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Does Organizational Capabilities Mediate the Relationship between E-Business Adoption and Organizational Balanced Scorecard Performance? Evidence from Fintech Companies in Nigeria

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Abstract. There is no doubt that the emergence and continual adoption of e-business has profoundly improve both financial and non-financial performance indicators of many organizations, yet, the role of organizational capabilities has been grossly undermined in the literature. This study is motivated to empirically investigate the mediation of organizational capabilities in the relationship between e-business adoption and organizational balanced scorecard performance in the Fintech Companies in Nigeria. A cross-sectional survey was employed to administer 205 Chief Executive Officers (CEO) in the Fintech sector but only 202 questionnaires were analyzed. The data were tested and estimated using Confirmatory Factor Analysis (CFA) and Mediation Linear Regression analysis through Statistical Packages for Social Sciences (SPSS) software. Findings from the four hypotheses tested reveal that e-business adoption directly influences organizational balanced scorecard performance and e-business adoption has the highest multiplier impact on learning and growth than other dimensional impacts of balanced scorecard performance. Furthermore, this study reveals that organizational capabilities partially mediate the relationship between e-business adoption and organizational balanced scorecard performance in the Fintech companies in Nigeria. Going forward, the management should not only intensify on the adoption of e-business but effectively optimize e-business adoption to enhance organizational financial performance and also invest massively in all organizational capabilities dimensions to reduce the mediating effect in the relationship between e-business adoption and organizational balanced scorecard performance in the Fintech Companies in Nigeria.

Keywords: Confirmatory factor analysis, E-business adoption, Fintech, Mediating regression, Organizational balanced scorecard performance, Organizational capabilities.

1. INTRODUCTION

The emergence of the third and fourth industrial revolutions since 1950s to date has continued to increase the use of Information and Communication Technology (ICT) in all business operations and industries. Remarkably, the constant changes in ICT from computing electronic devices without internet to the era of internet network and the recent emerging technologies, all have reshaped the business architecture, leading to the introduction and adoption of e-business by many organizations (Boumaza & Kamel, 2021; Dahmani, 2024).

Today, e-business adoption has been widely accepted as an organizational strategy to optimize internal business processes as well as a game changer over the conventional business rivalry to gain market share dominance and to continually secure a competitive advantage in the ever-changing business environment. While many organizations including small and medium-sized enterprises argue that the adoption of e-business has resulted in lowering operational costs, improving efficiency, effectiveness, and productivity as well as increasing customers satisfaction, retention and expansion (Mahajan & Balasubra & Maniam, 2003). In contrast, the view of many organizations, especially the Small and Medium-Sized Enterprises (SMEs) in developing countries is that e-business adoption have been less implemented due to high cost of e-business installation, inaccessibility to IT infrastructure, low financing, lack of technical know-how, and the prevailing gross organizational incapabilities (Fleenor & Raven, 2011; AI-Tayyar, Abdullah, Rahman, & Ali, 2021).

In spite of the inconclusiveness in the e-business adoption among organizations between developed and developing countries, the remarkable success of e-commerce has constantly motivated every organization to adopt e-business in all business operations. For instance, the report of United Nations Development Program (UNDP) in 2024 found that e-commerce has accounted for $25 trillion sales in 43 developed and developing economies, representing a three quarter of the global GDP. Similarly, the Statista report showed that the global e-commerce sales has reached $4.3 trillion as of June 2025 when compared with the global e-commerce sales of $6.39 trillion in 2024 (Statista, 2025). Indeed, there is a strong positive associations between e-commerce and organizational performance, however, the nexus between e-business and organizational performance has been less researched in the literature.

Meanwhile, the contending issues about the relationship between e-business adoption and organizational performance in developing countries, such as high variations in the expected organizational performance, slow rate of e-business expansion, and high inability of e-business adoption, have recently shifted attention to organizational capabilities in the literature (Attia, 2022; Kabrilyants, Obeidat, Alshurideh, & Masodeh, 2021).

