ARTIFICIAL INTELLIGENCE (AI) POWER AND ENTREPRENEURIAL SUCCESS

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ABSTRACT: *This study examined the effect of Artificial Intelligence (AI) on entrepreneurial success of Small and Medium Enterprises (SMEs), Eket, Akwa Ibom State. However, the specific objectives were to examine the effect of AI rarity and AI utilization efficiency on entrepreneurial success of SMEs, Eket, Akwa Ibom State. This study adopted a survey research design and utilized primary data collected from a pre-selected population which included SMEs that had already integrated or were in the process of integrating AI technologies in their business operations, in Eket, Akwa Ibom State. The data collected were analyzed using descriptive statistics, analysis of variance and multiple regression analysis via SPSS 25.0 statistical package. The study's findings revealed that AI rarity has a significant positive effect (r= 0.063{p=0.008<0.05}) on entrepreneurial success of SMEs in Eket, Akwa Ibom State while AI utilization efficiency has a significant positive effect (r= 0.442{p=0.001<0.05 on entrepreneurial success of SMEs in Eket, Akwa Ibom State. It was thus concluded that AI power exerts a significant effect on entrepreneurial success of SMEs in Eket, Akwa Ibom State at 5% level of significance. The study recommended, amongst others, that the SMEs in Eket should ensure that they take the time to do the research and educate themselves on how to properly use AI technologies to provide services or create value in ways that make them stand out from the competition.*

KEYWORDS: Artificial intelligence, Entrepreneurial success, Small and medium enterprises, Akwa Ibom state.

INTRODUCTION

The current world is characterized by tremendous technological evolution and none appears to have captured the human imagination like Artificial Intelligence. AI is now being implemented in almost all the sectors including farming, self-driving cars, fraud detection, cyber security, healthcare, retail e-commerce, banking, education and even in arts. With the increase in the availability of relatively cheap AI solutions, SMEs can take advantage of this to effectively improve their operations by applying automation and smart supply chain and making intelligent data driven decisions. These would enable SMEs to grow their business, work in cross-organization translation & localization mechanisms, and compete with large organizations. Moreover, specific advances in artificial intelligence applicable in SMEs contexts, including localized chatbots and specific regional market analysis tools, consider new demands and opportunities. In this case, SMEs need to incorporate AI in their business to work efficiently to cope up with the tight competition and fast-changing technology (Magdalena, 2023).

The application of AI for small and medium enterprises (SMEs) presents an opportunity to enhance activities, know consumers and survive the competition. However, SMEs regularly face a problem of average experience, and 'low AI awareness' that hinders them from challenging big businesses who have already integrated effective artificial intelligence into their operations. Used appropriately, AI could assist SMEs to effectively respond and cope with the growing technological advancement, thereby enabling SMEs to sustain their operations in the market. AI is one of the possibilities that can help SMEs make processes better, while understanding customers and competitive environments.

Statement of the Problem

According to the National Bureau of Statistics, Nigeria has lost over one million SMEs within the last five years. It is this sheer decline that raises a question mark on the growth and sustenance of SMEs in the forthcoming years in that region. Ikpoto (2023) pointed out that up to 80 percent of SMEs in Nigeria fail within a three to five-year period of their establishment. Many of the entrepreneurs who found SMEs often lack formal business education as observed by Ahn and Winters (2022). In 2024, Sharp Minds found that most people started businesses because of passion but lack the experience to run the business. This situation is further compounded by limited resources which do not allow for the acquisition of specialized human resources.

Additionally, inadequate management skills, ineffective business planning, and poor marketing strategies are common reasons for SME failures. Globally, entrepreneurial activities offer tremendous opportunities across the world (Brownson, 2021). Despite these challenges, SMEs are vital to Nigeria's economy, contributing approximately 48% to the country's GDP, accounting for 96% of businesses, and providing 84% of employment (Ezigbo, 2024). Liberto (2024) aptly describes SMEs as the lifeblood of the nation. The advent of artificial intelligence (AI) has the potential to transform the business landscape, offering opportunities for automating routine tasks, analyzing large datasets, and gaining valuable insights (Horton, 2024). However, many SMEs struggle to effectively incorporate AI into their practices. Unlike large corporations, which have the resources to seamlessly adopt and tailor AI technologies, SMEs often lack the know-how and infrastructure to fully leverage AI's potential. Ocran et al. (2024) emphasized that the underutilization of AI tools by SMEs hampers their efficiency and

competitive edge. Therefore, this research assesses the effect of AI on Entrepreneurial Successes of SMEs in Eket, Akwa Ibom State.

