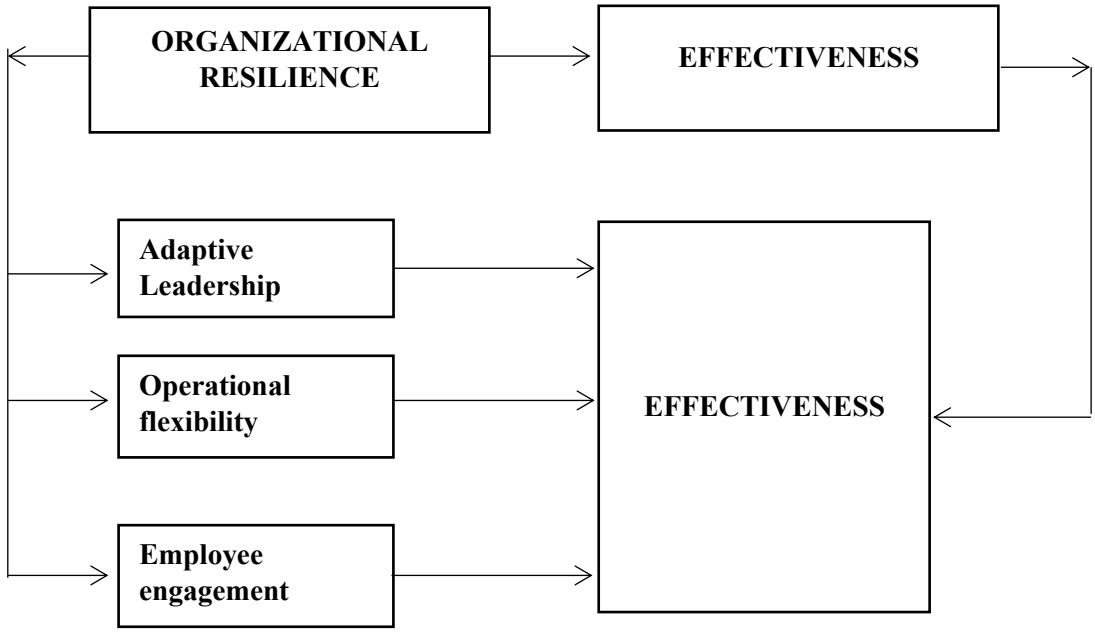


Fig 2.1: Operational Conceptual Framework

Source: Researcher's Computation

Concept of Organizational Resilience

Organizational resilience refers to a firm's capacity to anticipate, prepare for, respond to, and adapt to gradual change and sudden disruptions in order to survive and thrive (Burnard&Bhamra, 2021). It goes beyond crisis management to encompass proactive learning, adaptability, and innovation. According to Duchek (2020), organizational resilience is a dynamic capability that evolves through three stages: **anticipation, coping, and adaptation.** Firms that are resilient possess the ability to detect potential threats, withstand shocks, and recover quickly while maintaining operational continuity.

Lengnick-Hall, Beck, and Lengnick-Hall (2011) view resilience as a strategic capability that enables organizations to leverage adversity for growth. Similarly, Mallak (1998) posits that resilience reflects an organization's ability to bounce back stronger after setbacks. In the Nigerian beverage industry, resilience involves managing supply chain disruptions, fluctuating input costs, policy inconsistencies, and infrastructural challenges (Amah &Baridam, 2021). Therefore, resilience has become a strategic necessity for maintaining competitiveness and ensuring long-term effectiveness.

Dimensions of Organizational Resilience

1. **Adaptive Leadership**: Adaptive leadership refers to the ability of leaders to navigate complexity, foster innovation, and mobilize employees toward shared goals in times of

uncertainty (Heifetz, Grashow, &Linsky, 2009). It involves emotional intelligence, flexibility, and the capacity to make decisions under ambiguous conditions. Leaders who demonstrate adaptability create a supportive culture that encourages creativity, collaboration, and rapid response to environmental change (Duchek, 2020). In the context of beverage firms, adaptive leadership enables quick responses to supply disruptions, changing consumer preferences, and regulatory shifts.