While recent studies (Attia, 2022; Kabrilyants, Obeidat, Alshurideh, & Masodeh, 2021) have opined that organizational capabilities are the critical determinants of e-business adoption, in same vein, some studies argue that e-business adoption is not an ultimate solution to organizational performance. These contentious issues about the expected outcome of e-business adoption in many organizations vis-à-vis the heterogeneous organizational capabilities has raised more attention to the role of organizational capabilities in the relationship between e-business adoption and organizational performance in the literature. Although, the dimensions of

organizational capabilities in the existing studies have been varying, yet, it is worrisomely that none of these studies has empirically consider the entire dimensional role of organizational capabilities in the nexus between e-business adoption and organizational performance. In addition, these studies are less research in developing countries when compared with the developed countries.

In view of the aforementioned gaps in the existing studies, this study is motivated to investigate the mediating effect of organizational capabilities on the relationship between e-business adoption and organizational balanced scorecard performance in the Fintech companies in Nigeria. This study highlights the importance of each and the integrated dimensions of organizational capabilities on the nexus between e-business organizational balanced scorecard performance. Therefore, this study answers the following questions:

- What is the effect of e-business on organizational balanced scorecard performance of fintech companies in Nigeria?
- What is the effect of e-business on organizational capabilities of fintech companies in Nigeria?
- What is the effect of organizational capabilities on organizational balanced scorecard performance of fintech companies in Nigeria?
- What is the mediating effect of organizational capabilities on the relationship between e-business and organizational Balanced Scorecard performance of fintech companies in Nigeria?

Aside the introduction, the following sections of this paper is organized as follows. Section 2 explores the literature review and formulate the hypotheses. Section 3 describes the research methodology employed. Section 4 discusses the study findings while section 5 outlines the conclusion, recommendations and future research directions.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. E-Business Adoption

The electronic business termed e-business is defined as the use of the internet and emerging communication technologies in support of all business activities (Durbhakula and Kim, 2011). Importantly, the e-business since 2000 has continued to evolves business activities ranging from e-commerce, business-to-consumer (B2C), consumer-to-consumer (C2C), Business-to-Government (B2G), mobile commerce (M-Commerce), and the recent, automated manufacturing operations, such as e-warehouse systems, robotic pick and place systems, automated guided vehicles (AGVs) for material handling, all enhancing optimization of business activities which benefits all stakeholders including organizational employees, customers, government, and supply chains (Elhajjar, Yacoub and Yaacoub, 2023). On another hand, e-business adoption in this study is described as dynamic process that integrate internet-based information and communication technologies (ICT) in all internal and external business activities ranging from procurement, manufacturing, warehouse and logistics, to customer (Eze, Du an, & Chen, 2014).

Theoretically, e-business adoption is stemmed from technology adoption models. In the e-business adoption literature, several studies (Earl, 2000; McKay and Marshall, 2004; Chen and Holsapple, 2012) argue that the rapid growth phases of e-business adoption by many organizations is based on the Technology Acceptance Model (TAM). According to TAM, almost all organizations adopt e-business for three purposes-Perceived Usefulness, Perceived Ease of Use, and Attitude toward Use.

However, many organizations, especially the SMEs in the developing countries play less attention to internal capabilities, such as firm's availability of resources, opportunities and skills, before adopting e-business and the preconditions to achieve perceived organizational outcomes as advocated in the Theory of Planned Behavior (TPB) of technology adoption theories (Taherdooost, 2018).

In view of the theoretical underpinnings of TAM and TPB models, many e-business adoption studies (Attia, 2022; Karim, Nordin, Yusof, Amin, Islam, & Hassan, 2023; Kabrilyants, Obeidat, Alshurideh, and Masa'deh, 2021) have considered only internal capability factors, but Wu, Mahajan & Balasubramanian (2003) measured e-business adoption by considering the intensity and antecedents internal factors respectively. Although, recent studies on e-business adoption have widely adopted the Technological Organizational-Environmental (TOE) framework to measure e-business adoption, which are drawn from TAM and TPB models. While the technological and organizational capabilities are controllable, the environmental factor consists of uncontrollable events that can influence e-business adoption by any firm, such as country characteristics, government policy and events/shocks (Durbhakula, and Kim, 2011).

