NAVIGATING DEEP UNCERTAINTY: BEHAVIORAL STRATEGY AND ORGANIZATIONAL RESILIENCE IN TIMES OF CRISIS, A CASE STUDY OF THE IGBO APPRENTICESHIP PROGRAM IN ONITSHA.

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ABSTRACT

Crises marked by deep uncertainty continue to expose vulnerabilities in global business systems, particularly in fragile economies where formal support structures are weak. This study examines the Igbo Apprenticeship Program (IAP) in Onitsha Main Market, Nigeria, as a community-driven model of resilience. The research explores how indigenous institutions enable entrepreneurs to adapt and thrive during systemic shocks by embedding behavioral strategies and collective safety nets into everyday practice. Using a qualitative case study approach, data were collected through interviews, ethnographic observation, and archival analysis. Thematic findings reveal that traders rely on heuristics, intuition, and trust-based decision-making to navigate volatile environments. The IAP institutionalizes resilience through mentorship, intergenerational knowledge transfer, and settlement practices that redistribute resources and ensure entrepreneurial continuity. Unlike formal organizations that depend on structured contingency planning, the IAP leverages cultural norms, reciprocity, and communal enforcement to sustain businesses during crises such as currency devaluations, civil unrest, and the COVID-19 pandemic. By embedding risk-sharing and restorative mechanisms into apprenticeship contracts, the system demonstrates resilience as a collective, culturally grounded phenomenon rather than a purely organizational property.

This study contributes to resilience theory by bridging indigenous entrepreneurship with behavioral strategy, highlighting how informal institutions foster adaptability under deep uncertainty. Practically, it suggests that policymakers and development actors should recognize and integrate community-based models like the IAP into broader frameworks of inclusive economic resilience, offering lessons relevant not only to African economies but also to global contexts increasingly defined by volatility and unpredictability.

KEYWORDS: Crisis management, Deep uncertainty, Behavioral strategy, Organizational resilience, Indigenous entrepreneurship, Igbo Apprenticeship Program, Informal institutions, Trust networks, Mentorship, Risk-sharing

Introduction

Background of the Study:

Globally, the business environment of the twenty-first century is increasingly defined by volatility, complexity, and turbulence. Crises once considered rare and extraordinary have become recurrent, destabilizing organizations and exposing the inadequacy of traditional strategic planning tools. The COVID-19 pandemic, for example, disrupted global supply chains, froze mobility, and forced organizations to navigate uncertainty with limited information and rapidly changing conditions (Morales & Prasetyo, 2025). Beyond pandemics, geopolitical conflicts such as the Russia–Ukraine war, trade tensions between major economies, and the cascading effects of climate change have compounded systemic shocks. These disruptions are often nonlinear and interdependent, creating what Taleb (2007) describes as "Black Swan" events, low-probability but high-impact occurrences that cannot be effectively predicted or managed through conventional risk assessment models.

In this context, organisations across sectors confront what scholars' term deep uncertainty situations where actors cannot confidently assign probabilities to future events, outcomes, or strategies (Walker, Lempert, & Kwakkel, 2013). Unlike calculable risks, deep uncertainty undermines the predictive capacity of probabilistic forecasting and necessitates adaptive, iterative, and often experimental responses. For many firms, especially in fragile economies, navigating deep uncertainty is not an episodic challenge but an enduring reality.

Behavioral Strategy in Conditions of Uncertainty

Traditional strategy scholarship emphasises rational choice, structured analysis, and long-term planning. Yet, as Powell, Lovallo, and Fox (2011) argue, real-world strategic decision-making is deeply shaped by bounded rationality, heuristics, and cognitive biases. This recognition has fueled the emergence of behavioural strategy, a research stream that integrates insights from psychology, behavioural economics, and organisational studies. Behavioural strategy emphasises how decision-makers rely on rules of thumb, experiential knowledge, and social cues to make choices when information is incomplete or ambiguous.