2. **Operational Flexibility**: Operational flexibility is the ability of an organization to modify its processes, structures, and resource allocations in response to internal and external changes (Stevenson & Spring, 2007). It ensures that firms can reconfigure production schedules, logistics, and supply chains to maintain efficiency. According to Ponomarov and Holcomb (2009), flexibility is a vital component of resilience because it enhances responsiveness and recovery capacity during disruptions. For beverage firms facing challenges such as erratic power supply or raw material shortages, operational flexibility facilitates continuity and reduces downtime.
3. **Employee Engagement**: Employee engagement is the emotional and psychological commitment employees have toward their organization and its goals (Kahn, 1990). Engaged employees are proactive, loyal, and willing to contribute to organizational success even in times of adversity. Saks (2006) argues that engagement drives resilience because employees who feel valued are more likely to innovate and cooperate during crises. In beverage firms, high engagement leads to improved teamwork, problem-solving, and sustained productivity despite operational turbulence.

Concept of Organizational Effectiveness

Organizational effectiveness is the degree to which an organization achieves its objectives efficiently and adapts successfully to its environment (Richard et al., 2009). It encompasses multiple performance indicators such as profitability, product quality, customer satisfaction, and innovation. According to Steers (1975), effectiveness reflects the balance between internal efficiency and external adaptability. In the context of beverage firms, organizational effectiveness manifests through consistent product output, market share growth, and long-term customer loyalty.

Cameron (2015) identifies adaptability, goal achievement, and resource utilization as central elements of organizational effectiveness. Resilient firms are generally more effective because they possess dynamic capabilities that allow for quick adaptation, learning, and sustainable performance.

Theoretical Review

This study is anchored on two key theories that explain the relationship between resilience and effectiveness:

Dynamic Capabilities Theory (Teece, Pisano, &Shuen, 1997)

The dynamic capabilities theory posits that firms achieve competitive advantage through the ability to integrate, build, and reconfigure internal and external competencies in response to rapidly changing environments. Resilience represents a form of dynamic capability that enables organizations to sense opportunities, seize them, and reconfigure resources to maintain effectiveness (Teece, 2018). Adaptive leadership and operational flexibility are mechanisms through which beverage firms develop dynamic capabilities, allowing them to survive disruptions such as supply shortages or regulatory instability.

Resource-Based View (Barney, 1991)

The Resource-Based View (RBV) emphasizes that organizations gain sustained competitive advantage by possessing valuable, rare, inimitable, and non-substitutable resources. Organizational resilience can be viewed as an intangible resource developed through strong leadership, employee engagement, and flexible operations. When beverage firms cultivate resilient systems and cultures, they develop unique internal competencies that enhance effectiveness and performance in volatile environments.

Theoretical Framework (Anchored Theory)

This study is anchored on the **Dynamic Capabilities Theory** proposed by Teece, Pisano, and Shuen (1997). The theory posits that organizations achieve and sustain effectiveness by developing the ability to sense environmental changes, seize emerging opportunities, and reconfigure internal resources in response to turbulence. This makes it highly relevant to the beverage industry in South-East Nigeria, where firms operate under persistent infrastructural failures, regulatory inconsistencies, and economic instability.

The concept of **organizational resilience** aligns directly with the principles of the Dynamic Capabilities Theory, as resilience requires adaptive leadership, operational flexibility, and employee engagement capabilities that enable firms to absorb shocks, adapt quickly, and maintain effective performance despite disruptions. Therefore, the theory provides a robust foundation for understanding how resilience capacities can drive the effectiveness of beverage firms operating in an uncertain and volatile business environment.