2.2. E-Business Adoption and Organizational Balanced Scorecard Performance

The Balanced Scorecard (BSC) has been a strategic management framework since its introduction by Kaplan and Norton in 1999 as measures that drive performance (Madsen, 2025). In the report of Bain and Company, in 2005 and 2007 that of 960 and 1221 firms that evaluate their performance, about 57% and 66% of these firms employed Balanced Scorecard (BSC) over the conventional financial performance, indicating a wide spread use of BSC for its ability to integrate multiple performance dimensions (Geuser, Mooraj and Oyon, 2009). Additionally, the Balanced Scorecard (BSC), according to Gueser, Mooraj and Oyon (2009), is expected to test two questions. The first hypothesis is how much does the firm contributes to the firm's performance? And the second hypothesis,

how does the firm contribute to the firm's performance? While the first questions is interested in the financial (monetary) performance of the firm, the second question emphasizes on what contribute(s) to the firm's performance. To this quest, Kaplan and Norton (1992), uses four metrics to answer these two strategic management questions with the following performance dimensions, such as financial, customer, process, and learning and growth (Geuser, Mooraj and Oyon, 2009).

Several studies have explored the Balanced Scorecard (BSC) to access organizational performance from financial, customer, process and learning and growth performance (Geuser, Mooraj, & Oyon, 2009; Madsen, 2025; Kumar, Prince, & Baker, 2022; Kumari, 2011). All admitted that Balanced Scorecard (BSC) is a superior organizational performance metrics over the conventional organizational performance that is limited to financial metric only and does not account for recent management change concerns like environmental, technological, customer, and government policies. In e-business adoption context, several studies have examined the impact of e-business adoption on organizational financial performance (Alwuwallad and Alhumoudi, 2024; Omar & Mahmood, 2020; Ibrahim & Alkhasabah, 2024). However, few studies (Wu, Mahajan, & Balasubramanian, 2013) that investigated the relationship between e-business adoption and business performance, measured the business performance using both financial and non-financial performance metrics. Overall, the empirical studies relating to the relationship e-business adoption and the Balanced Scorecard (BSC) performance as a measure of organizational performance to the best of the literature review is scarcity and not found in the existing studies. Therefore, this study develops the following hypotheses:

H_1: E-business adoption has a positive relationship with organizational Balanced Scorecard (BSC) performance.

H_2: E-business adoption has a positive relationship with organizational capabilities.

H_3: Organizational capabilities has a positive relationship with organizational Balanced Scorecard (BSC) performance.

2.3. The Mediating Role of Organizational Capabilities on the Nexus between E-business Adoption and Organizational Balanced Scorecard Performance.

The e-business adoption which creates new business models through a driven internet and emerging technologies is expected to lower operational costs, increase customer satisfaction, and more importantly, increases operating efficiency and effectiveness that leads to higher profitability and a source of competitive advantages for any organizational change management (Kabrilyants, Obeidat, Alshurideh, & Masa'deh, 2021; Ibrahim & Alkhasabah, 2024). These perceived benefits of e-business adoption have unprecedented made 28 million businesses to operate electricity worldwide (Bisplan, 2025). However, studies on the benefits and barrier of e-business adoption SMES in developing countries found that a number of factors are detrimental, such as low level of technology, unqualified IT infrastructure (Abdullah, Thomas & Murphy, 2018; Idris, Edwards, & McDonald, 2017). Based on these detrimental factors that inhibit e-business adoption in developing countries, the research recognize the importance of organization capabilities to maximize the expected benefit of e-business adoption in the literature.

Organizational Capabilities according to Harris (2015), is the ability to perform a coordinated set of tasks while utilizing organization resources. In other words, organizational capacity is defined as a continuous management change in resources, skills processes, and knowledge to adapt improve and achieve a set predetermined goals. The organizational capability framework is drawn from two strategic management theories, Resource-Based View (RBV) and Knowledge-Based View (KBV), indicating that organizational capacity are the fundamental pillar which drives every organizational change or policy and ultimately helps in achieving organizational core measurable objectives.