Research Objectives

This empirical research examined the effects of artificial intelligence power on the success of entrepreneurial ventures. The following are the specific objectives of this study:

1. To assess the effect of AI Rarity on entrepreneurial success; and to

2. Examine the effect of AI Utilization Efficiency on entrepreneurial success.

Research Questions

1. What is the effect of AI Rarity on entrepreneurial success?

2. What is the effect of AI Utilization Efficiency on entrepreneurial success?

Research Hypotheses

1. H_0: AI Rarity has no effect on entrepreneurial success.

2. H_0: AI Utilization Efficiency has no effect on entrepreneurial success.

REVIEW OF RELATED LITERATURE

Conceptual framework

The conceptual review covers the concept of AI power with two dimensions as it relates to entrepreneurial success as depicted in the diagram below.

Independent Variables   **Dependent Variable**

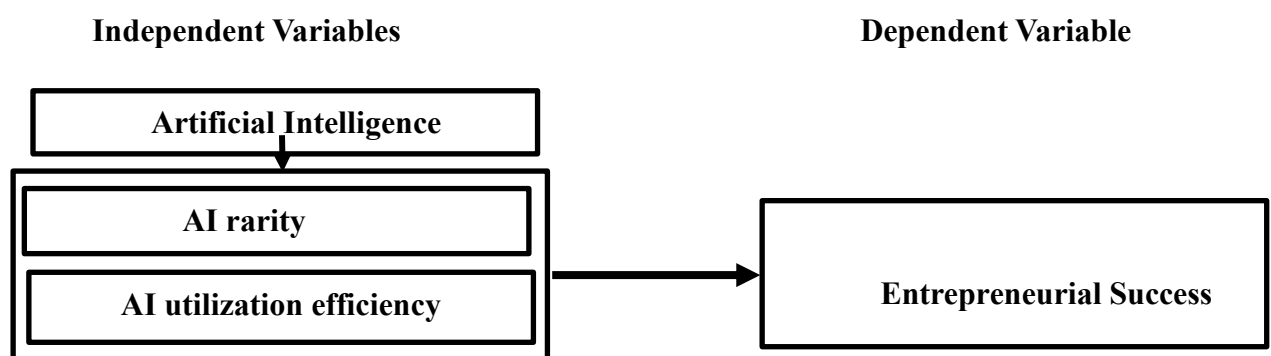| Artificial Intelligence |
| AI rarity |
| AI utilization efficiency |

→ | Entrepreneurial Success |

Fig 2.1: Conceptual framework of variables

Source: *Researcher's compilation (2024)*

The Concept of AI

Artificial intelligence is a complex entity. There are several definitions and many more impressions of what constitutes AI. Russell and Norvig (2021) defined Artificial Intelligence as the development of algorithms that enable machines to perform tasks traditionally requiring human intelligence, such as problem-solving and learning from experience.

Rouse et al. (2020) further defined it as a branch of computer science that focuses on building and managing technology that can learn to autonomously make decisions and carry out actions on behalf of a human being. Simply put, AI is an artificially-intelligent system that can learn on its own (Garnier, 2024). AI is not a single technology; instead, it is an umbrella term that includes any type of software or hardware component that supports machine learning, expert systems, generative AI and certain types of robotics. This is about neural networks from Google's DeepMind, which can make connections and reach meanings without relying on pre-defined behavioural algorithms. True AI can improve on past iterations, getting smarter and more aware, allowing it to enhance its capabilities and its knowledge.

According to the Subcommittee on Machine Learning and Artificial Intelligence (2016), there are many categories of AI. These include thinking like humans, acting like humans, thinking rationally, and acting rationally. Venture capitalist Sulemana and Chen (2019) broke AI into five categories: logical reasoning, knowledge representation, planning and navigation, natural language processing, and perception. Although most are aware of the core idea of AI, it is difficult to pin down. This diversity of AI problems and solutions, and the foundation of AI in human evaluation of the performance and accuracy of algorithms makes it difficult to clearly define a bright-line distinction between what constitutes AI and what does not (Boch & Kriebitz, 2023). In addition to all the different categories listed to define AI, there is also the question of self-awareness.