Empirical Review

Okechukwu and Nwosu (2022) examined *"Resilience and Organizational Performance of Small and Medium Enterprises (SMEs) in South-East Nigeria."* Using a **descriptive survey design**, data were collected from 250 SME owners and employees across Anambra and Imo States and analyzed using **Ordinary Least Squares (OLS) regression**. The findings showed that **employee engagement and innovation practices** had strong positive effects on business performance indicators such as growth, market share, and customer satisfaction. The authors concluded that people-centered resilience strategies enhance adaptability and effectiveness in small business contexts.

Burnard and Bhamra (2021) carried out an empirical investigation on *"Organizational Resilience and Sustainable Operations: A Framework for Organizational Responses"*in the United Kingdom. The study adopted a **quantitative survey research design** involving 186 manufacturing firms and employed **Structural Equation Modeling (SEM)** for data analysis. The findings revealed that **operational flexibility and leadership commitment** were significant predictors of sustained organizational performance, indicating that resilient firms are more likely to maintain effectiveness during disruptions.

Similarly, Amah and Baridam (2021) conducted a study titled *"Environmental Turbulence and Operational Performance of Manufacturing Firms in Nigeria"* using data collected from 150 manufacturing organizations across Rivers and Lagos States. The researchers applied **correlation and regression analysis** to examine the relationship between environmental uncertainty, resilience, and firm performance. Their findings revealed that **strategic flexibility and proactive leadership responses**were positively associated with firm stability and competitiveness, emphasizing the importance of resilience in sustaining effectiveness amid turbulence.

Akintunde and Okoro (2021) explored *"Organizational Resilience and Performance of Indigenous Manufacturing Firms in South-West Nigeria".* The study employed a **survey research design** and used **SPSS multiple regression analysis** to analyze responses from 210 managers. Findings showed that **leadership adaptability and operational flexibility** significantly predicted firm effectiveness and profitability. The study recommended that Nigerian firms institutionalize resilience-building practices to withstand economic and infrastructural shocks.

Akpan and Effiong (2020) investigated *"Organizational Resilience and Adaptability in Nigerian Service Firms"*in AkwaIbom State. The study utilized a **cross-sectional survey design** with 200 participants drawn from selected banks and telecommunication companies. Data were analyzed using **Pearson correlation and multiple regression techniques**. Findings revealed that **adaptive leadership, employee participation, and flexible organizational structures** significantly enhanced profitability, service quality, and customer retention, demonstrating that resilience fosters long-term effectiveness.

Duchek (2020) conducted a study titled *"Organizational Resilience: A Capability-Based Conceptualization"* in Germany. The study aimed to explore resilience as a dynamic organizational capability that enhances performance under turbulent conditions. Using a **qualitative content analysis and case study approach**, the research found that resilience operates through three key stages—anticipation, coping, and adaptation—and significantly improves organizational effectiveness by strengthening a firm's learning and adaptive capacity.

In Nigeria, Akinbode and Alaka (2019) examined *"Resilience Strategies and Performance of Manufacturing Firms in Lagos State".* The study used a **survey design**with a sample of 120 manufacturing firms and analyzed data using **multiple regression analysis.** The results indicated that**leadership adaptability and employee commitment** significantly enhanced

firms' recovery speed and post-crisis performance. The study concluded that organizations with strong adaptive leadership structures were better equipped to maintain effectiveness in volatile environments.

Identified Gap in Literature

While previous studies underscore the relevance of organizational resilience to performance outcomes, most were conducted either in developed countries or among non-beverage or service-sector firms. Empirical evidence focusing on how resilience dimensions such as: adaptive leadership, employee engagement, and operational flexibility affect the effectiveness of beverage firms in South-East Nigeria remains limited. This gap necessitates a focused investigation within this unique industrial and regional context to provide practical and context-specific insights for organizational sustainability and effectiveness.

