

ASSESSING THE LINK BETWEEN COGNITIVE FLEXIBILITY AND ENTREPRENEURIAL BEHAVIOR AMONG SMALL AND MEDIUM ENTERPRISE OWNERS: EVIDENCE FROM KOGI STATE, NIGERIA

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Abstract

This study aimed at cognitive flexibility on entrepreneurial behavior. The study assessed the effect of managing complex entrepreneurial situations on risk-taking behaviors of SME owners and examined how adopting new strategies to difficult entrepreneurial situations affects proactiveness of SME owners. This research utilized a descriptive design. The design enabled the researchers to produce quantitative data that may uncover patterns, connections, and trends among the target population, thereby offering insights into how CF influences specific entrepreneurial outcomes. The study's target group comprised SME owners in Kogi State, Nigeria. A purposive sample technique was utilized to guarantee the inclusion of participants possessing the pertinent characteristics—specifically, individuals who own and manage SMEs. The snowball sampling approach was additionally employed to support purposive sampling. A total sample size of 210 SME owners was surveyed. Regression analyses were utilized to accomplish the aims. Finding showed that the ability to manage complex entrepreneurial situations significantly enhances the risk-taking behaviours of SME owners, and that the ability to adopt new strategies in difficult entrepreneurial circumstances significantly enhances the proactiveness of SME owners. The study concludes that cognitive flexibility is crucial for influencing entrepreneurial behaviours among small and medium-sized enterprise owners. It was recommended that SME owners undertake ongoing training and mentorship programs designed to enhance their capacity to navigate complicated entrepreneurial scenarios.

Keywords: Entrepreneurial situations, Risk-taking behaviors, Proactiveness, Entrepreneurial opportunities.

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1. INTRODUCTION

Cognitive Flexibility (CF) is intrinsically linked to the learning process that allows individuals to modify their thinking when confronted with challenging entrepreneurial situations. This adaptability enables entrepreneurs to recognize opportunities and execute novel ideas in complex corporate environments. In light of the dynamic characteristics of the contemporary global corporate landscape, the significance of CF has become increasingly evident. As entrepreneurial activities proliferate globally, academics have become increasingly focused on identifying the unique characteristics and behaviours that facilitate entrepreneurial success (Boldureanu et al., 2020; Wei & Duan, 2024). CF, characterized by adaptability, creative navigation of uncertainty, and the capacity to pivot in response to obstacles, emerges as a crucial attribute deserving of extensive study (Fuchs et al., 2023; Rameshti, 2025).

In Nigeria, CF is intentionally included in entrepreneurial training programs (ETPs), which generally last from several days to several months and are frequently conducted by successful entrepreneurs and governmental organizations. These training sessions aim to enhance participants' capacity to navigate complex situations, modify their methods, and recontextualize their thoughts as required (Gabrys et al., 2018; Hayatbini et al., 2021; Lee et al., 2024). Through the cultivation of CF, both aspiring and established entrepreneurs are more adept at confronting experience problems that may emerge during their endeavours (Atrup et al., 2023). The government has progressively endorsed such efforts, seeing their potential to contribute to economic development.

In Kogi State, entrepreneurial behaviour is notably low, as many SME owners possess maladaptive beliefs that adverse business conditions will inevitably result in failure and financial losses. The government has implemented targeted initiatives to improve entrepreneurial confidence, particularly through the establishment and funding of the MSME clinic. The clinic functions as a collaborative platform uniting expert from diverse business development entities to offer mentorship, assistance, and pragmatic solutions to urgent entrepreneurial issues (Selvakumar et al., 2025; Vaz et al., 2023). Notwithstanding these initiatives, empirical research investigating the impact of SME owners' ability to manage complexity, implement novel strategies, and switch cognitive approaches on entrepreneurial behaviour is still scarce.

Prior research has demonstrated that CF substantially influences entrepreneurial outcomes by enhancing opportunity recognition, promoting inventive problem-solving, and stimulating proactive business approaches (Atrup et al., 2023; Yu et al., 2023). However, the magnitude of this influence remains contentious, as several research studies suggest that the impact of CF on entrepreneurial behaviour may

fluctuate according to the local business milieu, the availability of institutional support, and socio-cultural attitudes towards entrepreneurship. This study aims to address the gap by investigating how CF influences entrepreneurial behaviour in Kogi State, where government-sponsored initiatives like the MSME clinic strive to foster resilience, adaptability, and innovative thinking among SME owners. The specific objectives of the study were:

- Assess the effect of managing complex entrepreneurial situations on risk-taking behaviors of SME owners.
- Examine how adopting new strategies to difficult entrepreneurial situations affect proactiveness of SME owners.
- Ascertain how ability to switch thinking affects entrepreneurial opportunities utilization by SME owners.