Hintze (2017) stated that there are four different types of AI. These four types are on a continuum from reactive to self-aware. The Type I AI that Hintze described is reactive. This type of machine does not form memories nor use past experiences to make decisions. His example for this type is that of Deep Blue, IBM's chess-playing computer which beat Kasparov in the late 1990s. This type of computer acts on what it sees; it does not rely on an internal concept of the world. Hintze categorized his Type II AI as those with limited memories. These machines can look into the past. The shortcoming with this machine is that it does remember its experiences and use those experiences to handle new situations. For his Type II machine, Hintze (2017) gives the example of self-driving cars. These cars can observe the speed and direction of other cars. The observations are added to the cars database along with other driving elements. The next two types of AI do not yet exist. Hintze classifies his Type III AI as the theory of mind. The theory of mind-machine will form an understanding that people, creatures, and objects in the world can have thoughts and emotions that affect their behaviour. This type of machine can interact socially. The Type IV AI are considered self-aware, which also includes the theory of mind.

Dimensions of AI Power

AI Rarity

In the Resource-based View (RBV) model, a resource or capability is considered rare if it is not widely possessed by other firms. For AI to contribute to entrepreneurial success, it needs to be something that sets a firm apart from its competitors. For SMEs, this could mean having unique datasets, proprietary algorithms, or specialized expertise that others lack (Wang et al., 2023). If an SME can leverage such rare AI resources, it might gain a competitive edge. However, rarity alone is not enough; the resource also needs to be valuable and well-utilized. SMEs should strive for AI Rarity and Inimitability when it comes to their AI resources and technologies as it involves proprietary technology, exclusive partnerships, or unique ways of integrating AI into business processes. If an SME has AI capabilities that are difficult for competitors to imitate—perhaps due to specialized knowledge or complex algorithms—it can create a sustainable competitive advantage. This dimension is crucial because if competitors can easily copy AI strategies or tools, the initial advantage may be short-lived.

AI Utilization Efficiency

AI Utilization Efficiency, a pivotal dimension in the framework, delves into how entrepreneurs optimize AI tools for operational effectiveness. It seeks to understand how entrepreneurs leverage AI to enhance their business processes (Russell, 2024). This dimension explores how entrepreneurs make the most of AI capabilities to streamline operations, improve productivity, and achieve strategic objectives. Efficiency gains, cost-effectiveness, and resource optimization become focal points in assessing AI Utilization Efficiency (Howard & Bothwell, 2023). Understanding AI Utilization Efficiency requires delving into entrepreneurs' strategic decisions on where and how to integrate AI within their workflows. It involves considerations of AI's impact on tasks, decision-making processes, and overall organizational efficiency. Research on innovation efficiency, like that of Schumpeter, provides valuable insights into the intricacies of technological adoption for enhanced operational performance (Śledzik, 2013). In essence, AI Utilization Efficiency is a pragmatic exploration of how entrepreneurs harness AI's potential to drive efficiency gains within their ventures. This dimension, integral to the broader framework, underscores the practical implications of AI integration for entrepreneurial success without explicitly dwelling on the conceptual framework.

The Concept of Entrepreneurial Success

Entrepreneurial success is a multifaceted concept that encompasses various dimensions of achievement and fulfillment in the realm of entrepreneurship. Different scholars and experts offer diverse perspectives on what constitutes entrepreneurial success. Oluwaseun et al. (2020) related that entrepreneurial success also refers to the achievement of desired outcomes and objectives by individuals or groups engaged in entrepreneurial activities which can be affected or differ based on culture of entrepreneurship amongst the residents of a given population. It involves the realization of specific goals and aspirations related to the creation, management and growth of a business venture (Ben et al., 2023). Entrepreneurial success can be measured in various ways depending on the goals and priorities of the entrepreneur (Osborne, 1995).

Possible Kinds of Entrepreneurial Success

Financial Performance: Anjum (2024) stated that one of the most common indicators of entrepreneurial success is financial performance. This includes factors such as revenue growth, profitability, return on investment (ROI) and overall financial stability. A successful venture generates revenue that exceeds costs and is able to sustain itself and generate profit.

Market Impact: Entrepreneurial success can also be gauged by the impact a venture has on its target market or industry. This may include factors like market share, customer acquisition and customer satisfaction. A successful entrepreneur is often able to be creative and innovative with how they provide value for customers in order to gain competitive edge in the market environment (Ben et al., 2023).

Innovation and Differentiation: Innovation is that dynamic process that focuses on the creation and implementation of new or improved products and services and is the basis of all competitive advantages (Brownson, 2018). It is by innovation that new ventures can stand firm in the face of competition as competition between firms in similar industries is by product or service innovation (Brownson, 2014). Entrepreneurs who introduce novel products, services or business models that address unmet needs or solve specific problems can be considered successful ventures apart from competitors and contribute to long-term sustainability of the venture (Tohidi & Jabbari, 2012).