Research Design

This study adopted a **descriptive survey research design**. The design is suitable because it allows the collection of quantitative data from a defined population to describe existing conditions, relationships, and patterns among variables without manipulating them. It was used to examine the relationship between **organizational resilience** (measured by adaptive leadership, operational flexibility, and employee engagement) and **organizational effectiveness** among beverage firms in South-East Nigeria.

Population of the Study

The population of this study comprised employees of selected beverage firms operating in South-East Nigeria. These include both multinational and indigenous firms. The total population is **500 employees** distributed as follows:

S/N	State	Selected Beverage Firms	Estimated No. of Staff
1	Abia	7Up Bottling Company Plc (Aba Plant),	120
2	Anambra	Nigerian Bottling Company Plc (Onitsha Plant)	100
3	Ebonyi	Aqua Rapha Investment Ltd.	80
4	Enugu	Nigerian Breweries Plc (9th Mile Ama Brewery).	120
5	Imo	Coca Cola Bottling Company Onitsha road Owerri	80
Total			**500 Employees**

Sample Size Determination

The sample size was determined using the **Taro Yamane (1967) formula**, which provides a simplified method for calculating sample size from a known population:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

- (n) = sample size
- (N) = population size (500)
- (e) = level of precision (0.05 for 95% confidence level)

Substituting the values:

$$n = \frac{500}{1 + 500(0.05)^2}$$

$$n = \frac{500}{1 + 500(0.0025)}$$

$$n = \frac{500}{1 + 1.25}$$

$$n = \frac{500}{2.25}$$

$$n \approx 222.22$$

Therefore, the **sample size (n)** is approximately **222 respondents.**

Sample Distribution

The sample size (222) was proportionately distributed across the five states based on the staff strength of the firms in each state using the formula:

$$ni = \frac{Ni}{N} \times n$$

Where:

- (ni) = sample size for each state
- (Ni) = population of each state
- (N) = total population (500)
- (n) = total sample size (222)

State	Population (N_i)	Computation	Sample Size (n_i)
Abia	120	(120/500) × 222	53
Anambra	100	(100/500) × 222	44
Ebonyi	80	(80/500) × 222	36
Enugu	120	(120/500) × 222	53
Imo	80	(80/500) × 222	36
Total	**500**		**222**

Thus, **222 respondents** were drawn proportionately from the selected firms across the five states.

Sampling Technique

A **proportionate stratified random sampling technique** was adopted to ensure fair representation from all selected beverage firms. Each firm represents a stratum, and respondents were randomly selected within each stratum to minimize bias and ensure that responses reflect diverse organizational structures and operational contexts.

Sources of Data

The study utilized **primary data** and **secondary data** sources.

- **Primary Data:** Collected through a **structured questionnaire** administered to the selected employees.
- **Secondary Data:** Gathered from relevant textbooks, academic journals, government reports, company publications, and online databases to provide theoretical and empirical support.

Instrument for Data Collection

The primary data collection instrument was a **structured questionnaire** titled *Organizational Resilience and Effectiveness Questionnaire (OREQ)*.

The questionnaire was divided into two sections:

- **Section A:** Demographic characteristics of respondents.
- **Section B:** Statements measuring variables of interest adaptive leadership, operational flexibility, employee engagement, and organizational effectiveness.

A **four-point Likert scale** was used to measure respondents' opinions:

Response Option	Code	Weight
Strongly Agree	SA	4
Agree	A	3
Disagree	D	2
Strongly Disagree	SD	1

Validity of the Instrument

The instrument underwent **face and content validation** by three academic experts two from the Department of Management, Imo State University, and one from the Department of Business Administration, University of Nigeria, Nsukka. They reviewed the questionnaire for clarity, relevance, and comprehensiveness. Their corrections were incorporated to ensure that the items effectively measured the intended constructs.