2. LITERATURE REVIEW

2.1 Conceptual clarification

Cognitive flexibility (CF) denotes an individual's ability to adjust and transition among several thoughts, concepts, or entrepreneurial tasks in reaction to evolving circumstances (Ratan et al., 2019). It demonstrates receptiveness to novel ideas, the capacity to adapt strategies, and the proficiency to recalibrate cognitive processes in response to dynamic or unforeseen situations. CF is intricately linked to problem-solving, creativity, and adaptability—qualities essential for entrepreneurs who must consistently manoeuvre through complex business landscapes. Laureiro-Martínez and Brusoni (2018) assert that CF enables individuals to modify their cognitive processes to align with various obstacles, allowing SME owners to tackle entrepreneurial situations from diverse viewpoints and discern appropriate solutions.

Expanding on this perspective, Laureiro-Martínez and Brusoni (2018) emphasized that CF allows individuals to determine when to depend on known routines and when to pursue innovative techniques. This equilibrium between habitual decision-making and contemplative exploration enables entrepreneurs to maintain efficacy across diverse circumstances. Zhou et al. (2020) broadened this viewpoint, defining CF as the capacity to perceive events as manageable, to interpret situations in many ways, and to devise alternative solutions under duress. Elen et al. (2011) also highlighted that CF enables individuals to assimilate diverse information and incorporate it into their decision-making processes. For SME owners, these characteristics result in heightened optimism, greater problem-solving capabilities, and less vulnerability to stress. Entrepreneurs with high CF can categorize ideas and reorganize their mental

frameworks, allowing them to adjust their behaviours to new demands instead of inflexibly repeating previous solutions (Ratan et al., 2019).

Rameshti (2025) characterized CF as an indicator of adaptation in cognitive and behavioural processes. This adaptability allows individuals to discern pertinent information, devise strategies, and respond to external changes (Atrup et al., 2023; Fuchs et al., 2023). In this context, CF serves as an essential cognitive mechanism enabling SME owners to identify alternatives, adapt with agility, and sustain confidence amid uncertainty (Filippetti & Krumm, 2020). Ratan et al. (2019) discover that people who exhibit greater cognitive adaptability are more inclined to engage in entrepreneurial activities, indicating that CF serves as a predictor of entrepreneurial behaviour. This link illustrates the importance of cultivating CF in entrepreneurship education, as it may facilitate the identification and development of entrepreneurial talent (Lang & Liu, 2019; Harima et al., 2021).

The literature delineates three principal elements of CF pertinent to entrepreneurship: navigating difficult situations, adopting novel strategies, and shifting cognitive frameworks (Ratan et al., 2019; Schwolk et al., 2022). The capacity to manage complexity demonstrates an entrepreneur's proficiency in overcoming uncertainty via problem-solving, flexibility, and resource management (Laureiro-Martínez & Brusoni, 2018). Secondly, implementing new strategies requires inventive solutions to emerging obstacles through problem analysis, modification of business approaches, and capitalizing on opportunities (Schwolk et al., 2022). Switching thinking denotes the cognitive ability to transition between analytical and creative modes or to shift from detailed to broad perspectives based on situational requirements (Jiatong et al., 2021). These dimensions collectively provide SME owners with the adaptability necessary to succeed in dynamic situations.

The correlation between CF and entrepreneurial behaviour has been well recognized. CF influences individuals' behaviour in complex settings, affecting their capacity to take risks, identify opportunities, and maintain proactivity (Caton et al., 2022; Jiatong et al., 2021). Entrepreneurial behaviour includes several behaviours and attitudes, such as innovation, resource mobilization, and engaging with uncertainty to generate value (Aránega et al., 2024; Shi et al., 2022). The fundamental components of entrepreneurial behaviour encompass risk-taking, proactiveness, and opportunity exploitation. Risk-taking denotes a readiness to accept uncertainty in the quest for development (Bate, 2022; Guo & Jiang, 2020), whereas proactiveness illustrates the importance of foreseeing obstacles and influencing business contexts (Coleman & Adim, 2019; Kraus, 2019). Opportunity utilization necessitates identifying and responding to market gaps to create economic or social value. The evidence indicates that CF is not solely an abstract cognitive characteristic but a tangible asset that supports entrepreneurial activity. Entrepreneurs

demonstrating elevated levels of CF are more inclined to innovate, adapt, and maintain their enterprises amidst challenges.

2.2 Theoretical review

This study is based on Cognitive Flexibility Theory (CFT), a theory established by Rand Spiro, Paul Feltovich, and Richard Coulson in 1988 in the domains of cognitive science and educational psychology. It is assumed and underscored that the ability to modify one's cognition and utilize knowledge in diverse ways is essential for manoeuvring through complex and uncertain contexts (Delgado et al., 2022; Ratan et al., 2019). CFT posits that individuals with greater CF are more adept at reorganizing their mental frameworks, reevaluating previous assumptions, and tackling problems from novel viewpoints when confronted with unfamiliar or challenging situations (Cheng & Koszalka, 2016).

This theory is particularly pertinent for entrepreneurs, especially owners of SMEs. Entrepreneurship is seldom uncomplicated; it frequently entails uncertainty, fluctuating market dynamics, and swiftly changing obstacles. According to CFT, SME owners that can adeptly modify their cognitive processes exhibit superior risk management capabilities. Cognitively adaptable entrepreneurs perceive risk not merely as detrimental but as an opportunity for innovation and growth in the face of uncertainty (Atrup et al., 2023). This reassessment enables them to undertake calculated risks instead of entirely evading uncertainty.