During crises such as the COVID-19 pandemic, behavioral strategy becomes indispensable. Organisational leaders often cannot wait for complete data before acting; instead, they must rely on judgment, intuition, and adaptive experimentation (Gavetti, Levinthal, & Ocasio, 2007). These behavioral mechanisms, though prone to biases, can foster resilience by enabling quicker adaptation and improvisation. Importantly, they highlight that organisations are not perfectly rational entities but social systems embedded in culture, norms, and networks of trust.

Organizational Resilience in Developing Economies

Organisational resilience has emerged as a central concept in understanding how actors withstand and adapt to disruption. Defined as the capacity to absorb shocks, reconfigure, and sustain functionality in adverse conditions (Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017), resilience research spans engineering, ecological, and socio-organisational perspectives. While much scholarship has examined resilience in advanced economies and large corporations, less attention has been paid to how resilience operates in developing contexts where institutions are weaker and volatility is endemic.

In many African economies, resilience does not emerge from formalised contingency plans or sophisticated forecasting systems. Instead, it is embedded in social networks, informal institutions, and community-based practices (Lengnick-Hall, Beck, & Malone, 2021). For micro and small enterprises, the backbone of many developing economies resilience is cultivated through adaptability, improvisation, and mutual support. As Morales and Prasetyo (2025) demonstrate in their study of SMEs during COVID-19, resourcefulness and agility, rather than structured strategies, often determine survival.

This perspective is crucial for reframing resilience research: it suggests that resilience is not only a technical property of organisations but also a cultural and institutional phenomenon. Indigenous practices, traditional institutions, and local social norms play a decisive role in shaping how communities navigate crises. Yet, these dimensions remain underexplored in mainstream resilience and strategy literature.

Igbo Apprenticeship Program as a Model of Resilience

The Igbo Apprenticeship Program (IAP), practiced in Nigeria's Onitsha Main Market, one of the largest commercial hubs in Africa offers a distinctive example of resilience through indigenous institutions. The IAP is a centuries-old system whereby young apprentices (known as ndi boy) are placed under the mentorship of established traders, learn the intricacies of commerce, and are eventually "settled" with financial capital or business assets to start their own ventures (Ekeh, 2021). More than an economic arrangement, the IAP is grounded in cultural values of trust, reciprocity, and communal obligation.

This system has enabled generations of Igbo traders to thrive in environments characterised by political instability, weak formal institutions, and economic volatility. During crises such as Nigeria's civil war (1967–1970) and repeated currency devaluations, the IAP has sustained entrepreneurial continuity by redistributing resources, ensuring succession, and embedding risk-sharing mechanisms. Apprenticeship contracts, though often informal, are enforced by community norms and reputational sanctions. In effect, the IAP provides a living laboratory of resilience, demonstrating how community-based institutions can adapt and flourish under deep uncertainty.

Research Gap and Justification

Despite its recognition by historians, sociologists, and development scholars, the IAP has received limited attention in organizational resilience and behavioral strategy research. Much of the existing literature privileges firm-centric, formalized models rooted in Western organizational contexts. Consequently, there is insufficient theorization of how indigenous systems, particularly in Africa, foster resilience in times of crisis. Exploring the IAP provides an opportunity to bridge this gap by situating resilience within a cultural and institutional framework that transcends conventional boundaries of firm-level analysis.

This study therefore, seeks to contribute to theory and practice by integrating indigenous entrepreneurship into the broader discourse on organisational resilience and behavioral strategy. By analysing how the IAP enables actors to navigate uncertainty, adapt strategically, and sustain continuity, the study offers insights relevant not only to African economies but also to global debates on resilience in crisis-prone environments.

Research Objectives and Questions

The primary objective of this research is to examine how the Igbo Apprenticeship Program fosters organisational resilience under conditions of deep uncertainty. Specifically, the study aims to:

1. Analyze how participants in the IAP adapt their strategies during crises.
2. Identify the behavioral mechanisms—such as heuristics, trust, and mentorship that enable resilience within the system.
3. Assess how the IAP challenges or extends existing theories of organizational resilience and behavioral strategy.

Accordingly, the guiding research questions are:

- How do traders within the IAP navigate deep uncertainty and systemic shocks?
- What institutional mechanisms of resilience are embedded in the apprenticeship system?
- In what ways does the IAP contribute to or challenge dominant theoretical models of resilience and strategy?