Indeed, organizational capability is internally driven but vary from organization to another. Several studies have measured organizational capability differently but all the organizational capability dimensions are drawn from both RBV and KBV theories. In the study of Gold et al., (2001), organizational capability is categorized into three infrastructure-cultural, structural, and technological. While some studies (Zhu et al., 2006; Lee et al., 2007; Liu, 2013; Maditinos et al., 2014; Kabrilyants, Obeidat, Alshurideh, & Masa'deh, 2021) measured organizational capabilities in three dimensions-organizational learning capability, knowledge management capability, and IT capability. In another study, Attia (2022) decomposed organizational capability which was termed organizational factors into four dimensions-learning capabilities, knowledge management capabilities, adhocracy culture, and top management support. Based on these previous findings, the study develops the following hypotheses:

H_4: The mediating effect of organizational capabilities on the nexus between e-business adoption and organizational Balanced Scorecard performance

H_{4a}: The mediating effect of organizational learning capabilities on the nexus between e-business adoption and organizational Balanced Scorecard performance

H_{4b}: The mediating effect of organizational knowledge management capabilities on the nexus between e-business adoption and organizational Balanced Scorecard performance

H_{4c}: The mediating effect of organizational top management support on the nexus between e-business adoption and organizational Balanced Scorecard performance

H_{4d} The mediating effect of organizational adhocracy culture capabilities on the nexus between e-business adoption and organizational Balanced Scorecard performance

H_{4e} The mediating effect of organizational IT capabilities on the nexus between e-business adoption and organizational Balanced Scorecard performance.

3. THEORETICAL FRAMEWORK AND RESEARCH MODEL

The theoretical framework that examines the mediating role of organizational capabilities on the relationship between e-business adoption and organizational Balanced scorecard performance are technology acceptance model (TAM) and the resource-based view theories. On one hand, the technology acceptance model (TAM) that is rooted from the theory of planned behavior, recognizes the importance of an individual or entity to independently decide on adopting a technology for its expected or perceived usefulness, ease of use and attitude towards use. Although, the TAM theory nor planned behavior was not theorized to perceived organizational performance, but recent literature has extended its application or usefulness to organizational performance.

Today, many organizations have widely accepted the adoption of e-business as a critical enabler of organizational performance. In view of this theoretical underpinning of TAM and organizational performance, several studies (Chen & Holassple, 2012; Sahu, 2016; Attia, 2022) have tested the relationship between e-business adoption and organizational performance. Although both e-business adoption and organizational performance have been measured differently, yet there is a high variations in the TAM underpinning of perceived usefulness (organizational performance) between firms and economies. Therefore, this study test the TAM vis-à-vis the fintech startups perceived performance in Nigeria, while investigate the direct relationship between e-business adoption and balanced scorecard performance of Fintech startups in Nigeria.

On the other hand, the resource-based view (RBV) theory that theorize the role of firm's resources and capabilities on the firm's performance by Barney in 1991 (Komakech, Ombati, Kikwatha, & Wainaina, 2025). The resource-based view (RBV) theory assumed that the organizational performance and competitive advantage of a firm solely depends on both tangible and intangible resources. Indeed, these organizational resources are valuable, rare and inimitable, implying that organizational resources are varying from one firm to another, and the most superior organization possesses the highest organizational resources that are costly, expensive and strongly inimitable (Komakech, Ombati, Kikwatha, & Wainaina, 2025).

Like TAM, the RBV theory is an independent decision by an individual or entity however, in this study, the RBV theory is a precondition decision before the TAM decision. This implies that RBV theory relates to organizational capabilities which are the fundamental decisions before the e-business adoption decision, in order to achieve the TAM motive of perceived usefulness (perceived organizational performance).

Studies in organizational capabilities underpinned by RBV theory have considered internal factors to measure organizational capabilities, except the study of Durbhakula, & Kim (2011) that considered external factors like country characteristics, government policy, and event shocks. Therefore, this study a bridge the gap in the organizational capabilities and measure organizational capabilities from internal and external dimensions in the existing studies.