CFT emphasizes the necessity of implementing novel solutions when traditional methods prove ineffective. In entrepreneurial situations, this study indicates that SME owners with enhanced flexibility are more inclined to forgo inflexible routines and instead explore creative approaches in response to obstacles. This adaptability promotes proactiveness, enabling entrepreneurs to anticipate changes in the business environment and strategically position their businesses to capitalize on new possibilities rather than merely responding to issues. A fundamental aspect of CFT is the capacity to alter cognitive processes (Ratan et al., 2019). Entrepreneurs frequently transition between various cognitive modes, such as shifting from analytical decision-making to creative ideation or from meticulous operational concentration to expansive strategic vision. Owners of small and medium enterprises possessing this competence can identify opportunities in unforeseen areas, reinterpret existing knowledge, and innovatively amalgamate resources to capitalize on market deficiencies (Egbetade et al., 2024; Osei, 2025). By altering perceptions, they augment their capacity to exploit entrepreneurial chances more efficiently.

This theoretical framework is hence significant for the current study. It elucidates not only the thought processes and actions of SME owners in uncertain circumstances but also the mechanisms by which CF influences entrepreneurial behaviour. Previous studies indicate that CF markedly affects decision-making and entrepreneurial propensity (Ratan et al., 2019). Spiro et al. (2003) emphasize that fundamental cognitive frameworks and belief systems influence individuals' interpretations of issues and their choice of

strategies. This study utilizes CFT to explore three dimensions of cognitive flexibility—managing complex entrepreneurial situations, adopting new strategies, and shifting thought processes—and their influences on entrepreneurial behaviours, including risk-taking, proactiveness, and opportunity utilization.

3. METHODOLOGY

This research utilized a descriptive design. A descriptive design was considered suitable, as the objective of the study was not to change variables but to meticulously observe, delineate, and analyze the relationships between CF and entrepreneurial activity among SME owners. The design enabled the researchers to produce quantitative data that may uncover patterns, connections, and trends among the target population, thereby offering insights into how CF influences specific entrepreneurial outcomes.

The study's target group comprised SME owners in Kogi State, Nigeria. A purposive sample technique was utilized to guarantee the inclusion of participants possessing the pertinent characteristics—specifically, individuals who own and manage SMEs. This criterion ensured that the acquired data would be significant and directly pertinent to the research objectives. The snowball sampling approach was additionally employed to support purposive sampling. This strategy enabled initial participants to link the researchers to other SME owners within their networks, facilitating access to individuals who may have been inaccessible through direct sample techniques. This combined method yielded a total sample size of 210 SME owners. We deemed the sample size sufficient for accurate statistical analysis, yet manageable within the study's scope.

A structured questionnaire served as the principal instrument for data collection. The questionnaire was created to gather data on two primary constructs: CF and entrepreneurial activity. The questionnaire was administered within the period of six months (November 2024 to April 2025). CF was assessed by three variables found in the literature. Items assessing these dimensions were derived from validated scales utilized in prior research (e.g., Ratan et al., 2019; Schwolk et al., 2022). Entrepreneurial behaviour was assessed through aspects including risk-taking, proactiveness, and the usage of entrepreneurial opportunities. Participants were requested to express their degree of agreement with each statement using a five-point Likert scale, from “strongly disagree” (1) to “strongly agree” (5).

Both face validity and content validity were established to assure the instrument's validity. Specialists in entrepreneurship and cognitive psychology evaluated the questionnaire to determine if the items sufficiently represented the constructs being examined. Their criticism prompted adjustments that enhanced clarity, phrasing, and agreement with the study objectives. A pilot test was performed with a limited cohort of SME owners external to the primary sample to evaluate the clarity and pertinence of the

items. The feedback received validated that the instrument was intelligible and suitable for the intended demographic.

The data collected were evaluated utilizing both descriptive and inferential statistical methods. Descriptive statistics, including frequencies and percentages, were utilized to encapsulate the demographic characteristics of the participants and to present a summary of responses to the primary topics. Inferential statistics were utilized. Regression analyses were utilized to accomplish the aims. All analyses were performed via EView, and results were shown in tables for clarity of interpretation.

4. DATA ANALYSIS

TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

Profile	Responses	Frequency	Percent
Gender	Male	110	37.97
	Female	100	62.03
Age	18-25	20	9.52
	26-35	54	25.71
	36-45	46	21.90
	46-55	50	23.81
	56-65	36	17.14
	66+	4	1.90
Marital Status	Single	49	23.33
	Married	101	48.10
	Divorced	13	6.19
	Separated	40	19.05
	Widowed	7	3.33
Educational Background	First School Leaving Certificate	12	5.71
	Senior Secondary Certificate	36	17.14
	Ordinary National Diploma Certificate or equivalent	67	31.90
	HND Certificate/B.Sc or equivalent	80	38.10
	M.Sc Degree or equivalent	14	6.67
	PhD or equivalent	1	0.48
	Others	-	-
Experience	5-7 years	91	43.33
	8-10 years	89	42.38
	11-13 years	8	3.81
	>13 years	22	10.48

Source: Field survey (2025)

The demographic data (in Table 1) indicate that a higher percentage of the participants were female (62.03%) than male (37.97%). This indicates that a higher number of women are participating in entrepreneurial activities within the research area, underscoring the growing importance of women in SME development.