By addressing these questions, this study not only advances scholarly understanding but also underscores the practical relevance of indigenous institutions in shaping adaptive capacity in uncertain times.

Theoretical Framework

Organisations operate in environments marked by increasing volatility, uncertainty, complexity, and ambiguity (VUCA). While conventional strategy assumes predictability and control, the realities of global crises such as the COVID-19 pandemic, geopolitical instability, and economic shocks demonstrate that firms often face deep uncertainty, where both outcomes and probabilities are unknown (Walker, Lempert, & Kwakkel, 2013). Under these conditions, risk management approaches premised on statistical modeling and forecasting lose efficacy, requiring alternative mechanisms of strategic adaptation. This study draws upon three interrelated constructs deep uncertainty, behavioral strategy, and organisational resilience to examine how the Igbo Apprenticeship Program (IAP) constitutes a distinctive resilience system.

Deep Uncertainty and the Need for Adaptive Systems

Deep uncertainty refers to contexts in which decision-makers lack clarity on future states, causal mechanisms, or even possible outcomes (Taleb, 2007). Unlike measurable risk, uncertainty here is indeterminate and resistant to probabilistic modeling. For firms in fragile economies, deep uncertainty is not episodic but structural, shaped by recurrent shocks such as inflation, trade restrictions, pandemics, and sociopolitical instability (Morales & Prasetyo, 2025). The implication is that organizational survival depends less on predictive capacity and more on adaptive systems that can improvise and evolve in real time.

Behavioral Strategy as a Response Mechanism

Behavioral strategy provides a lens for understanding how organisations act under such conditions. It challenges the rational-choice assumptions of classical strategy by incorporating insights from psychology and behavioral economics (Powell, Lovallo, & Fox, 2011). Decision-making under uncertainty is shaped by bounded rationality (Simon, 1997), heuristics, and biases, but these same mechanisms can generate adaptive advantages. Heuristics enable fast, frugal decision-making, while intuition, shaped by experience, guides choices when information is incomplete (Gavetti, Levinthal, & Ocasio, 2007).

In crisis contexts, behavioral strategy emphasises flexibility, learning, and embedded trust networks over rigid plans (Williams et al., 2017). Particularly in informal economies, where contracts and regulations may be weakly enforced, decision-making relies heavily on social trust, reciprocity, and community norms. This insight is critical for analysing indigenous systems such as the IAP, where strategy is culturally embedded rather than formally codified.

Organisational Resilience and Informal Institutions

Organisational resilience is broadly defined as the capacity to absorb shocks, adapt, and continue functioning despite adversity (Lengnick-Hall, Beck, & Malone, 2021). In developed economies, resilience research often emphasises dynamic capabilities, redundancy, and engineered systems of recovery. By contrast, in developing economies, resilience is often embedded in social networks and informal institutions that distribute risk and facilitate adaptation (Béné, 2020). Informal institutions operate as adaptive governance systems that rely on trust, reciprocity, and collective enforcement rather than formal contracts.

The IAP exemplifies this dynamic. It embeds resilience not in organizational structures but in community norms and apprenticeship contracts. Through mentorship, risk-sharing, and eventual settlement, the system ensures continuity across generations. This mechanism allows entrepreneurial capacity to regenerate even after systemic shocks such as civil war, economic downturns, or supply chain disruptions.

The Igbo Apprenticeship Program as a Resilience Model

The IAP can be conceptualised as a community-based resilience system where behavioral strategies and indigenous institutions intersect. Three mechanisms are central:

1. Behavioral Adaptation: Apprentices and masters rely on heuristics, intuition, and experience to adapt to crises. For example, traders pivot quickly to alternative goods or suppliers when disruptions occur.

2. Institutionalized Mentorship and Settlement: The structured apprenticeship process ensures knowledge transfer, succession, and redistribution of resources, creating continuity beyond individual firms.

3. Social Capital and Risk-Sharing: Trust-based contracts and community enforcement substitute for weak formal institutions, reducing transaction costs and buffering shocks.

