

CLIMATE CHANGE RESILIENCE IN TODAY'S 21ST CENTURY: DRIVING TOWARDS ORGANISATIONAL EFFECTIVENESS

Dr. Nwata, Ulunwa Philip¹; Jacob, Madighi Ph.D² & Dr. Sandra Chidinma Jacob

¹Lecturer in Department of Business Administration
University of Agriculture and Environmental Sciences, Umuagwo, Imo State, Nigeria
nwataulunwaphilip@gmail.com
07035211408

²Ph.D. in Management (Organisational Behaviour)
madighi.jacob@iaue.edu.ng; jacobmadighi1@gmail.com
07033709410

³Lecturer in Department of Marketing/Entrepreneurship/Procurement
Faculty of Management Sciences
Federal University of Otueke, Bayelsa State, Nigeria
sandralyn_nma@yahoo.com
08035419195

Abstract

This study examines the essential function of climate change resilience in improving organisational efficacy. The stimulus for this paper was drawn from the increasing frequency and severity of extreme weather events, the growing recognition of the need for sustainable business practices, global policy landscape, including international agreements such as the Paris Agreement, and the potential for significant economic and social impacts resulting from climate change. The paper identified climate change resilience strategies that organizations can adopt in order to enhance their effectiveness. Among others, the implications of this paper are predicated on the fact that the knowledge on the concept will help managers develop strategies that would help them navigate through climate change while enhancing their effectiveness.

Keywords: Climate change resilience, 21st century, strategies and organisational effectiveness.

Introduction

Climate change is characterised as a long-term statistical variance, generally lasting a decade or more (Ogbuabor & Egwuchukwu, 2017). It relates to the frequency and magnitude of anomalous climatic events, along with the gradual yet persistent increase in global average surface temperature. Climate change is a significant threat that adversely affects humans, natural ecosystems, and corporate entities in both developed and developing nations worldwide. Developed countries consider the impact of climate change as less severe due to natural advantages, advanced adaption mechanisms, high technology, mechanised agriculture systems, and wealth status. These factors have enabled industrialised economies to alleviate the worst effects of climate change. In underdeveloped nations like Nigeria, the consequences of climate change are profoundly severe due to increased temperatures, limited adaptation capacity, and the lack of early warning systems for individuals and businesses.

The African continent contributes merely 3% of global greenhouse gas emissions, yet it is one of the most vulnerable regions to climate change, expected to experience some of its most drastic impacts (Notre Dame Global Adaptation Initiative, 2023). The African Climate Change Summit revealed that Africa is the most vulnerable continent to the impacts of climate change (Chibundu, 2023).

The above symbolizes that Africa inclusive of Nigeria is yet to follow the Ts and the Dots of the resolution as most individuals and corporate firms seem not to enshrine climate change resilience strategies that would smoothen their operations and effectiveness while conducting business.

On a general note, climate crisis across the globe presents extreme dangers to government and businesses. Consequently, governmental and corporate entities must engage in addressing these climate concerns specific to them, since it impacts their social, environmental, and economic operations. Although the government is tasked with creating and enforcing laws that reduce business-related difficulties, it is the duty of business managers to develop strategies that lessen the environmental effects of their operations and adjust their plans to respond to the consequences of climate crises (Zolnikov, 2019). The effects of the global climate catastrophe vary among economies and types of organisations. Each economy and industry faces distinct challenges and potential obstacles arising from climate change. Considering that climate change is a worldwide process, academics have demonstrated considerable interest in comprehending its local impacts. Consequently, contemporary organisational effectiveness will not improve without the right use of climate change resilience strategies by corporate entities in their operations.

The impacts of climate change in Nigeria are increasingly evident. Recent estimates predict that climate change might lead to a reduction of up to 11% in the nation's Gross Domestic Product (GDP), with projections indicating an increase to between 6% and 30% by 2050 (Anabaraonye et al., 2019). The country could face financial losses between 100 billion and 460 billion US dollars as a result of the climate crisis by 2050. By implementing suitable adaptation measures, organisations could decrease the amount. Moreover, developing (low-latitude) nations will endure significant repercussions from climate change for various reasons. Owing to their proximity to the equator, these nations are already facing increased temperatures that are anticipated to exacerbate in the future. A substantial portion of the GDP of developing countries is generated from agriculture and other climate-sensitive sectors, leading to pronounced effects on their GDP (Asokoro-Ogaji, 2020; Mendelsohn, 2012). Third, the instability of governments and the inadequacy of infrastructure and institutions in impoverished nations may hinder their ability to conduct effective climate change mitigation

initiatives and establish vibrant markets. These concerns highlight the imperative for immediate climate change resilience strategies at both macro and local levels, including organisations.