The age distribution reveals that the majority of participants belong to the active working-age categories. The majority were aged 26–35 years (25.71%) and 46–55 years (23.81%), closely followed by those aged

36–45 years (21.90%). A lesser proportion belonged to the younger demographic of 18–25 years (9.52%), whereas 17.14% were aged 56–65 years, and merely 1.90% exceeded 66 years. This pattern indicates that entrepreneurship in Kogi State is predominantly propelled by individuals in their productive years, but participation markedly diminishes post-retirement age.

Regarding marital status, around 48.10% of participants were married, and 23.33% were single. Approximately 19.05% were separated, 6.19% were divorced, and 3.33% were widowed. The prevalence of married participants indicates that numerous SME owners balance entrepreneurial activities with familial obligations, potentially affecting their entrepreneurial conduct and decision-making processes.

The educational background of the participants indicates that the majority possessed an HND/B.Sc. or equivalent qualification (38.10%), followed by those with an OND or equivalent (31.90%). A lesser proportion indicated possessing senior secondary education (17.14%) and a first school leaving certificate (5.71%). Simultaneously, merely 6.67% possessed master’s degrees, while 0.48% held doctoral degrees. This distribution suggests that the majority of SME owners have attained at least a tertiary education, perhaps augmenting their capacity to implement creative methods and respond to entrepreneurial issues.

A significant proportion of the participants possessed 5–7 years (43.33%) and 8–10 years (42.38%) of entrepreneurship experience. Only 3.81% of participants had 11–13 years of experience, while 10.48% reported having more than 13 years of entrepreneurial engagement. The results indicate that the majority of SME owners in the sample have considerable experience, with many having operated their enterprises for about a decade, albeit a smaller number have maintained entrepreneurship for over 13 years.

TABLE 2. ANALYSIS OF THE EFFECT OF ABILITY TO MANAGE COMPLEX ENTREPRENEURIAL SITUATIONS ON INFLUENCE ON RISK-TAKING BEHAVIORS OF SME OWNERS

Variable	Coefficients	Std. Errors	t-Statistics	P-Value
C	0.753	0.1387	5.427	0.000
AMC	0.796	0.045	17.874	0.000
R-squared	0.605	Mean dependent var.		3.066
Adjusted R-squared	0.603	S.D. dependent var.		1.149
S.E. of regression	0.724	Akaike info criterion		2.202
Sum squared residual	109.571	Schwarz criterion		2.233
Log likelihood	-230.264	Hannan-Quinn criterion		2.214
F-statistic	319.496	Durbin-Watson stat		2.130
Prob(F-statistic)	0.000			

Source: Authors’ computation using E-views

The regression analysis investigated the impact of the ability to handle complex entrepreneurial situations (AMC) on the risk-taking behaviours of SME owners (Table 2). The results demonstrate a robust and statistically significant correlation between the two variables. The coefficient for AMC is 0.796, accompanied by a standard error of 0.045 and a t-statistic of 17.874 ($p = 0.000$). This indicates that the ability to manage complex entrepreneurial situations positively and significantly affects the risk-taking behaviours of SME owners, implying that as SME owners enhance their proficiency in managing complex

challenges, they are more inclined to undertake calculated risks in their business endeavours. The regression model exhibits a satisfactory match. An R-squared value of 0.605 signifies that roughly 60.5% of the variability in risk-taking behaviour among SME owners is accounted for by their capability to manage complex entrepreneurial situations. The modified R-squared value of 0.603 validates the model's robustness after considering the number of predictors. The F-statistic of 319.496, accompanied by a probability value of 0.000, substantiates the statistical significance of the overall model. Additional diagnostic statistics corroborate the credibility of the results. The Durbin-Watson score of 2.130 is within the allowed range, indicating no significant autocorrelation issue in the residuals. Moreover, the model's efficacy and robustness are indicated by the minimal standard error of regression (0.724) and advantageous information criterion values (Akaike = 2.202, Schwarz = 2.233, Hannan-Quinn = 2.214).