These mechanisms illustrate how resilience can emerge from cultural and institutional contexts rather than from engineered organizational processes. By situating the IAP within the framework of deep uncertainty, behavioral strategy, and organizational resilience, this study highlights the need to broaden theoretical models to account for indigenous systems of adaptation.

Conceptual Model

This framework provides the theoretical foundation for analyzing the IAP as a unique resilience system. It extends resilience literature by highlighting indigenous, community-driven mechanisms that operate outside conventional organizational boundaries. By integrating behavioral strategy and informal institutions, the study positions the IAP as a globally relevant model for navigating crises in volatile environments.

Construct	Definition	Key Indicators / Dimensions	Examples in IAP Context
Deep Uncertainty	Situations where outcomes and probabilities cannot be reliably predicted (Walker et al., 2013).	• Volatility of markets • Policy/regulatory instability • Unforeseen shocks (pandemics, wars, inflation)	• Currency devaluation disrupting trade • COVID-19 supply chain collapse • Import/export restrictions in Nigeria
Behavioral Strategy	Strategic responses shaped by bounded rationality, intuition, heuristics, and social norms (Powell et al., 2011).	• Reliance on intuition & experiential knowledge • Use of heuristics in decision-making • Influence of cognitive biases • Embedded trust in relationships	• Trader choosing suppliers based on trust, not contracts • Rapid shifts in goods sold during crisis • Apprentices copying mentors' rules of thumb
Organizational Resilience	Capacity of organizations/communities to absorb shocks, adapt, and sustain continuity (Williams et al., 2017).	• Absorptive capacity (withstanding shocks) • Adaptive	• Apprentices re-entering business after loss • Masters redistributing capital to

		capacity (adjusting to new conditions) • Recovery capacity (bouncing back post-crisis)	apprentices • Community trust networks facilitating recovery
Igbo Apprenticeship Program (IAP)	Indigenous system of entrepreneurial mentorship, settlement, and wealth distribution.	• Mentorship (knowledge transfer, skill building) • Settlement (financial empowerment at end of apprenticeship) • Reciprocity & trust norms • Succession & continuity	• Senior trader funding ex-apprentice's startup • Informal contracts enforced by social reputation • Inherited networks sustaining trade resilience

Table: Constructs and Indicators

Methodology

This study adopts a qualitative case study design to investigate how the Igbo Apprenticeship Program (IAP) in Onitsha Main Market facilitates resilience under conditions of deep uncertainty. A case study approach is particularly appropriate when the aim is to generate contextualized insights into complex social and organizational processes (Yin, 2018). The IAP represents a unique indigenous institution embedded in cultural practices and informal economic structures. Examining it as a bounded case allows for an in-depth exploration of how behavioral strategies and organizational resilience are enacted in a real-world setting.

The choice of a qualitative design reflects the exploratory nature of the research.

Quantitative surveys, while useful for measuring patterns, would be inadequate in capturing the tacit knowledge, trust dynamics, and lived experiences that sustain the IAP. Instead, a qualitative case study provides the flexibility to triangulate data from multiple sources, including interviews, ethnographic observations, and documentary materials, thereby ensuring a rich and nuanced understanding.

The study is situated in Onitsha Main Market, Anambra State, Nigeria widely regarded as one of the largest open-air markets in Africa. The market serves as the nucleus of Igbo entrepreneurship and is the most prominent site where the IAP is actively practiced. The setting is significant because it reflects the dynamics of deep uncertainty in a developing economy: fluctuating exchange rates, inconsistent government policies, infrastructural deficiencies, and recurrent crises such as pandemics or civil unrest. Onitsha's dense trading networks and reliance on informal systems of coordination provide a fertile ground for examining resilience mechanisms.

Sampling and Participants

The study employs purposive sampling to select participants directly involved in the apprenticeship system. The target groups include:

1. Masters (Oga) – Established traders who sponsor and mentor apprentices.
2. Apprentices (Nwa Boi) – Young men undergoing training under the mentorship of masters.
3. Settled Entrepreneurs – Former apprentices who have completed training and received settlement support to establish independent businesses.
4. Market Leaders – Executives of trade associations and unions who mediate disputes and uphold community norms.