Reliability of the Instrument

To ensure the consistency of the instrument, a **pilot study**was conducted with 30 employees from beverage firms in Anambra State who were not part of the main sample. The responses were analyzed using **Cronbach's Alpha**. The following reliability coefficients were obtained:

Variable	No. of Items	Cronbach's Alpha (α)
Adaptive Leadership	6	0.86
Operational Flexibility	6	0.84
Employee Engagement	6	0.82
Organizational Effectiveness	6	0.88
Overall Reliability	24	**0.85**

Since all coefficients exceed the minimum acceptable threshold of **0.70**, the instrument was considered **reliable.**

Method of Data Collection

Questionnaires were distributed personally by the researcher and trained research assistants to ensure a high response rate. Respondents were assured of confidentiality and anonymity. Out of the 222 questionnaires distributed, **210 were retrieved and found usable**, representing a **94.6% response rate.**

Method of Data Analysis

Data collected were analyzed using both descriptive and inferential statistical techniques with the aid of Statistical Package for the Social Sciences (SPSS) Version 26.0**.**Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize respondents' demographic characteristics and responses.Inferential statistics involved the use of the Pearson Product Moment Correlation Coefficient (PPMCC) to test the hypotheses and determine the strength and direction of the relationships between organizational resilience components (adaptive leadership, operational flexibility, employee engagement) and organizational effectiveness.

The Pearson correlation formula is given as:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{N\sum X2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2}}$$

Where:

- rr = Pearson correlation coefficient
- X = scores of the independent variable (organizational resilience indicators)
- Y = scores of the dependent variable (organizational effectiveness)
- N = number of observations

The correlation coefficient (r) ranges between -1 and +1, where:

- **+1** indicates a perfect positive relationship,
- **0** indicates no relationship, and

- **-1** indicates a perfect negative relationship.

Decision Rule

If the p-value ≤ 0.05, the null hypothesis (H_0) is rejected, indicating a statistically significant relationship between the variables. If the p-value > 0.05, the null hypothesis is accepted, indicating no significant relationship.

DATA PRESENTATION, ANALYSIS, AND INTERPRETATION

This section presents, analyzes, and interprets the data collected from respondents in beverage firms across the five states of South-East Nigeria: Abia, Anambra, Ebonyi, Enugu, and Imo. The data were analyzed to examine the effect of organizational resilience dimensions adaptive leadership, operational flexibility, and employee engagement on organizational effectiveness. A total of 222 questionnaires were distributed, out of which 210 were duly completed and returned, representing a **94.6% response rate**, which was considered adequate for analysis.

Demographic Characteristics of Respondents

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	128	61.0
	Female	82	39.0
Age (Years)	20–29	46	21.9
	30–39	78	37.1
	40–49	60	28.6
	50 and above	26	12.4
Educational Qualification	OND/NCE	38	18.1
	Bachelor's Degree	110	52.4
	Master's Degree	52	24.8
	Ph.D./Others	10	4.7
Years of Experience	Below 5 years	40	19.0
	5–10 years	82	39.0
	11–15 years	58	27.6
	Above 15 years	30	14.4

Source: Field Survey, 2025

The data in Table 4.1 show that most respondents were male (61%), aged between 30–39 years (37.1%), and held at least a Bachelor's degree (52.4%). Majority (66.6%) had more than 5 years of work experience, indicating that they were knowledgeable and capable of providing credible responses regarding their firms' operations and resilience strategies.

Descriptive Analysis of Study Variables

Adaptive Leadership

S/N	Statement	SA	A	D	SD	Mean	Std. Dev
1	Our leaders effectively guide the organization through crises.	90	82	28	10	3.20	0.89
2	Management encourages innovation in solving problems.	84	88	26	12	3.16	0.92
3	Leaders are flexible in decision-making.	78	94	28	10	3.15	0.87
4	Leaders communicate changes clearly to employees.	92	84	26	8	3.24	0.86
5	Leadership inspires confidence during uncertainty.	88	90	22	10	3.22	0.88
6	The organization learns from past disruptions.	96	80	24	10	3.25	0.85

Aggregate Mean = 3.20

Interpretation: The mean score of 3.20 indicates that respondents generally agreed that **adaptive leadership** practices were strong in their organizations.