TABLE 3. ANALYSIS OF THE IMPACT OF ABILITY TO ADOPT NEW STRATEGIES TO DIFFICULT ENTREPRENEURIAL SITUATIONS ON PROACTIVENESS OF SME OWNERS

Variable	Coefficients	Std. Errors	t-Statistics	P-Value
C	0.570	0.113	5.028	0.000
ASD	0.866	0.031	28.358	0.000
R-squared	0.794	Mean dependent var.		3.573
Adjusted R-squared	0.793	S.D. dependent var.		1.298
S.E. of regression	0.591	Akaike info criterion		1.795
Sum squared residual	72.945	Schwarz criterion		1.826
Log likelihood	-187.339	Hannan-Quinn criterion.		1.808
F-statistic	804.155	Durbin-Watson stat		2.082
Prob(F-statistic)	0.000			

Source: Authors' computation using E-views

The regression analysis (Table 3) examined the influence of the ability to adopt new strategies for difficult entrepreneurial situations (ASD) on the proactivity of SME owners. The results indicate a robust and statistically significant relationship. The coefficient of ASD is 0.866, accompanied by a standard error of 0.031, resulting in a t-statistic of 28.358 ($p = 0.000$). This indicates that SME owners, who exhibit the ability to adopt new strategies when confronted with challenging situations, are markedly more proactive in their entrepreneurial endeavours. Practically, strategic flexibility increases SME owners' willingness to see opportunities, undertake actions, and influence business outcomes. The model exhibits significant explanatory power. An R-squared value of 0.794 signifies that roughly 79.4% of the variation in proactiveness among SME owners is accounted for by their ability to adopt new strategies when confronted with challenging situations. The adjusted R-squared of 0.793 further corroborates this substantial association, indicating that the model retains its strength even after accounting for covariates. The F-statistic of 804.155, with a p-value less than 0.01, validates the overall significance of the regression model. Diagnostic statistics further validate the reliability of the results. The Durbin-Watson value of 2.082 signifies the absence of substantial autocorrelation in the residuals, while the comparatively low standard error of the regression (0.591) demonstrates precision in the model's predictions. The advantageous

values of the Akaike information criteria (1.795), Schwarz criterion (1.826), and Hannan-Quinn criterion (1.808) further substantiate the model's efficiency and stability.

TABLE 4. ANALYSIS OF THE INFLUENCE OF ABILITY TO SWITCH THINKING ON ENTREPRENEURIAL OPPORTUNITIES UTILIZATION BY SME OWNERS

Variable	Coefficients	Std. Errors	t-Statistics	P-Value
C	0.323	0.100	3.225	0.002
AST	0.929	0.030	31.244	0.000
R-squared	0.824	Mean dependent var.		3.237
Adjusted R-squared	0.823	S.D. dependent var.		1.265
S.E. of regression	0.533	Akaike info criterion		1.587
Sum squared residual	59.278	Schwarz criterion		1.619
Log likelihood	-165.452	Hannan-Quinn criterion.		1.600
F-statistic	976.184	Durbin-Watson stat		1.879
Prob(F-statistic)	0.000			

Source: Authors' computation using E-views

The regression study investigated the impact of the ability to switch thinking (AST) on the exploitation of entrepreneurial opportunities by SME owners. The results indicate a robust and statistically significant relationship. The AST coefficient is 0.929, accompanied by a standard error of 0.030, resulting in a remarkably high t-statistic of 31.244 and a p-value of 0.000. This result indicates that the ability to switch thinking significantly enhances the effectiveness with which SME owners recognize and exploit entrepreneurial opportunities. SME owners who can alter their perspectives and change their cognitive processes are more adept at identifying and capitalizing on business opportunities. The model's strength is highlighted by its substantial explanatory power. The R-squared value of 0.824 indicates that about 82.4% of the variance in entrepreneurial opportunity utilization is accounted for by the ability to switch thinking. The adjusted R-squared of 0.823 reinforces the model's robustness, signifying that its explanatory power remains substantial even after accounting for predictors. The F-statistic of 976.184, accompanied by a probability value of 0.000, further substantiates the statistical significance of the entire regression model. The diagnostic statistics bolster the validity of the results. The Durbin-Watson score of 1.879 indicates a lack of significant autocorrelation in the residuals, while the low standard error of regression (0.533) reflects the model's precision in predicting the dependent variable. The favourable information criteria values—Akaike (1.587), Schwarz (1.619), and Hannan-Quinn (1.600)—demonstrate that the model is both efficient and parsimonious.

5. DISCUSSION OF FINDINGS

Research demonstrates that the ability to manage complex entrepreneurial situations significantly enhances the risk-taking behaviours of SME owners. This indicates that entrepreneurs with robust problem-solving abilities and strategic decision-making aptitude are more inclined to accept risks in

business. Successfully navigating complex hurdles exemplifies cognitive flexibility, enabling entrepreneurs to deconstruct complex issues, identify new possibilities, and make reasoned judgments amid uncertainties. This ability fosters a risk-tolerant mindset, as SME owners with superior problem-solving skills are more adept at assessing risks and managing uncertain business environments. This finding corresponds to the research of Ratan et al. (2019) and Jiatong et al. (2021), who assert that cognitive flexibility favourably influences risk-taking attitudes in entrepreneurial settings.