Approximately 30 participants were selected to ensure diversity in age, trade sectors, and stages of involvement in the IAP. Sampling continued until theoretical saturation was reached, i.e., when new interviews yielded little additional insight (Charmaz, 2014).

Data Collection Methods

Three primary methods were employed:

1. Semi-Structured Interviews

- Conducted with masters, apprentices, and settled entrepreneurs.
- Questions explored experiences of apprenticeship, strategies for navigating crises, mechanisms of trust and reciprocity, and perceptions of resilience.

- Interviews were conducted in English and Igbo (depending on participant preference) and recorded with consent. Each lasted between 45–90 minutes.

2. Ethnographic Observation

- Immersion in Onitsha Main Market over a period of six weeks.

- Observations focused on day-to-day interactions, decision-making processes, and crisis responses (e.g., disruptions in supply or regulatory interventions).

- Field notes documented both formal and informal practices that sustain the apprenticeship program.

3. Archival and Documentary Analysis

- Review of historical accounts of the IAP, media reports, and records from market associations.

- These secondary sources provided contextual depth and complemented primary data.

This multi-method approach enabled data triangulation, enhancing the credibility and reliability of findings.

Data Analysis

Data were analysed using thematic analysis, following Braun and Clarke's (2006) six-step framework:

1. Familiarization with transcripts and field notes through repeated reading.

2. Generating initial codes focused on resilience mechanisms, behavioral strategies, and uncertainty responses.

3. Searching for themes such as mentorship, trust-based contracts, heuristic decision-making, and settlement practices.

4. Reviewing themes against the data corpus to ensure consistency.

5. Defining and naming themes in relation to the theoretical constructs of deep uncertainty, behavioral strategy, and resilience.

6. Producing the report, weaving empirical data with theoretical insights.

NVivo software was used to support coding and thematic organization, ensuring systematic handling of the qualitative data.

Trustworthiness and Rigor

Following Lincoln and Guba's (1985) criteria, four strategies were employed to ensure rigor:

- Credibility: Achieved through prolonged engagement in the field, triangulation of data sources, and member checking, where participants reviewed transcripts and thematic summaries for accuracy.
- Transferability: Thick description of context and practices enables readers to judge applicability in other settings.
- Dependability: An audit trail documented the research process, including coding decisions and reflexive notes.
- Confirmability: Researcher reflexivity was maintained to minimize bias, acknowledging positionality as an external academic observer.

Ethical Considerations

Ethical approval was obtained from a university review board prior to fieldwork. Participants provided informed consent, with assurances of confidentiality and anonymity. Pseudonyms are used in reporting to protect identities. Given the communal nature of the IAP, additional care was taken to avoid disclosing sensitive information that could harm reputations or relationships within the market. Data were securely stored in encrypted files accessible only to the research team.

Limitations of the Methodology

While the case study design offers rich insights, it also has limitations. The findings are context-specific and may not be statistically generalizable. However, the goal of qualitative research is analytical rather than statistical generalization developing concepts and theoretical insights that can inform other contexts (Yin, 2018). Furthermore, reliance on self-reported data introduces the risk of bias, though triangulation with observation and archival materials mitigated this concern.

The chosen methodology provides a robust framework for capturing the lived experiences and cultural logics underpinning the Igbo Apprenticeship Program. By combining interviews, ethnography, and archival analysis, the study reveals how indigenous systems mediate deep uncertainty through behavioral strategy and resilience. This methodological approach ensures that the insights generated are not only empirically grounded but also theoretically illuminating, enabling the IAP to be positioned as a globally relevant model of organizational resilience in times of crisis.

Findings and Analysis

Theme 1: Behavioral Adaptation under Deep Uncertainty

One of the most striking findings is the reliance of IAP participants on heuristics, intuition, and experiential learning to navigate uncertainty. Unlike formal firms that depend on market forecasts or structured risk assessments, traders in Onitsha often make rapid decisions based on rules of thumb. For example, an apprentice interviewed explained:

"When the dollar goes up and imports slow, we don't wait for government policy. We quickly switch to local goods or cheaper substitutes. It's what my oga [master] taught me don't hold on to one product too long when the market is shaking."