Operational Flexibility

S/N	Statement	SA	A	D	SD	Mean	Std. Dev
1	Our production process can be easily adjusted to meet changes in demand.	94	80	24	12	3.22	0.90
2	The firm can quickly change suppliers when necessary.	80	92	28	10	3.15	0.89
3	We can modify work schedules during emergencies.	88	84	26	12	3.17	0.91
4	Our firm can reallocate resources efficiently during crises.	82	88	28	12	3.15	0.93
5	The organization invests in technology to support flexible operations.	90	86	22	12	3.21	0.88
6	There is strong coordination across departments.	92	82	26	10	3.22	0.86

Aggregate Mean = 3.19

Interpretation: The mean value (3.19) suggests that operational flexibility is actively practiced, allowing firms to adjust to environmental changes efficiently.

Employee Engagement

S/N	Statement	SA	A	D	SD	Mean	Std. Dev
1	Employees are motivated to contribute ideas for improvement.	98	80	22	10	3.27	0.84
2	Staff are committed to achieving the organization's goals.	100	82	20	8	3.30	0.82
3	The firm recognizes and rewards employee efforts.	92	84	26	8	3.25	0.88
4	Employees cooperate well with one another.	94	86	22	8	3.28	0.83
5	Communication between management and staff is effective.	90	88	24	8	3.24	0.86
6	Employees remain productive even under pressure.	88	86	24	12	3.19	0.90

Aggregate Mean = 3.25

Interpretation: The average mean score of 3.25 indicates that employees are generally engaged, motivated, and cooperative, which enhances resilience and effectiveness.

Organizational Effectiveness

S/N	Statement	SA	A	D	SD	Mean	Std. Dev
1	The firm consistently meets its production targets.	94	86	22	8	3.27	0.84
2	The organization maintains a stable customer base.	92	88	20	10	3.25	0.85
3	Our firm is profitable despite market challenges.	88	84	26	12	3.18	0.90
4	Product quality is consistently maintained.	100	80	22	8	3.29	0.82
5	The firm adapts effectively to environmental changes.	96	84	22	8	3.28	0.83
6	The organization enjoys strong market reputation.	94	82	24	10	3.26	0.85

Aggregate Mean = 3.26

Interpretation: The firms demonstrate a high level of effectiveness through profitability, adaptability, and product quality stability.

Test of Hypotheses

Hypothesis One (H_{01}): *Adaptive leadership has no significant effect on the effectiveness of beverage firms in South-East Nigeria.*

Variables	N	r	p-value	Decision
Adaptive Leadership & Organizational Effectiveness	210	0.732	0.000	Reject H_{01}

Interpretation: The Pearson correlation coefficient ($r = 0.732$, $p < 0.05$) indicates a strong positive and statistically significant relationship between adaptive leadership and organizational effectiveness. This implies that adaptive leadership significantly enhances firm effectiveness in the South-East beverage industry.

Hypothesis Two (H_{02}): *Operational flexibility has no significant influence on the effectiveness of beverage firms in South-East Nigeria.*

Variables	N	r	p-value	Decision
Operational Flexibility & Organizational Effectiveness	210	0.701	0.000	Reject H_{02}

The result ($r = 0.701$, $p < 0.05$) shows a strong and significant positive correlation between operational flexibility and organizational effectiveness. This means that firms that maintain flexible operations are more likely to sustain performance and adapt efficiently to changes.

Hypothesis Three (H_{03}): *Employee engagement has no significant impact on the effectiveness of beverage firms in South-East Nigeria.*

Variables	N	r	p-value	Decision
Employee Engagement & Organizational Effectiveness	210	0.768	0.000	Reject H_{03}

The Pearson correlation coefficient ($r = 0.768$, $p < 0.05$) reveals a strong positive relationship between employee engagement and organizational effectiveness. This suggests that highly engaged employees contribute meaningfully to the achievement of organizational goals and sustained performance.