Research indicates that the ability to adopt new strategies in difficult entrepreneurial circumstances significantly enhances the proactiveness of SME owners. This illustrates the vital role of adaptation and strategic agility in promoting proactive entrepreneurial conduct. According to the Theory of Planned Behaviour, individuals with positive attitudes are more likely to engage in proactive behaviours (Al Sawaey et al., 2025). Entrepreneurship is marked by continual market fluctuations and unforeseen obstacles; thus, SME owners who can devise and implement creative strategies in the face of adversity are more inclined to adopt a proactive approach. This link highlights the connection among flexibility, innovation, and proactive corporate strategies. Implementing new tactics demonstrates cognitive flexibility, which reflects the entrepreneur's ability to reevaluate existing procedures and modify them to accommodate evolving circumstances. This adaptable attitude aids in navigating problems and discovering potential possibilities that may arise. Entrepreneurs who adopt innovation and flexibility consequently strengthen their proactivity, which is characterized by foresight and future-oriented actions. Kraus (2019), who highlighted that SME owners typically demonstrate proactive behaviour when they adapt to changing market conditions, aligns with the findings.

Research indicates that the ability to switch thinking significantly affects how SME owners exploit entrepreneurial opportunities. This underscores the need for cognitive flexibility in identifying and leveraging possibilities within dynamic business contexts. Opportunities frequently arise unexpectedly and necessitate swift identification and prompt action; thus, entrepreneurs who can swiftly alter their perspectives and strategies are more adept at identifying, assessing, and capitalizing on them. This result aligns with Cognitive Flexibility Theory, which posits that individuals possessing strong cognitive flexibility may adapt their conceptual frameworks to navigate complicated problems and opportunities (Cheng & Koszalka, 2016). Therefore, the ability of entrepreneurs to manoeuvre through volatile situations is closely associated with their cognitive agility. Adaptive thinking cultivates cognitive flexibility, enabling entrepreneurs to reassess situations, investigate alternative perspectives, and swiftly modify their strategies. This aptitude improves their ability to identify unorthodox or concealed opportunities and to convert uncertainty into beneficial results. This finding corroborates previous research (Jiatong et al., 2021), which contends that cognitive flexibility facilitates the transformation of unforeseen events into advantageous entrepreneurial opportunities.

6. LIMITATIONS OF THE STUDY

This study has few limitations. The study focused on SMEs. The findings of the study may be limited in its applicability. The sample size of 210 SME owners was manageable enough, but may not be a complete representative of SME owners in Kogi State. Few of the respondents were not readily available at the time of the survey. This slowed down the data collection process. We administered 210 copies of the questionnaire for a six-month period. During this period, changes to the business environments of these SME owners may have affected their responses to the questionnaire items.

7. THEORETICAL IMPLICATIONS OF THE STUDY

This study has clear theoretical implications for cognitive flexibility theory. The study supports the idea that flexible thinking helps people act well in changing situations. The study shows that having the ability to manage complex entrepreneurial situations improves the risk-taking behaviour of SME owners. It also shows that the ability to adopt new strategies in difficult situations improves their level of proactiveness. In the same way, the ability to switch thinking affects how SME owners identify and use business opportunities. These strengthen Cognitive Flexibility Theory by showing that different aspects of flexible thinking are linked to key parts of entrepreneurial behaviour among SME owners.

8. CONCLUSION AND RECOMMENDATIONS

The study concludes that cognitive flexibility is crucial for influencing entrepreneurial behaviours among small and medium-sized enterprise owners. The capacity to navigate intricate entrepreneurial scenarios markedly amplifies risk-taking propensities. Owners of SMEs who have robust problem-solving and decision-making abilities are more adept at navigating uncertainties, evaluating risks impartially, and undertaking entrepreneurial endeavours with assurance. The capacity to implement new techniques in challenging situations significantly enhances proactiveness. Adaptability and strategic agility empower SME owners to foresee changes, respond to market dynamics, and implement proactive measures that ensure competitive advantage. This instance illustrates that innovation and a willingness to pursue novel strategies are essential components of entrepreneurial success. The capacity to shift cognitive processes is identified as a crucial factor in the effective utilization of opportunities. Entrepreneurs demonstrating mental agility and perspective-shifting are more adept at identifying, assessing, and capitalizing on opportunities in rapidly evolving contexts. This emphasizes the essential importance of adaptability in transforming uncertainty into advantageous results.

It is recommended that SME owners undertake ongoing training and mentorship programs designed to enhance their capacity to navigate complicated entrepreneurial scenarios. Workshops and simulations centred on decision-making amid uncertainty, strategic planning, and problem-solving will furnish businesses with the competencies required to take calculated risks. This will enhance their confidence and cultivate a culture of innovation that embraces risk. Agencies supporting entrepreneurship should develop interventions that promote the adoption of innovative methods by SMEs in response to problems. Initiatives like innovation hubs, company incubation centres, and knowledge-sharing platforms will introduce SME owners to inventive and adaptive methodologies. This will augment their proactivity, allowing them to foresee market fluctuations and respond in advance of rivals. SME development frameworks should incorporate programs that foster cognitive flexibility, such as critical thinking classes, scenario analysis, and engagement with diverse business stakeholders. By cultivating the ability to shift perspectives and contemplate various viewpoints, entrepreneurs will enhance their potential to identify and capitalize on emerging possibilities. This, thus, enhances resilience and sustainability within a dynamic business landscape.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work the authors used ChatGPT to edit the text and correct sentences. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