Longevity and Growth Potential: A successful entrepreneurial venture is one that demonstrates the potential for sustained growth and longevity. This may involve expanding into new markets, introducing additional product lines and achieving scalability (Burns, 2021).

AI and Entrepreneurial Success

Artificial Intelligence in entrepreneurial success refers to the transformative impact of AI technologies on startups and businesses, enabling them to achieve significant growth, innovation and a competitive advantage (Chukwuka & Dibie, 2024). Ibrahim (2023) stated that, "Future success will go to business people who can effectively use artificial intelligence (AI)". He further asserted that AI has the ability to completely change how businesses are established and expanded because of its ability to:

a.   analyze large data sets and find patterns that would be difficult or impossible to see by humans;

b.   evaluate consumer data and find patterns and preferences;

c.   assist business owners in automating chores;

d.   evaluate market data in order to spot new possibilities and create competitive strategies; and to

e.   enhance decision-making.

AI Rarity and Entrepreneurial Success:

The Resource-Based View (RBV) theory underscores the significance of resources being valuable, rare, inimitable, and non-substitutable (Mataruka, 2022). In the realm of AI, large organizations have the advantage of developing and incorporating AI technologies that are tailored specifically to their unique operations. This customization results in AI capabilities that are rare and difficult for competitors to replicate, giving these organizations a substantial competitive edge. For example, Amazon's recommendation engine utilizes advanced, AI-driven algorithms built from extensive data and continuous investment in AI research (Bouguezzi & Simic, 2024). This engine not only personalizes product suggestions for customers but also integrates seamlessly across Amazon's platform, creating a distinctive advantage that smaller competitors find challenging to replicate. The rarity and inimitability of Amazon's AI-driven personalization capabilities provide the company with a significant market edge. Similarly, Google's AI prowess in search algorithms and advertising stands out. The extensive data from billions of searches daily allows Google to continually refine these algorithms, creating an AI capability that is rare and inimitable. This sophisticated and customized technology reinforces Google's dominance in search and online advertising, an area where smaller firms struggle to compete.

Hamm et al. (2021) highlight that one of the major barriers for SMEs in adopting advanced AI technologies is financial limitations. Unlike large corporations like Amazon and Google, which can invest heavily in AI research and development, SMEs often operate with constrained budgets. This financial disparity limits their ability to invest in AI solutions that are both sophisticated and customized, thereby narrowing the competitive gap.

Netflix's success in leveraging AI to personalize content further exemplifies the impact of AI Rarity and Inimitability. By customizing AI to enhance user experience, Netflix achieves significant market differentiation. In contrast, SMEs often rely on generic, off-the-shelf AI tools that lack the depth of customization necessary to meet specific business needs effectively. These results in less impactful outcomes and widens the competitive divide between large corporations and SMEs. As leading firms continue to advance AI capabilities, SMEs face growing challenges in achieving similar levels of innovation and competitive advantage.

AI Utilization Efficiency and Entrepreneurial Success

Spulbar and Mitrache (2024) revealed that the efficient utilization of AI significantly impacts entrepreneurial success by improving strategic decision-making processes, facilitating adaptive and informed business operations, and fostering a culture of continuous innovation. They further explained that AI's transformative role in product development, market penetration, and competitive differentiation underscores its critical importance in navigating the complexities of modern business environments. Thus, the proper utilization of AI is essential for new businesses aiming to thrive in the digital age, marking it as a fundamental component for achieving entrepreneurial success and sustainable growth.

Similarly, Sharma and Garg (2021) discussed how AI's ability to process large datasets, automate routine tasks, and provide actionable insights enables businesses to operate more efficiently and innovate continuously. As a result, companies that effectively integrate AI into their operations are better positioned to achieve sustainable growth, maintain a competitive edge, and ultimately succeed financially. Both studies underscore the indispensable role of AI

in enhancing business performance and innovation, highlighting its necessity for achieving long-term success in the contemporary digital landscape.