Drawing from the above precedents, this paper explores on climate change resilience strategies that corporate entities would adopt to enhance organisational effectiveness in today's 21st century.

REVIEW OF RELATED LITERATURE

Theoretical Framework

This research is based on the dynamic capacities theory of management. In their 1997 article, "Dynamic Capabilities and Strategic Management," David J. Teece, Gary Pisano, and Amy Shuen introduced the concept of dynamic capabilities. The concept of dynamic capabilities refers to an organization's ability to adjust and reorganise its resources and competencies in response to changing conditions (Folke, 2006; Teece, 2007). The principles of dynamic capacity theory are based on the idea that businesses operate within environments characterised by unpredictability, complexity, and rapid change. In such circumstances, static resources and competencies may be inadequate to maintain a competitive edge over the long run. Consequently, a firm's capacity to dynamically generate and reorganise its resources in reaction to fluctuating market conditions is essential for sustaining a competitive edge (Teece et al., 1997).

The implications of the above theory to the concept under study are predicated on the fact that organisations that are more resilient to climate change are better positioned to maintain their operational continuity and minimize the negative impacts of such disruptions. Also, resilient organisations are better equipped to manage risks effectively and maintain their long-term sustainability (Akpan et al., 2022). Organisations that demonstrate a commitment to climate change resilience through sustainable practices, emission reductions and adaptation strategies can enhance their reputation as responsible corporate citizens. This can lead to improved stakeholder trust, brand loyalty and competitive advantage in the marketplace. Resilient organisations that proactively integrate climate considerations into their operations are better positioned to navigate evolving regulatory landscapes and avoid potential penalties or liabilities associated with non-compliance. By recognizing the interconnectedness between environmental sustainability and business success, resilient organisations can identify new opportunities for innovation, product development, market expansion and cost savings. They can also build strategic partnerships with other resilient entities across sectors to address shared climate challenges collaboratively.

Concept of Climate Change Resilience

The Union of Concerned Scientists (2022) defines climate resilience as the capacity to effectively confront and alleviate the impacts of climate change while preventing their intensification. A climate-resilient civilisation would be low-carbon and equipped to address the difficulties of a warming planet. Resilience to climate change refers to the capacity to anticipate, react to, and recuperate from the impacts of detrimental climatic events while minimising damage to social welfare, the economy, and the environment (Mehryar, 2022). This includes several actions pertaining to legislation, infrastructure, services, planning, education, and communication. Thus, enhancing climate resilience requires a thorough and diversified approach to bolster communities' social, psychological, ecological, physical, and financial capacities to endure and recover from the impacts of climate change.

Given the previously mentioned factors, resistance to climate change is crucial for Nigerian organisations, as it constitutes one of the most pressing issues of our day. Nearly fifty percent of the global population is markedly vulnerable to climate-related impacts, such as unpredictable weather patterns, melting ice sheets, increasing sea levels, floods, and droughts. Currently, thirty percent of the population experiences deadly heat stress, a statistic projected to rise to 50–70 percent by 2100 (United Nations Industrial Development Organisation, 2023).

More so, Kim (2023) asserted that with the growing concern over climate change, organisations are starting to take notice of the risks that come with it. Unfortunately, many organisations are still not fully aware of the consequences of ignoring these risks, which can lead to significant business disruption and financial losses.

Concept of Organisational Effectiveness

Effectiveness simply put is “the achievement of objectives” (Wehrich et al., 2008). In line with the above, organisational effectiveness refers to the achievement of objectives by a business entity. They are the outcomes a corporation seeks to attain to fulfil its long-term corporate vision.

The concept of organisational effectiveness is multidimensional in nature. However, it entails the use of resources, aligning strategies with goals, fostering a positive work environment, and continuously improving processes and outcomes in order for the organisation to survive, grow and develop. Organisational effectiveness is one of the most critical functions of every business entity or institution (Eketu, 2018). It is crucial for the long-term prosperity of commercial entities and companies. It enables businesses to function more efficiently by maintaining their focus on objectives (Devon, 2019).