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REFERENCES

Al Sawaey, S., Palalić, R., As-Saber, M. S. N., Al Riyami, S., & Backhirov, A. A. (2025). The impact of prosocial behavior on the social entrepreneurial intention of the youth: a theory of planned behavior perspective. *Journal of Entrepreneurship and Public Policy, ahead-of-print*. <https://doi.org/10.1108/JEPP-07-2024-0112>

- Aránega, A. Y., & Cañero Serrano, J. (2024). Guest editorial: Innovative entrepreneurial behavior vs entrepreneurial activity in today's business environment. *International Journal of Entrepreneurial Behavior & Research*, 30(4), 829–833. <https://doi.org/10.1108/IJEBR-04-2024-063>
- Atrup, A., Diawati, P., Syamsuri, S., Pramono, S. A., & Ausat, A. M. A. (2023). The effect of entrepreneurship education and creativity on students' entrepreneurial intention: The perspective of effectuation and cognitive flexibility theory. *Jurnal Kependidikan: Jurnal Hasil Penelitian dan Kajian Kepustakaan di Bidang Pendidikan, Pengajaran dan Pembelajaran*, 9(2), 555–569. <https://doi.org/10.33394/jk.v9i2.7822>
- Bate, A. F. (2022). The nexus between uncertainty avoidance culture and risk-taking behaviour in entrepreneurial firms' decision making. *Journal of Intercultural Management*, 14(1), 104–132.
- Boldureanu, G., Ionescu, A. M., Bercu, A. M., Bedrule-Grigoruță, M. V., & Boldureanu, D. (2020). Entrepreneurship education through successful entrepreneurial models in higher education institutions. *Sustainability*, 12(3), 1267. <https://doi.org/10.3390/su12031267>
- Caton, A., Bradshaw-Ward, D., Kinshuk, K., & Savenye, W. (2022). Future directions for digital literacy fluency using cognitive flexibility research: A review of selected digital literacy paradigms and theoretical frameworks. *Journal of Learning for Development*, 9(3), 381–393. <https://doi.org/10.56059/jl4d.v9i3.818>
- Cheng, J. & Koszalka, T. A. (2016). *Cognitive Flexibility Theory and its Application to Learning Resources*. Syracuse University – RIDLR project. Retrieved April 09, 2026 from https://ridlr.syr.edu/wp-content/uploads/2016/09/CFT_Final.pdf
- Coleman, R. O., & Adim, C. V. (2019). Entrepreneurial proactiveness and organizational resilience in mobile telecommunication firms in Rivers State, Nigeria. *Strategic Journals*, 6(3), 454–465. Retrieved April 09, 2026 from www.strategicjournals.com.
- Delgado, S. V., Pedapati, E. V., & Strawn, J. R. (2022). *Cognitive Flexibility (Theory of Mind): "Being in your Shoes"*. In *Promoting the Emotional and Behavioral Success of Youths*. Cham: Springer. https://doi.org/10.1007/978-3-030-88075-0_5
- Egbetade, I. S., Onyeizugbe, C., & Orizu, T. C. (2024). Entrepreneurial skill set and sustainability of SMEs in Anambra State. *UBS Journal of Business and Economic Policy*, 2(2), 38–51.
- Elen, J., Stahl, E., Bromme, R., & Clarebout, G. (2011). Chapter 1: Introduction In J. Elen, E. Stahl, R. Bromme, & G. Clarebout (Eds.), *Links between Beliefs and Cognitive Flexibility: Lessons Learned* (pp. 1–5). Dordrecht: Springer. https://doi.org/10.1007/978-94-007-1793-0_1
- Filippetti, A. V., & Krumm, G. (2020). A hierarchical model of cognitive flexibility in children: Extending the relationship between flexibility, creativity and academic achievement. *Child Neuropsychology*, 26(6), 770–800. <https://doi.org/10.1080/09297049.2019.1711034>
- Fuchs, H., Benkova, E., Fishbein, A., & Fuchs, A. (2023). The importance of psychological and cognitive flexibility in educational processes to prepare and acquire the skills required in the twenty-first century. In *The global conference on entrepreneurship and the economy in an era of uncertainty* (pp. 91–114). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-97-0996-0_6
- Gabrys, R. L., Tabri, N., Anisman, H., & Matheson, K. (2018). Cognitive control and flexibility in the context of stress and depressive symptoms: The cognitive control and flexibility questionnaire. *Frontiers in Psychology*, 9, 2219. <https://doi.org/10.3389/fpsyg.2018.02219>