Following the theoretical framework in this study that shows the indirect relationship between TAM and RBV theories to produce organizational performance as well as the direct relationship between TAM and organizational performance. In this study, the TAM and RBV proxy as e-business adoption and organizational capabilities respectively. The research model for this study is depicted in Figure 1.

H1

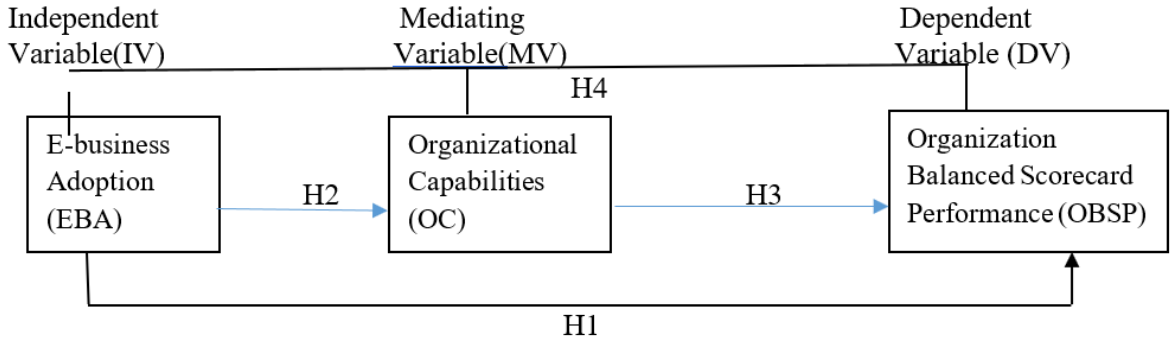


Figure 1. Research model.

Figure 1 displays the direct and indirect effects to represent hypothesis 1 and hypotheses 2-3 respectively. While H_1 exhibits a direct relationship between e-business adoption and organizational balanced scorecard performance, H2 and H3 exhibit indirect effects of e-business adoption on organizational capabilities as well as effect of organizational capabilities on organizational balanced scorecard performance. The hypothesis 4 denoted by H4 indicates the mediating effect of organizational capabilities on the relationship between e-business adoption and organizational balanced scorecard performance.

4. METHODOLOGY

4.1. Research Design

This study employed a quantitative cross-sectional survey design to investigate the mediating effect of organizational capabilities on the relationship between e-business adoption and organizational balanced scorecard performance in the Fintech companies in Nigeria. To investigate, this study collect data from the sample and test the theoretical underpinning.

4.2. Population and Sample

In the context of this study, the Fintech startups companies in Nigeria is the target population due to the impeccable adoption of IT driven by internet to perform all banking activities from start to end. Of 430 Fintech companies operating in Nigeria as of February 2025, which represent the population, 205 Fintech companies was selected as the sample using the Taro-Yamane method. The choice of Taro-Yamane over other sample size determination methods lies on the finite number of Nigerian fintech companies within the study period and the threshold of below 450 population size (Olonite, 2022). The randomly chosen 205 Fintech companies were sent email, requesting the Chief Executive Officer (CEO) of the company to administer the electronic questionnaire format called the Google survey for academic purpose strictly research purpose.

4.3. Data Collection Instrument

The structured-questionnaire is aimed to collect the primary data while measuring responses from the constructs to test the study hypotheses. Aside the bio-demographic, the remaining sections in the questionnaire is divided into three sections, e-business adoption, organizational balanced scorecard performance, and organizational capabilities as summarized in Table 1.

Table 1. Organization of Data Collection instruments.

Second-order construct	First-order construct	Number of items	Adapted from
e-business adoption	Organizational Antecedent Factor (why)	4	Lal (2002),
	Technological Intensity (how) Factor	4	Lal (2002)
	Environmental	4	Durbhakula & Kim, (2011).
Organizational Balanced Scorecard Performance	Financial	4	Gazi, Atan & Kihc (2022)
	Customer	4	Kaplan & Northon (1992)
	Internal Process	4	
	Learning and Growth	4	
Organizational Capabilities	Learning capability	4	
	knowledge Management capability	4	
	Information technology capability	5	Amin, Raharja, Tahir, &Muhyi (2023)
	Adhocracy culture capability	4	
	Top Management Support	4	
	Total	49	

Of the 49-item measures used to measure the mediating effect of organizational capabilities on the relationship between e-business adoption and organizational balanced scorecard performance, 12-item measures were used to assess the dependent variable, organizational balanced scorecard performance in this study. Lastly, the measurement scale for all constructs were a five-point Likert scale in the ascending from 1-stronlgy disagree to a 5-strongly agree.