Theoretical Framework

Resource-based View (RBV) Theory (1990)

The Resource-Based View (RBV) (aka Resource-Based Theory) of the organization is a strategy for achieving competitive advantage that emerged during the 1980s and 1990s, following the works of academics and businessmen, such as Birger Wernerfelt, Prahalad and Hamel, Spender and Grant (Young & Barney, 2016). The core idea of the theory is that instead of looking at the competitive business environment to get a niche in the market or an edge over competition and threats, the organization should instead look within the resources and potential it already has available. In line with this research "artificial intelligence power and entrepreneurial success of small and medium scale enterprises in Akwa Ibom State," the RBV theory can be of great use. The use of artificial intelligence (AI) by small and medium enterprises (SMEs) can be well analysed through the lens of strategic value, namely as a resource that strengthens the company's abilities. Due to the integration of AI technologies, SMEs can enhance efficiency, customer interactions and financial performance, as well as encourage innovation leading to the increased competitive advantage in the marketplace.

Furthermore, AI makes it easier for SMEs to analyse and make better use of data as well as to make sound decisions that are in tune with the market. Interestingly, SMEs in Eket, Akwa Ibom State may be characterized by SMEs with deficiencies in terms of resources hence the RBV proposes that the cardinal resource could unlock optimal performance based on an SME's protection of unique technological resources. Therefore, the RBV framework could prove useful in expressing how AI could act as an invaluable asset in enhancing the performances as well as progression of SMEs in Eket. For this study, the resource-based view theory is more suitable as it emphasizes how organizations can use their internal resources to stand out amongst competitors.

Empirical Review

Several studies have been conducted by some scholars on how AI impacts both large and medium scale enterprises. Uzomah and Eruetemu (2024) examined artificial intelligence and digital economy and the economic state of Nigerians. The study adopted the qualitative research design and was based on secondary data collection. Thus, hermeneutical and analytic methods were deployed by the researchers to provide extended, inferential and critical analysis of secondary data on the aforementioned subject matter in order to assert an inter-subjective deductive conclusion and recommendations based on the outcome or findings of the hermeneutical analysis. The most fundamental finding of this hermeneutical treatise is that, contrary to popular insinuations, Artificial Intelligence and Digital Economy may not compound the nose-diving economic condition of the country. Instead, accelerated and augmented access to faster and improved quality internet, up-skilled tech literacy and aptitude pool, an effervescent start-up ecosystem, access to a wide variety investment and partnership opportunities has the incredible prospect of drastically improving the living standard of Nigerians.

Odoh (2024) explored the role of artificial intelligence-driven digital advertising in sustainable real estate marketing in Nigeria. The main purpose of this study was to identify the innovative

digital technologies that are implemented in digital advertising of real estate properties in Nigeria. The study adopted a qualitative research design. The sample was drawn from realtors in Lagos State and Abuja and the sampling technique was purposive. A total of ten semi-structured, one-on-one interviews were conducted with realtors in Lagos and Abuja that deal with luxury homes in Ikoyi, Victoria Island, Lekki, Asokoro and Maitama with each interview session lasting 30 minutes and tape-recorded. The study found that innovative technologies have enhanced the digital advertising strategies of Nigerian realtors and stimulated purchase intentions and sustained business growth.

Ola-Oluwa's (2024) study explored the impact of artificial intelligence in enhancing knowledge sharing and boosting organizational efficiency in Nigerian enterprises. A survey research design was employed with two hundred and thirty-four (234) respondents from diverse industries providing feedback through questionnaires. The data collected was analyzed using both descriptive and inferential statistics. Hypothesis testing revealed a positive correlation between AI-driven knowledge sharing and organizational efficiency, with AI technologies enabling faster and more accessible information flow. The findings highlighted AI's potential to optimize knowledge sharing, helping employees make more informed decisions and fostering a collaborative work environment. Based on these findings, the study suggests that adopting change management practices and developing AI-specific policies can increase the success of AI initiatives, fostering a sustainable shift toward technology-driven growth in emerging markets.

Ebuka et al. (2023) examined Artificial Intelligence as a catalyst for the Sustainability of Small and Medium Scale Businesses (SMEs) in Nigeria. This study adopted a descriptive design. The population of the study was 27,546 small businesses that were registered under the Corporate Affairs Commission (CAC), and a sample size of 379 was arrived at by adopting Krejcie and Morgan's 1970 sample size determination formula. The source of data was an interview, which was followed by a structured questionnaire used for the study. The instrument was validated and tested for reliability. Data analysis was performed using descriptive statistics consisting of frequencies and percentages. The study highlighted the importance of AI not only for big and multinational corporations, but also for SMEs in Nigeria.

METHODOLOGY

Survey research design was applied in the course of this study. The population of this study consisted of 102 SMEs in Eket Local Government Area, Akwa Ibom State which consisted of enterprises who had already incorporated or are in the process of incorporating AI into their business operations. For the purpose of this research, no sampling size and method was incorporated because the entire population was manageable.