Discussion of Findings

The discussion of findings provides an interpretation of the statistical results in relation to existing empirical studies and theoretical frameworks guiding this research. The study examined the relationship between organizational resilience and organizational effectiveness

of beverage firms in South-East Nigeria, focusing on three dimensions: adaptive leadership, operational flexibility, and employee engagement.

Adaptive Leadership and Organizational Effectiveness

The result of the first hypothesis revealed a strong and positive relationship between adaptive leadership and organizational effectiveness ($r = 0.732$, $p < 0.05$). This finding implies that beverage firms in South-East Nigeria with leaders who demonstrate adaptability, responsiveness, and foresight are more likely to sustain effectiveness in dynamic and uncertain business environments.

This result aligns with the findings of **Akpan and Effiong (2020),**who discovered that adaptive leadership and participatory decision-making significantly enhanced profitability, service quality, and customer retention among service firms in AkwaIbom State. Similarly, **Akintunde and Okoro (2021)**reported that leadership adaptability was a significant predictor of firm effectiveness and profitability among indigenous manufacturing firms in South-West Nigeria. Both studies confirm that adaptive leadership practices promote resilience and enable firms to maintain stability and competitiveness during turbulence.

Furthermore, **Duchek (2020)** conceptualized organizational resilience as a capability-based process consisting of anticipation, coping, and adaptation. This supports the current study's findings, showing that adaptive leadership facilitates continuous learning and the ability to respond effectively to external shocks. Within the Nigerian context, **Akinbode and Alaka (2019)** also found that leadership adaptability and employee commitment improved firms' recovery and post-crisis performance.

From the lens of the **Dynamic Capabilities Theory (Teece, Pisano, &Shuen, 1997)**, adaptive leadership can be seen as a core mechanism that enables firms to sense, seize, and reconfigure resources in response to environmental changes. Thus, adaptive leaders enhance the organization's ability to build and maintain resilience, thereby improving overall effectiveness.

Operational Flexibility and Organizational Effectiveness

The analysis of the second hypothesis revealed a significant positive relationship between operational flexibility and organizational effectiveness ($r = 0.701$, $p < 0.05$). This suggests that firms that maintain flexible operational systems—such as decentralized decision-making, process innovation, and quick response to market changes—are better positioned to sustain performance and effectiveness.

This finding corroborates the study by **Burnard and Bhamra (2021),** which found that operational flexibility and leadership commitment are strong predictors of sustained performance among manufacturing firms in the United Kingdom. Likewise, **Amah and Baridam (2021)** emphasized that strategic flexibility and proactive leadership enhance stability and competitiveness of manufacturing firms in Nigeria, particularly during environmental turbulence.

The results are consistent with **Akintunde and Okoro (2021),** who found that operational flexibility significantly predicted firm performance and profitability. These findings jointly reinforce that operational flexibility serves as a resilience mechanism, allowing beverage firms in South-East Nigeria to adapt efficiently to disruptions such as raw material shortages or regulatory shifts.

From the **Dynamic Capabilities perspective**, operational flexibility enables firms to reconfigure internal processes to align with changing market and environmental demands. This capacity to adapt operational systems reflects a key source of sustained organizational effectiveness. Similarly, under the **Resource-Based View (Barney, 1991),** flexibility represents a valuable and rare intangible resource that enhances competitive advantage and improves organizational outcomes.