4.4. Data Analysis Techniques

Before the hypotheses developed are tested, the study scientifically assessed the data collected. In order to analyze the data, a two-step estimation techniques was conducted. The first step employed the confirmatory factor analysis (CFA) to test the reliability and validity of the factors (primary data collected). In this study, Cronbach Alpha and composite reliability are estimated and adjudged by the standard values of 0.70 and above for Cronbach alpha as well as 0.60 and above for composite reliability to test for internal consistency of the indicators (Hair et al., 2021; Kabrilyants, Obeidat, Alshwrideh, & Musa'deh, 2021).

On another hand, the factor loading and average variance extracted (AVE) and the comparison between the average variance extracted (AVE) and the bivariate variance of constructs, all were used to test convergent validity and discriminant validity in the data measurement. Importantly, the conformity to minimum acceptable values for factor loading and average variance extracted (AVE) are 0.5 and above as well as 0.6 and above respectively, confirmed the presence of convergent validity among the indicators and constructs in this study (Karim, Nordin, Yusof, Amin, Islam, & Hassan, 2023). Furthermore, the discriminant validity in this study prevails when the AVE exceeds the shared variance square bivariate of constructs under the AVE-SV approach

by Fornell and Larcker in 1981 (Cheung, Cooper-Thomas, Lau, & Wang, 2024). Lastly, the statistical software used for the data measurement and hypotheses testing is the statistical package for social sciences (SPSS) version 25.

5. RESULTS AND DISCUSSION

5.1. Measurement Model

Results in Table 2 displays the factor loading, Cronbach's alpha, composite reliability and the square root of average variance extracted (AVE) to test the reliability and convergent validity of the indicators and constructs in this study.

Table 2. Measurement model result.

Construct	Items	Factor Loading	Cronbach Alpha	CR	Convergent Validity
Organization Adoption Antecedent	OA1	0.832	0.9	0.772	0.879
	OA2	0.92			
	OA3	0.867			
	OA4	0.897			
Technological	TI1	0.836	0.76	0.613	0.783
	TI2	0.813			
	TI3	0.799			
	TI4	0.674			
Environmental	E1	0.81	0.729	0.709	0.842
	E2	0.929			
	E3	0.879			
	E4	0.737			
Financial Organizational	F1	0.718	0.718	0.601	0.775
	F2	0.91			
	F3	0.678			
	F4	Deleted Removed			
Customer	C1	0.846	0.871	0.673	0.820
	C2	0.86			
	C3	0.685			
	C4	0.875			
Internal process	IP1	0.547	0.717	0.558	0.747
	IP2	0.688			
	IP3	0.804			
	IP4	0.902			
Learning & Growth	LG1	0.695	0.841	0.646	0.804
	LG2	0.657			
	LG3	0.889			
	LG4	0.937			
Learning Capacity	LC1	0.832	0.801	0.503	0.709
	LC2	0.85			
	LC3	0.525			
	LC4	0.565			
Knowledge Management Capacity	KMC1	0.546	0.71	0.456	0.675
	KMC2	Deleted			
	KMC3	0.743			
	KMC4	0.719			
Information Technology Capacity	ITC1	0.731	0.86	0.561	0.735
	ITC2	0.777			
	ITC3	0.693			
	ITC4	0.841			
	ITC5	0.694			
Adhocracy Culture Capacity	ACC1	Deleted	0.708	0.578	0.760
	ACC2	0.661			
	ACC3	0.758			
	ACC4	0.85			
TOP Management System	TMS1	0.799	0.715	0.851	0.762
	TMS2	0.839			
	TMS3	0.632			
	TMS4	Deleted			