Method of Data Analysis

The data collected were analyzed using descriptive statistics, analysis of variance and multiple regression analysis via SPSS 25.0 statistical package. The decision was based on a 5% level of significance. Accept null hypothesis (Ho) if probability value (i.e., P-value or Sig.) is greater than or equals to ($\geq$) stated 5% level of significance (α); otherwise, reject and accept alternative hypothesis (H_1), if p-value or sig. calculated is less than 5% level of significance.

Model specification

This study employed a multiple regression model.

ENSU = $\quad$ **$\beta_0 + \beta_1 AIR + \beta_2 AIUE_+ + \mu.$**

Where;

ENSU $\qquad$ = $\qquad$ Entrepreneurial Success

AIRI $\qquad$ = $\qquad$ AI Rarity

AIUE $\qquad$ = $\qquad$ AI Utilization Efficiency

β_0 s $\qquad$ = $\qquad$ Intercept or regression constant

β_1, β_2 $\qquad$ = $\qquad$ Regression coefficients to be estimated

μ $\qquad$ = $\qquad$ Stochastic error term.

Table 1: Summary of questionnaire administered

Questionnaire	Number of questionnaires	Percentage (%)
Completed and returned	98	96.07
Not completed and returned	3	2.94
Rejected	1	0.99
Administered	102	100.00

Source: *Field survey (2024)*

Table 1 above shows that a total of 102 questionnaires were administered to SMEs at Eket, Akwa Ibom State. Out of the administered questionnaires, 98 (96.07%) were correctly completed and returned, 3 (2.94%) were not completed and returned while 1 (0.99%) was not correctly completed, hence was rejected.

Analysis of respondents' responses

Table 2: Percentage analysis of respondents' responses regarding AI Rarity

	Strongly agreed	Agreed	Neutral	Disagreed	Strongly Disagreed	Total
Small businesses in Akwa Ibom state are actively embracing measures to prevent their AI technologies from being copied by competitors	77 (78.6%)	6 (6.1%)	1 (1.0%)	7 (7.1%)	7 (7.1%)	98 (100%)
Prioritizing AI Rarity is seen as essential for small businesses to remain competitive.	53 (54.1%)	16 (16.3%)	8 (8.2%)	12 (12.2%)	9 (9.2%)	98 (100%)
Resources are being invested to customize AI solutions specifically for your business needs	56 (57.1%)	21 (21.4%)	11 (11.2%)	5 (5.1%)	0 (0%)	98 (100%)

Your unique AI technologies are perceived to positively impact the competitive edge in business processes.	49 (50.0%)	17 (17.3%)	16 (16.3%)	11 (11.2%)	5 (5.1%)	98 (100%)

Source: *Field survey (2024)*

Table 2 above shows that 77 (78.6%) of the respondents strongly agreed that small businesses in Akwa Ibom state are actively making strides to ensure customization of artificial intelligence technologies in their operations, 6 (6.1%) agreed, 1 (1.0%) were neutral, 7 (7.1%) disagreed while 7 (7.1%) of them strongly disagreed. However, 53 (54.1%) of them strongly agreed that prioritizing AI rarity is seen as essential for small businesses to remain competitive. 16 (16.3%) agreed, 8 (8.2%) were neutral, 12 (12.2%) disagreed while 9 (9.2%) strongly disagreed.

Moreso, 56 (57.1%) of them strongly agreed that resources are being invested in training employees to effectively utilize AI solutions for customization, 21 (21.4%) agreed, 11 (11.2%) were neutral, 5 (5.1%) disagreed while 0 (0%) of them strongly disagreed. Furthermore, 49 (50.0%) of them strongly agreed that AI technologies are perceived to positively impact the efficiency of business processes, 17 (17.3%) agreed, 16 (16.3%) were neutral, 11 (11.2%) disagreed while 5 (5.1%) of them strongly disagreed.