This illustrates behavioral strategy in practice (Powell, Lovallo, & Fox, 2011). Under deep uncertainty, bounded rationality (Simon, 1997) limits the ability to process all available information. Traders therefore adopt fast and frugal heuristics (Gigerenzer & Gaissmaier, 2011) such as shifting product lines, renegotiating supply agreements informally, or pooling resources with peers.

COVID-19 further highlighted this adaptive behavior. When international trade routes were disrupted, many apprentices and settled entrepreneurs pivoted into domestic supply chains. One case involved a textile trader who shifted into selling locally made face masks and sanitizers, guided not by formal analysis but by observing customer demand in real time. This exemplifies effectual logic (Sarasvathy, 2001)—acting with available means and adjusting based on unfolding contingencies.

Scholarly Significance: These findings underscore that behavioral adaptation in the IAP is not random but systematically institutionalized through apprenticeship. Young traders learn resilience heuristics by observing their masters. This supports Gavetti, Levinthal, & Ocasio's (2007) claim that experiential intuition becomes a strategic asset in turbulent contexts.

Theme 2: Institutionalized Mentorship and Settlement

The IAP is distinctive for its structured mentorship system and the eventual settlement process that equips apprentices to become independent entrepreneurs. Apprentices typically spend between 5–7 years under their masters, during which they not only learn trade-specific skills but also acquire behavioral strategies for navigating uncertainty. Masters provide both technical guidance (e.g., sourcing, negotiation) and informal lessons on resilience, such as how to diversify income streams or maintain liquidity in volatile times.

The settlement process marks the culmination of apprenticeship: masters provide financial capital, goods, or shop space to their apprentices to establish them as independent traders. This redistributive practice institutionalizes resilience by ensuring continuity of entrepreneurship across generations. One settled entrepreneur noted:

"I lost everything during the 2008 crash, but my oga still supported me with goods to restart. It is the way our system works no one is left to die in the market."

This reflects Lengnick-Hall, Beck, & Malone's (2021) concept of restorative capacity, where resilience is not merely about withstanding shocks but also regenerating after collapse. The settlement system embeds this restorative logic structurally into the IAP.

Additionally, mentorship facilitates intergenerational knowledge transfer. During field observations, several apprentices described how they were taught to anticipate crises by monitoring signals such as exchange rate fluctuations or government restrictions. This illustrates how behavioral strategy is socially transmitted, not individually acquired.

Scholarly Significance: Unlike Western models of organizational resilience that emphasize firm-level redundancies (Williams et al., 2017), the IAP embeds resilience at the community level. Apprenticeship ensures that entrepreneurial knowledge and resources are perpetually recycled, creating a system of resilience that extends beyond individual businesses.

Theme 3: Social Capital and Risk-Sharing

The IAP thrives in a context where formal institutions—such as contract enforcement, banking systems, or regulatory frameworks—are often unreliable. Instead, trust-based contracts and communal monitoring underpin transactions. Relationships are governed by reputation, honor, and the threat of community sanctions. Market leaders and trade unions often act as arbiters, resolving disputes and reinforcing cultural norms.

One master explained:

"If my boy betrays me, he cannot survive in this market. Everyone will know, and no one will do business with him. That fear keeps them honest."

This reliance on social capital aligns with Granovetter's (1985) theory of embeddedness, where economic action is sustained by social relations. It also reflects resilience literature emphasizing the role of network ties in enabling collective recovery (Béné, 2020).

Risk-sharing is another critical resilience mechanism. During periods of economic crisis, masters often absorb apprentices' debts, while apprentices reciprocate through loyalty and unpaid labor until stability is restored. In one observed case, a trader who lost goods in a fire was supported by fellow traders with short-term loans and goods, allowing him to restart his operations within weeks.

Such practices resonate with the concept of collective resilience (Lengnick-Hall et al., 2021), where survival depends on mutual support systems rather than isolated individual efforts. Importantly, these mechanisms challenge the dominant Western-centric models of organizational resilience, which often assume strong formal institutions and firm-level autonomy.