Employee Engagement and Organizational Effectiveness

The third hypothesis revealed a strong and significant positive relationship between employee engagement and organizational effectiveness ($r = 0.768$, $p < 0.05$). This finding indicates that engaged employees—those who are emotionally committed, motivated, and involved in organizational processes play a crucial role in enhancing firm performance and effectiveness. This aligns with **Okechukwu and Nwosu (2022),** who found that employee engagement and innovation practices had strong positive effects on business performance indicators such as growth, market share, and customer satisfaction among SMEs in South-East Nigeria. Similarly, **Akpan and Effiong (2020)** reported that employee participation significantly improved service quality and profitability among service firms.

These findings further validate the proposition of the **Resource-Based View**, which posits that organizational resilience is built upon intangible assets such as human capital, engagement, and commitment. When beverage firms cultivate employee engagement, they strengthen their internal capacity to withstand shocks and achieve sustained effectiveness. Engaged employees contribute to innovation, operational continuity, and strategic renewal—core components of organizational resilience.

The findings of this study lend empirical support to both the **Dynamic Capabilities Theory** and the **Resource-Based View (RBV).** From the dynamic capabilities standpoint, resilience mechanisms: adaptive leadership, operational flexibility, and employee engagement enable beverage firms to reconfigure their resources to match changing environmental conditions. From the RBV perspective, these resilience dimensions constitute valuable, rare, and inimitable organizational resources that collectively enhance long-term effectiveness and competitive advantage.

Summary of Findings

1. Adaptive leadership has a **strong and significant effect** on the effectiveness of beverage firms ($r = 0.732$, $p < 0.05$).
2. Operational flexibility shows a **positive and significant influence** on organizational effectiveness ($r = 0.701$, $p < 0.05$).

3. Employee engagement exhibits a **significant and positive relationship** with organizational effectiveness ($r = 0.768$, $p < 0.05$).

Conclusion

Based on the empirical findings, the study concludes that organizational resilience significantly enhances the effectiveness of beverage firms in South-East Nigeria. Specifically, adaptive leadership fosters quick decision-making and innovative problem-solving during crises; operational flexibility ensures firms can efficiently adjust to changing production and market conditions; and employee engagement strengthens internal commitment and collective performance.

The results further substantiate the relevance of the Dynamic Capabilities Theory, which posits that organizations that can sense, seize, and reconfigure resources in response to change gain a sustainable competitive advantage. Similarly, the Resource-Based View underscores resilience as a strategic, intangible resource that contributes to long-term organizational effectiveness and competitiveness.

In essence, resilient beverage firms in the South-East are better positioned to withstand market shocks, maintain operational stability, and achieve superior performance outcomes.

Recommendations

In light of the findings and conclusions, the following recommendations are made:

1. **Promote Adaptive Leadership Development:** Beverage firms should invest in leadership training programs that emphasize adaptability, creativity, and proactive problem-solving. Managers should be encouraged to lead with flexibility and foresight to improve responsiveness to environmental challenges.
2. **Enhance Operational Flexibility:** Firms should implement decentralized decision-making and adopt modern technologies that allow for quick adaptation to production and supply chain changes. Continuous improvement practices such as lean management and agile operations should be encouraged.
3. **Strengthen Employee Engagement:** Management should foster a participatory work culture where employees are actively involved in goal-setting, decision-making, and innovation processes. Recognition, career development opportunities, and fair compensation should be prioritized to enhance employee morale and commitment.

Contribution to Knowledge

This study contributes to existing literature by providing empirical evidence on the relationship between organizational resilience and effectiveness within the Nigerian beverage industry context. It extends the application of the Dynamic Capabilities Theory and Resource-Based View to an emerging market, demonstrating how adaptive leadership, operational flexibility, and employee engagement jointly drive firm effectiveness.

Suggestions for Further Studies

1. Future research may explore the moderating role of organizational culture or technological innovation on the relationship between resilience and effectiveness.
2. Comparative studies can be conducted across different sectors such as banking, telecommunications, or manufacturing to generalize the findings.
3. Longitudinal research designs could be used to examine how resilience capabilities evolve over time and their long-term effects on organizational sustainability.

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