Table 3: Percentage analysis of respondents' responses regarding AI utilization efficiency

	Strongly agreed	Agreed	Neutral	Disagreed	Strongly disagreed	Total
AI tools implemented in small businesses have improved productivity and workflow efficiency	57 (58.2%)	17 (17.3%)	14 (14.3%)	7 (7.1%)	3 (3.1%)	98 (100%)
Integrating AI solutions into existing business practices is considered feasible and beneficial	54 (55.1%)	10 (10.2%)	14 (14.3%)	18 (18.4%)	2 (2.0%)	98 (100%)
AI systems have reportedly reduced manual errors and improved accuracy in tasks	58 (59.2%)	17 (17.3%)	14 (14.3%)	7 (7.1%)	2 (2.0%)	98 (100%)
AI utilization is viewed as leading to cost savings and resource optimization in local businesses	53 (54.1%)	21 (21.4%)	13 (13.3%)	4 (4.1%)	7 (7.1%)	98 (100%)

Source: *Field Survey (2024)*

Table 3 above shows that 57 (58.2%) of the respondents strongly agreed that AI tools implemented in small businesses have improved productivity and workflow efficiency, 17 (17.3%) agreed, 14 (14.3%) were neutral, 7 (7.1%) disagreed while 3 (3.1%) of them strongly disagreed. Equally, 54 (55.1%) of them strongly agreed that integrating AI solutions into existing business practices is considered feasible and beneficial, 10 (10.2%) agreed, 14 (14.3%) were neutral, 18 (8.4%) disagreed while 2 (2.0%) of them strongly disagreed. However, 58 (59.2%) of them strongly agreed that AI systems have reportedly reduced manual errors and improved accuracy in tasks, 1 7(17.3%) agreed, 14 (14.3%) were neutral, 7 (7.1%) disagreed while 21 (5.9%) strongly disagreed. In the same vein, 53 (54.1%) of them strongly agreed that AI utilization is viewed as leading to cost savings and resource optimization in local

businesses, 21 (21.4%) strongly agreed, 13 (13.3%) were neutral, 4 (4.1%) disagreed while 7 (7.1%) strongly disagreed.

Table 4: Percentage analysis of respondents' responses regarding entrepreneurial success

	Strongly agreed	Agreed	Neutral	Disagreed	Strongly disagreed	Total
The role of AI technologies in driving innovative outputs in small businesses in Akwa Ibom state is widely acknowledged.	28 (28.6%)	34 (34.7%)	19 (19.4%)	7 (7.1%)	10 (10.2%)	98 (100%)
AI adoption is believed to have significantly contributed to the growth and profitability of local businesses.	51 (52.0%)	18 (18.4%)	7 (7.1%)	8 (8.2%)	14 (14.3%)	98 (100%)
AI integration is perceived to have improved customer satisfaction and retention rates in small businesses in Akwa Ibom state.	34 (34.7%)	20 (20.4%)	8 (8.2%)	24 (24.5%)	12 (12.2%)	98 (100%)
Positive trajectories business longevity in business performance and success are foreseen due to AI implementation.	38 (38.8%)	21 (21.4%)	17 (17.3%)	22 (22.4%)	0 (0%)	98 (100%)

Source: *Field Survey (2024)*

Table 4 above shows that 28 (28.6%) of the respondents strongly agreed that the role of AI technologies in driving innovative outputs in small businesses in Akwa Ibom state is widely acknowledged, 34 (34.7%) agreed, 19 (19.4%) were neutral, 7 (7.1%) disagreed while 10 (10.2%) of them strongly disagreed. However, 51 (52.0%) of them strongly agreed that AI adoption is believed to have significantly contributed to the growth and profitability of local businesses, 18 (18.4%) agreed, 7 (7.1%) were neutral, 8 (8.2%) disagreed while 14 (4.3%) of them strongly disagreed. More so, 34 (34.7%) of them strongly agreed that AI integration is perceived to have improved customer satisfaction and retention rates in small businesses in Akwa Ibom State. 20 (20.4%) agreed, 8 (8.2%) were neutral, 24 (24.5%) disagreed while 12 (12.2%) of them strongly disagreed. Finally, 38 (38.8%) of them strongly agreed that positive trajectories business longevity in business performance and success are foreseen due to AI implementation, 21 (21.4%) agreed, 17 (17.3%) were neutral, while 22 (22.4%) disagreed while 0 (0%) of them strongly disagreed.

Test of Hypotheses

In line with this, each hypothesis was tested based on the regression results obtained.

Table 5: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.032	.825		6.097	.000
	AI RARITY	.082	.159	.063	3.015	.008
	AI_UTILIZATION EFFICIENCY	.557	.163	.442	3.417	.001
a. Dependent Variable: ENTREPRENEURIAL_SUCCESS						

The t-statistics and p-values as revealed in table 5 above were employed in the test of hypotheses at 5% significance level.

Ho: AI rarity has no significant effect on entrepreneurial success of small businesses in Akwa Ibom State.