Among others, organisational effectiveness is measured in terms of productivity, employee engagement, profitability, service delivery, customer satisfaction and shareholder’s return. Consequently, it is essential to recognise that organisational effectiveness serves as an indicator of corporate success. This implies that when an organisation is effective, it is likely to succeed in business.

The Nexus between Climate Change Resilience in today’s 21st Century and Organisational Effectiveness

Climate change resilience strategies can substantially improve organisational effectiveness by enabling firms and institutions to adapt to the difficulties presented by a changing climate. These strategies include proactive measures to mitigate the impacts of climate change on operations, supply chains, and infrastructure.

By implementing resilience strategies, organisations can improve their ability to withstand and recover from extreme weather events, resource scarcity and other climate-related disruptions. This ultimately leads to increased operational stability, cost savings and improved reputation among stakeholders.

When viable strategies are adopted to manage climate change in the workplace, vulnerability to climate-related risks tends to be minimized. Organisations which invest in resilient infrastructure and diversify supply chains reduce the risk of disruption to extreme weather events or resource shortages. By doing so, they can minimize the potential for costly downtime and loss of productivity. Proactively addressing climate-related risks can result in long-term cost savings by avoiding or minimizing the impact of disruptive events. For

example, energy-efficient technologies and renewable energy sources can help organisations reduce their carbon footprint and lower energy costs. Additionally, investing in sustainable practices can lead to operational efficiencies and reduced resource consumption, further contributing to financial savings.

Prioritizing climate change resilience can also gain a competitive advantage (Adger et al., 2011). As consumers and investors place greater importance on sustainability and environmental stewardship, organisations that exhibit a dedication to resilience and sustainability may draw more customers and investors.

Moreover, regulatory requirements related to climate change are becoming more stringent in many jurisdictions, making it advantageous for organisations to proactively address these issues. Organisations can cultivate trust with stakeholders, including employees, customers, suppliers, and local communities, by exhibiting a dedication to environmental stewardship and community resilience. This may result in enhanced brand reputation and fortified ties with essential stakeholders.

Strategies for Climate Change Resilience in today's 21st Century towards Organisational Effectiveness

The imperative for resilience strategies in modern workplaces is a critical issue that has received increased focus due to the escalating impacts of climate change on businesses and organisations (Singh, 2022).

Importantly, climate change poses a range of risks to workplaces, including extreme weather events, supply chain disruptions, increased operational costs and potential damage to infrastructure. Consequently, it is essential for corporate management to formulate and execute resilience strategies to adapt to and alleviate the effects of climate change throughout business operations. Among others, strategies for climate change resilience in today's 21st century towards organisational effectiveness include:

Developing Emergency Plans: As the consequences of climate change become increasingly evident, organisations are acknowledging the necessity to plan for extreme weather events, natural disasters, and other emergencies that may result from shifting climatic circumstances. Incorporating emergency planning into broader resilience strategies is essential to ensure the continuity of operations during climate change-induced disruptions (Ghazali et al., 2018).

Climate change poses numerous risks to workplaces, including heightened frequency and severity of climatic events such as storms, floods, wildfires, and heatwaves. Such incidents can impede business operations, jeopardise staff safety, and compromise infrastructure.

By developing an emergency plan as part of their resilience strategies, organisations can proactively identify potential climate-related hazards, assess vulnerabilities and implement measures to mitigate risks and enhance preparedness. An efficient emergency plan often include components such as risk assessment, communication protocols, evacuation procedures, emergency supplies and equipment, training and drills, cooperation with external response agencies, and recovery methods. Integrating climate change considerations in these domains is essential for ensuring that organisations are adequately prepared to confront the distinct challenges posed by a shifting environment. This can mitigate disturbances to their operations.

Improving Infrastructure: Consistent improvement of infrastructure is key to promoting the effectiveness of the organisation. Moreover, investing in robust infrastructure capable of enduring extreme weather events and other climate-related disturbances is essential for organisational resilience. This may include building or retrofitting facilities to be more resistant to climate impacts (Smith & Olesen, 2010).

Employee Training: This process involves providing employees with the knowledge, skills, and capabilities necessary for efficient job performance. Training during climate change-resilient periods motivates employees to perceive challenging circumstances as chances for learning and to discover methods for adapting to change without surrendering (Karaj, 2024). Therefore, educating employees about climate change risks and resilience strategies can empower them to contribute to organisational efforts towards sustainability and resilience. Involving staff in sustainability efforts helps cultivate a feeling of environmental accountability within the organisation.