Results in Table 2 reveal that all items except ACC1 and TMS4 conform to the acceptable factor loading standard value of 0.7 and above, according to hair et al. (2021) and thus, these indicators, have highly explained the constructs in this study. Furthermore, Table 2 shows that Cronbach's Alpha and composite reliability threshold values of 0.7 and 0.6 respectively. This results confirm that all indicators are reliable and the reliability test for all constructs are accepted in this study. In addition, the convergent validity in Table 2 shows that the square root of average variance extracted (AVE) for all constructs exceed the minimum value of 0.5, hence, the convergent validity test is accepted for all constructs in this study. This implies that these indicators are in agreement with the measurement model in this study.

Table 3. Discriminant validity results.

Construct	1	2	3
1. E-business Adoption	1.00		
	[0.835]		
2. Organization Balanced Scorecard performance	0.914**	1.00	
	[0.956]	[0.787]	
3. Organization Capabilities	0.758**	0.845**	1.00
	[0.871]	[0.919]	[0.729]

Note: ***, **, and * are 1%, 5%, and 10% respectively.

Table 3 reports the discriminant validity for the three constructs using three criteria. The Anderson and Gerbing (1988) criterion found that the constructs are distinct because all the bivariate coefficients for the constructs are statistically significant at 5%, and thus, there is evidence of discriminant validity. Also, the Garson (2002) and Kenny (2016) criteria accepted discriminant validity among the constructs because all bivariate coefficients are less than 0.85 or 0.8 or 0.75, except organizational balanced scorecard performance in this study. However, the AVE-SV approach, commonly known as the Fornell and Larcker criterion found in Table 3 that discriminant validity is not present among the constructs because the diagonal parentheses values are not greater than the bivariate variance in the parentheses. Nonetheless, this study accepts the presence of discriminant validity using the Anderson and Gering criterion, hence, the constructs are indistinct but some high bivariate coefficient above 0.85 and above suggest the likelihood of collineraity presence in this measurement model results.

Table 4. Collinearity and normal tests result.

	Variance-Inflated factors (VIF) statistic			Skewness
	1	2	3	
1. E-business	-			-1.938
2. Organization	22.7	-		-1.072
3. Organization Capability	7.75	0.129	-	0.283

Results in Table 4 present the collinearity and normal tests for the constructs. All the variance-inflated factors (VIF) except the VIF of e-business adoption and organizational capabilities, violated the no collinearity assumption because their collinearity values exceed the rule-of-thumb of VIF less than 10 (Gujarati, 2020). Although, e-business adoption is the main independent variable while the organizational capabilities is a mediating variable, hence, there is no collinearity presence, except e-business adoption and organization capabilities that the VIF value of 0.129 exceeds VIF equals 10. On another hand, the skewness results in Table 4 finds that all constructs reject the normal distribution, and exhibit both positive and negative skewed distribution in this study. Although, the asymmetrical distribution of these constructs questioned the constructs reliability, and thus justify the use of ordinary least squares (OLS) technique in this study.

Overall, the measurement model results in Tables 2-4 affirm that almost all indicators and constructs meet the reliability and validity tests, hence, the constructs/variables can be described using descriptive statistics as well as appropriate to statistically test the developed hypotheses using the mediation OLS regression analysis in this study.

5.2. Data Estimation Results

5.2.1. Demographic Characteristics and Descriptive Statistics

Figures 2-5 display the gender, length of position, qualifications, and Fintech service experience of the 202 administered respondents in the Fintech sector in Nigeria. Results in Figure 2 shows that the male respondent accounted for 92.1 percent that is far more than the female respondent proportion of about 7.9 percent. This indicates that there are more male in the Chief Executive Officer (CEO) position than the female in the Fintech sector in Nigeria.