- Guo, Z., & Jiang, W. (2020). Risk-taking for entrepreneurial new entry: Risk-taking dimensions and contingencies. *International Entrepreneurship and Management Journal*, 16(2), 739–781. <https://doi.org/10.1007/s11365-019-00567-8>
- Harima, A., Harima, J., & Freiling, J. (2021). The injection of resources by transnational entrepreneurs: towards a model of the early evolution of an entrepreneurial ecosystem. *Entrepreneurship & Regional Development*, 33(1-2), 80–107. <https://doi.org/10.1080/08985626.2020.1734265>
- Hayatbini, N., Knauft, K., & Kalia, V. (2021). Cognitive reappraisal moderates the relationship between perfectionism and cognitive flexibility. *Journal of Clinical Psychology*, 77(7), 1685–1699. <https://doi.org/10.1002/jclp.23124>
- Jiatong, W., Murad, M., Li, C., Gill, S. A., & Ashraf, S. F. (2021). Linking cognitive flexibility to entrepreneurial alertness and entrepreneurial intention among medical students with the moderating role of entrepreneurial self-efficacy: A second-order moderated mediation model. *PLoS One*, 16(9), e0256420. <https://doi.org/10.1371/journal.pone.0256420>
- Kraus, S., Breier, M., Jones, P. & Hughes, M. (2019). Individual entrepreneurial orientation and intrapreneurship in the public sector. *International Entrepreneurship and Management Journal*, 15, 1247–1268. <http://dx.doi.org/10.1007/s11365-019-00593-6>
- Lang, C., & Liu, C. (2019). The entrepreneurial motivations, cognitive factors, and barriers to become a fashion entrepreneur: A direction to curriculum development for fashion entrepreneurship education. *International Journal of Fashion Design, Technology and Education*, 12(2), 235–246. <https://doi.org/10.1080/17543266.2019.1581844>
- Laureiro-Martínez, D., & Brusoni, S. (2018). Cognitive flexibility and adaptive decision-making: Evidence from a laboratory study of expert decision makers. *Strategic Management Journal*, 39(4), 1031–1058. <https://doi.org/10.1002/smj.2774>
- Lee, L. Y., Healy, M. P., Fischer, N. L., Tong, K., Chen, A. S., Sahakian, B. J., & Kourtzi, Z. (2024). Cognitive flexibility training for impact in real-world settings. *Current Opinion in Behavioral Sciences*, 59, 101413. <https://doi.org/10.1016/j.cobeha.2024.101413>
- Osei, E. (2025). *Entrepreneurship of Ordinary Places: SME Adaptation in Resource-Limited Contexts* (Doctoral dissertation, Birmingham City University).
- Rameshti, Z. M. (2025). Art as a catalyst for cognitive flexibility: Unleashing new pathways to creative thinking. Available at SSRN 5160314. <https://ssrn.com/abstract=5160314> or <http://dx.doi.org/10.2139/ssrn.5160314>
- Ratan, J., Dheer, S., & Lenartowicz, T. (2019). Cognitive flexibility: Impact on entrepreneurial intentions. *Journal of Vocational Behaviour*, 115, 1–17. <https://doi.org/10.1016/j.jvb.2019.103339>
- Schwolk Fontan Ayres de Aguirre, D., Lizote, S. A., Dos Santos, A. M., & Guerra, M. C. A. G. (2022). Cognitive flexibility and entrepreneurial self-efficacy: A study of its influence on the entrepreneurial behavior of international leaders. *Revista Alcance – Eletrônica*, 29(1), 20–34. [https://doi.org/10.14210/alcance.v29n1\(jan/abr\).p20-34](https://doi.org/10.14210/alcance.v29n1(jan/abr).p20-34)
- Selvakumar, P., Aradhya, S. G. B., Anute, N., Devi, S., Sharma, M., & Vaissnave, V. (2025). Strategic Collaborations and Partnerships in Entrepreneurship. In *Support Networks for Entrepreneurs: Social Capital and Strategic Collaborations* (pp. 203–232). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-9836-4.ch009>
- Shi, Z., Yuan, L., & Lee, S. H. (2022). Dynamic capabilities and entrepreneurial performance of Chinese start-ups: The mediating roles of managerial attitude towards risk and entrepreneurial behaviour. *Asia Pacific Business Review*, 28(3), 354–379. <https://doi.org/10.1080/13602381.2020.1854983>

- Spiro, R. J., Collins, B. P., Thota, J. J., & Feltovich, P. J. (2003). Cognitive flexibility theory: Hypermedia for complex learning, adaptive knowledge application, and experience acceleration. *Educational Technology-Saddle Brook then Englewood Cliffs NJ*, 43(5), 5–10.
- Vaz, R., de Carvalho, J. V., & Teixeira, S. F. (2023). Developing a digital business incubator model to foster entrepreneurship, business growth, and academia–industry connections. *Sustainability*, 15(9), 7209. <https://doi.org/10.3390/su15097209>
- Wei, W., & Duan, J. (2024). How do entrepreneurial activities at different levels promote business growth: A review and research agenda. *Chinese Management Studies*, 18(3), 755–784. <https://doi.org/10.1108/CMS-06-2022-0226>
- Yu, X., Zhao, X., & Hou, Y. (2023). Cognitive flexibility and entrepreneurial creativity: The chain mediating effect of entrepreneurial alertness and entrepreneurial self-efficacy. *Frontiers in Psychology*, 14, 1292797. <https://doi.org/10.3389/fpsyg.2023.1292797>
- Zhou, X., Meng, Y., Schmitt, H.S., Montag, C., Kendrick, K. M., & Becker, B. (2020). Cognitive flexibility mediates the association between early life stress and habitual behaviour. *Personality and Individual Differences*, 167, 110231. <https://doi.org/10.1016/j.paid.2020.110231>