Risk Assessment and Management: This pertains to the identification, analysis, and evaluation of potential risks, with the formulation of methods to effectively mitigate or manage them. Risk assessment and management are essential elements of climate change resilience, enabling the identification of methods to alleviate the risks posed by climate change impacts on various systems, including natural, human, and built environments. It is a crucial component of climate change adaptation methods, aimed at identifying and alleviating vulnerabilities to diminish the negative effects of climate change (Al-Humaiqani & Al-Ghamdi, 2022). Organisations must perform thorough risk assessments to ascertain potential climate change effects on their operations. This involves assessing vulnerabilities, estimating the likelihood of various climate-related risks (including extreme weather events, sea-level rise, and changes in temperature and precipitation patterns), and devising strategies to manage and mitigate these risks.

Collaborating with stakeholders: Stakeholders refer to individuals, groups or organisations that have interest or concern in the operations and success of a business (Barney, 2023). Engaging with stakeholders such as local communities, governments and non-governmental organisations is essential for building resilience. Collaboration with stakeholders can facilitate the exchange of knowledge, resources and expertise to address climate-related challenges.

Implementing sustainable practices: Implementing sustainable practices is indeed a crucial component of climate change resilience strategies in the 21st-century workplace. As organisations face the challenges of climate change, it is imperative to integrate sustainable practices into their operations to bolster resilience and mitigate the impacts of environmental alterations (The Oxford Handbook of Corporate Social Responsibility, 2019). By implementing sustainable practices, businesses can diminish their carbon footprint, improve resource efficiency, and support wider initiatives to combat climate change. This proactive approach not only helps organisations adapt to the changing environmental landscape but also positions them as responsible corporate citizens committed to environmental stewardship.

Empirical Review on Climate Change Resilience and Organisational Effectiveness

Zabłocka-Kluczka and Sałamacha (2023) investigated organisational resilience as a mediating factor in the correlation between brand performance and organisational performance, especially during crises. The researchers performed empirical studies in 268 Polish organisations to examine the potential relationships. This study utilised the CAWI

approach and purposefully selected the companies. We assessed the reliability of the survey scales and subsequently constructed the mediation model to validate the hypothesised correlations among the variables. Andrew F. Hayes utilised the PS Imago Pro and Process macro for SPSS version 3.4 to perform the computations. The results demonstrated that an organization's resilience partially mediates the connection between brand and organisational success.

Hillmann et al. (2022) examined the temporal impacts of cultivating organisational resilience. To yet, empirical research has alone identified evidence that organisational resilience yields long-term advantages. The connection remains ambiguous in the short and medium term. Nonetheless, their comprehensive findings suggest that cultivating organisational resilience is beneficial as it equips a company to confront the challenges posed by climate change while simultaneously yielding financial advantages.

Kadungure et al. (2023) conducted a study on climate change resilience and the health of informal workers in Zimbabwe, namely in the cities of Harare, with a population of 2.4 million, and Masvingo, which has an urban population of 207,000. We assessed the climate-related, occupational, and environmental health risks faced by informal urban agricultural workers and plastic waste-pickers by surveys (N=418) and focus group discussions (N=207). Approximately 55% of waste-pickers and urban agriculture labourers reported that extreme heat has already curtailed their working hours and decreased their income. We highlight the interrelation of living and working situations, examine gender-specific risk differentials, and assess the effects of heatwaves, water scarcity, and floods on informal workers. Local authorities in Masvingo have initiated collaboration with informal workers to mitigate these concerns. We promote cooperatively created, multi-sectoral policies that simultaneously improve health and strengthen resilient livelihoods. Although climate change may intensify urban disparities, it may also offer distinct opportunities to stimulate action by adopting a health-oriented approach to improve livelihoods and foster more inclusive, resilient urban development trajectories.

Conclusion and Implications

In conclusion, organisations must recognise that investing in climate change resilience is both essential and a strategic necessity for sustained success, as the effects of climate change persistently emerge. By embracing resilience-building measures and actively contributing to broader resilience efforts, organisations can enhance their effectiveness while ultimately contributing to a more sustainable future.

Drawing from the above conclusion, this paper makes the following predictions with managerial implications. Firstly, by improving knowledge of the antecedents of climate change resilience and organisational effectiveness, this paper will help managers develop strategies that would help them navigate through climate change while enhancing their effectiveness. Secondly, from the organisational perspective, we consider that organisation may review its capacity to improve its climate change resilience system for developing strategies that would enhance her effectiveness in business.

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