The analysis in table 5 reveals that the p-value of 0.008 is less than 0.05 ($p < 0.05$). The t-cal value of 3.015 is greater than the critical value of t which was 1.985. In addition, the regression coefficient (r) of 0.063 indicates a positive relationship between the variables. Based on the decision rule of the study, the null hypothesis of this study was rejected for the alternate hypothesis: **H₁**: AI rarity has a significant effect on entrepreneurial success of small businesses in Akwa Ibom State.

This alternative was introduced due to the null hypothesis being rejected. It is accepted because the p-value of 0.021 shown in table 5 is less than 0.05($p < 0.05$). The study found that when SMEs in Eket, Akwa Ibom State is unique specifically to meet business needs, SMEs tend to do well.

Hypothesis two

Ho: AI utilization efficiency has no significant effect on entrepreneurial success of small businesses in Eket, Akwa Ibom State.

Similarly, the null hypothesis of one of the studies is rejected because the p-value of 0.001 shown in table 4.3 is less than 0.05 ($p < 0.05$). The null hypothesis is further rejected because the t-cal value of 3.417 is greater than the critical value of t which was 1.985.

H₁: AI utilization efficiency has a significant effect on entrepreneurial success of small businesses in Eket, Akwa Ibom State.

This alternative was introduced because the null hypothesis was rejected. It is accepted because the regression coefficient (r) of 0.442 indicates a positive relationship between the variables.

Therefore, AI utilization efficiency has a significant positive effect on entrepreneurial success in SMEs, Eket Akwa Ibom State.

DISCUSSION OF FINDINGS

AI Rarity and entrepreneurial success

The findings contradict the notion that the AI Rarity has no significant impact on entrepreneurial success of SMEs in Eket, Akwa Ibom State, demonstrating the fact that while effective integration of AI into business operations yields results, it is substantially more advantageous for SMEs to acquire technologies that enable them to stand amidst competition. This conclusion is consistent with the RBV theory which suggests that a firm's greatest competitive advantage lies within itself. Research conducted by Mitrache et al. (2024) in their study also emphasized the importance of incorporating customized AI technology. They reported that one's AI technology which is not easily fabricated is indispensable for business success and boosts competitive edge. Ainah (2024) highlights the importance of ensuring that each AI technology is tailored to suit specific operational needs. She elaborated on this using Sabah Business Landscape as a focal point and provided an example of how AI-powered recommendation systems, tailored to individual preferences and behaviour, have the potential to provide personalized travel itineraries, optimize resource allocation, and boost visitor satisfaction as among many other benefits.

AI utilization efficiency and entrepreneurial success

Furthermore, the study revealed that AI utilization efficiency also has a significant positive impact on entrepreneurial success, with a correlation coefficient of 0.442 and a p-value of 0.001 ($p<0.05$). This indicates that properly utilizing AI technologies improve entrepreneurial success within SMEs in Eket, Akwa Ibom State. This aligns with the findings from Yikilmaz et al. (2023) whose study increased the awareness of business opportunities AI tools like Generative AI could offer in providing innovative solutions and offering a strategic advantage in the competitive market. Additionally, this finding also supports findings from the study Imagha et al. (2023) which established that effective technological skill is very important for the performance of SMEs and recommended that for SMEs to be successful and be ahead of their competitors, its managers must be technologically inclined.

CONCLUSION

The purpose of the study was to find out the impact of AI technologies on the potential success of SMEs in Eket, Akwa Ibom State. It focused on the independent variables AI rarity and AI utilization efficiency. The findings did reveal that AI rarity and AI utilization efficiency have a significant effect on entrepreneurial success. The study did a good job in proving that it is not as clean-cut as SMEs wanting to adopt AI technologies, showing the potential factors that could affect or postpone the application of AI technologies by SMEs. It also gives ample reasons why SMEs should do thorough work in acquiring knowledge about several AI technologies and ensuring that whatever AI technology is acquired should be customized to fit the current

operations framework, as it ensures a more efficient use of AI technologies, which could, in the long run, lead to entrepreneurial success.

RECOMMENDATIONS

1. SMEs in Eket, Akwa Ibom State should explore ways to ensure that technologies that they adopt are unique to their services and difficult to replicate. This niche focus will allow businesses to create a unique proposition making them stand out in the competitive market.

2. SMEs in Eket, Akwa Ibom State should make optimizing their AI utilization practices their top priority. Enhancing the efficiency of AI technology use can potentially provide long-term benefits in productivity and performance.

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