Scholarly Significance: The IAP demonstrates how informal institutions create resilience through reciprocity, trust, and collective sanctioning. It suggests that resilience in developing economies must be theorized not as an individual organizational property but as an emergent outcome of community-level institutions.

Discussion

Revisiting the Research Objectives

The aim of this study was to examine how organizations in contexts of deep uncertainty deploy behavioral strategies to build resilience, using the Igbo Apprenticeship Program (IAP) in Onitsha Main Market as a case study. Specifically, the research sought to (1) explore how deep uncertainty is navigated in the IAP, (2) investigate the mechanisms through which resilience is institutionalized, and (3) highlight the broader theoretical and practical lessons that can be drawn for resilience scholarship and practice.

The findings demonstrate that the IAP operationalizes resilience through three interrelated mechanisms: behavioral adaptation, mentorship and settlement, and social capital and risk-sharing. This discussion connects these findings back to the theoretical framework, outlines contributions to the literature, and considers implications for both developing and global economies.

Linking Findings to the Theoretical Framework

The framework proposed that deep uncertainty compels organizations to rely on behavioral strategies, which in turn cultivate organizational resilience. The IAP exemplifies this dynamic in several ways.

1. Deep Uncertainty as a Contextual Constant

Global crises such as COVID-19, wars, and inflationary shocks have exposed the vulnerability of firms worldwide (Taleb, 2010). In developing economies like Nigeria, uncertainty is even more acute due to institutional weaknesses and infrastructural deficits. The IAP shows that uncertainty is not treated as an anomaly but as a permanent condition. This challenges resilience frameworks that often assume stable baselines disrupted by occasional crises (Williams et al., 2017).

2. Behavioral Strategy as Adaptive Heuristics

Findings confirm Powell et al.'s (2011) view that strategy under uncertainty is often behavioral rather than purely analytical. The use of heuristics—such as diversifying product lines or switching suppliers based on intuition—enables rapid adaptation. These strategies are not idiosyncratic but are systematically transmitted through the apprenticeship model, illustrating how bounded rationality (Simon, 1997) is socially embedded.

3. Organizational Resilience as Collective Capacity

Unlike Western firms where resilience is usually framed as an individual organizational property (Lengnick-Hall et al., 2021), the IAP demonstrates that resilience can be collective and institutionalized. The mentorship-settlement system regenerates entrepreneurial capacity across generations, while social capital facilitates recovery after shocks. This reflects emergent resilience, where community-level institutions create systemic durability.

Contributions to Theory

This study makes three key contributions to the literature on behavioral strategy and organizational resilience:

1. Expanding the Concept of Behavioral Strategy

The findings show that behavioral strategies are not only cognitive (e.g., heuristics, intuition) but also institutionalized within cultural systems. In the IAP, strategies for navigating uncertainty are codified in the mentorship process and enforced through communal sanctions. This extends Powell et al.'s (2011) notion of behavioral strategy by embedding it in social learning and indigenous knowledge systems.

2. Reframing Organizational Resilience in Developing Economies

Much of the resilience literature assumes the presence of strong formal institutions and resource redundancies (Williams et al., 2017). The IAP demonstrates a resilience model where informal institutions substitute for weak formal ones, producing collective safety nets. This reframes resilience not as a matter of redundant resources but as a matter of redistributive practices and trust-based reciprocity.

3. Introducing the Igbo Apprenticeship Program as a Global Model

By analyzing the IAP, this study introduces an indigenous system into mainstream management scholarship. The IAP represents a unique resilience model that combines economic, social, and cultural dimensions. As such, it contributes to decolonizing organizational theory (Banerjee, 2020) by foregrounding non-Western practices as legitimate sources of theoretical innovation.

Practical and Policy Implications

For Entrepreneurs and Business Leaders

The IAP offers practical lessons for entrepreneurs globally. First, it shows that resilience can be taught and institutionalized through mentorship rather than left to chance. Second, it demonstrates the importance of trust and reciprocity in sustaining networks during crises. Business leaders in volatile environments could adopt similar practices by formalizing mentoring systems and building collective support structures.

For Policymakers in Developing Economies

The study suggests that governments should recognize and support indigenous institutions like the IAP, which often achieve what formal systems struggle to provide—continuity, employment, and resilience. Policies could include creating legal frameworks that acknowledge apprenticeship agreements, providing infrastructure for markets, or offering micro-finance tailored to IAP graduates.

For Global Resilience Scholarship and Practice

The IAP challenges resilience models premised on Western organizational structures. For multinational firms operating in volatile regions, lessons can be drawn from the IAP's flexibility, community-based risk-sharing, and rapid adaptation mechanisms. This suggests that resilience strategies must be context-sensitive and incorporate informal institutional dynamics.

Limitations and Future Research

While the study provides rich insights, its single-case design limits generalizability. Future research could adopt comparative studies, examining whether similar apprenticeship systems in West Africa or Asia exhibit comparable resilience mechanisms. Quantitative studies could also measure the performance outcomes of IAP-trained entrepreneurs compared to formally trained counterparts. Moreover, longitudinal research would help trace how resilience capacities evolve over time, especially as markets become more digitized.

Conclusion and Recommendations

This study has examined how organizations in contexts of deep uncertainty navigate crises through behavioral strategies and resilience, using the Igbo Apprenticeship Program (IAP) in Onitsha Main Market as a case study. In a world marked by COVID-19 disruptions, economic shocks, and geopolitical volatility, the IAP provides a compelling example of how indigenous institutions can offer structured pathways to resilience.

The findings reveal three core insights:

1. Behavioral Adaptation – Apprentices and masters rely on heuristics, intuition, and effectual logic to rapidly adjust to shocks, showing that resilience is cultivated through everyday practices rather than formal planning.

2. Institutionalized Mentorship and Settlement the IAP embed resilience structurally by training apprentices in adaptive strategies and redistributing resources through the settlement system, ensuring entrepreneurial continuity across generations.

3. Social Capital and Risk-Sharing Trust, reciprocity, and communal sanctions substitute for weak formal institutions, creating collective resilience that allows traders to absorb shocks and regenerate after crises.

Together, these findings extend the theory of behavioral strategy by situating it within indigenous knowledge systems and reframe organizational resilience as a collective capacity rather than a purely firm-level property.

Recommendations

1. For Policymakers in Developing Economies

- Formal Recognition of Apprenticeship Systems: Governments should acknowledge indigenous systems like the IAP as legitimate institutions of economic development. Policies could formalize apprenticeship agreements without undermining their flexibility.

- Infrastructure and Financial Support: Provision of market infrastructure, access to credit, and business-friendly policies would enhance the resilience already built into the IAP.

- Integration into Entrepreneurship Policy: National development strategies should incorporate indigenous apprenticeship models alongside formal vocational training to foster inclusive growth.

2. For Entrepreneurs and Market Leaders

- Strengthening Mentorship Structures: The IAP demonstrates that mentorship institutionalizes resilience. Entrepreneurs elsewhere could adopt similar models by embedding structured mentoring programs in their businesses.

- Community-Based Risk Pools: Trade associations and cooperatives could replicate the IAP's mutual aid practices by creating collective insurance or loan schemes to buffer members during crises.

- Embedding Trust as Strategy: The reliance on reputation and communal enforcement in the IAP suggests that trust is not just a moral value but a strategic asset in volatile environments.

3. For Global Scholars and Practitioners

- Theorizing from the Global South: The IAP underscores the need for resilience scholarship to broaden its scope beyond Western firms and incorporate indigenous models of organization. Comparative studies between apprenticeship systems in Africa, Asia, and Latin America could enrich theory.

- Behavioral Strategy as Socially Embedded: The study contributes to behavioral strategy literature by showing that heuristics and bounded rationality are transmitted through socialization, not merely individual cognition. Future research should examine how cultural systems embed behavioral strategies.

- Practical Relevance for Multinational Firms: Multinationals operating in uncertain environments could learn from the IAP's practices of diversification, mentorship, and collective sanctioning as context-specific resilience strategies.

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