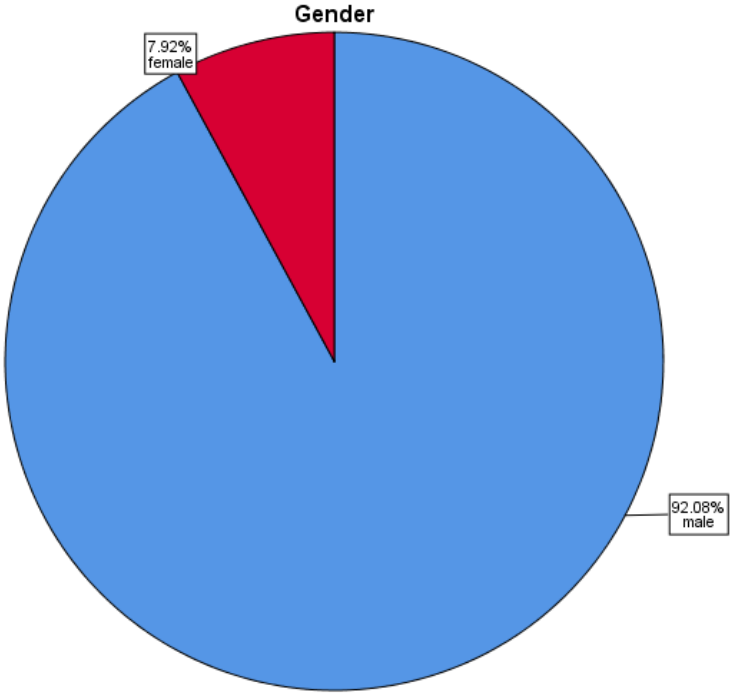


Figure 2. Gender.

Figure 3 reveals that about 52 percent of the respondents have spent less than 6 years on the length of job position while the respondents with the highest length of position is about 5 percent. This imply that more than half of the CEO are less experienced on the job position in the Fintech sector in Nigeria.

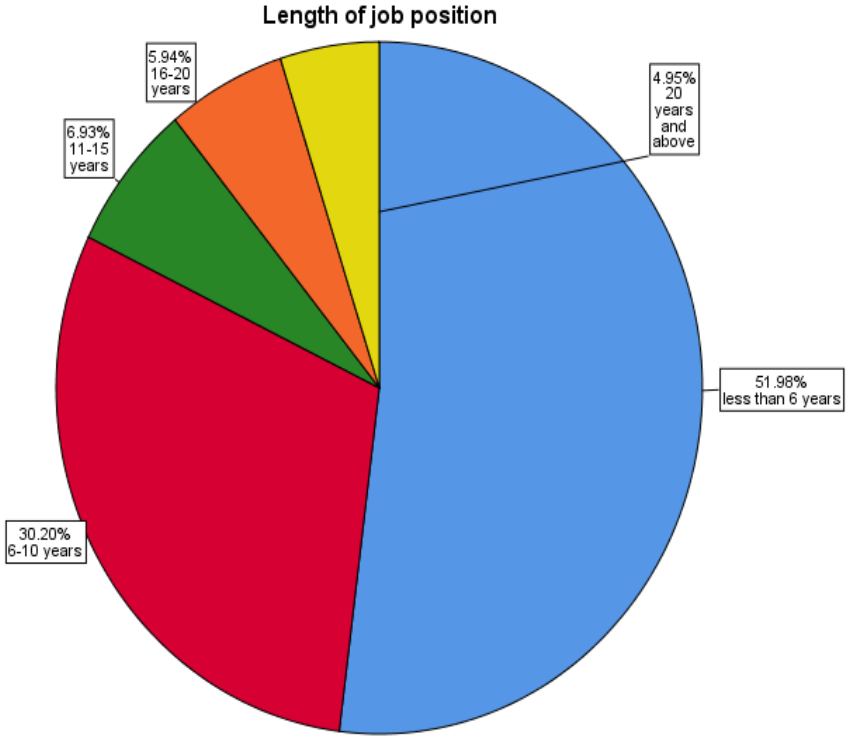


Figure 3. Length of Job Position.

Furthermore, Figure 4 shows that about 64.4 percent of the respondents possess M.Sc/MBA and professional certificates, indicating more than half of the CEO are well-educated, while only a quarter percent possess a PhD certificate in the Fintech industry. This affirms that all CEO/respondents are well qualified with array of degrees.

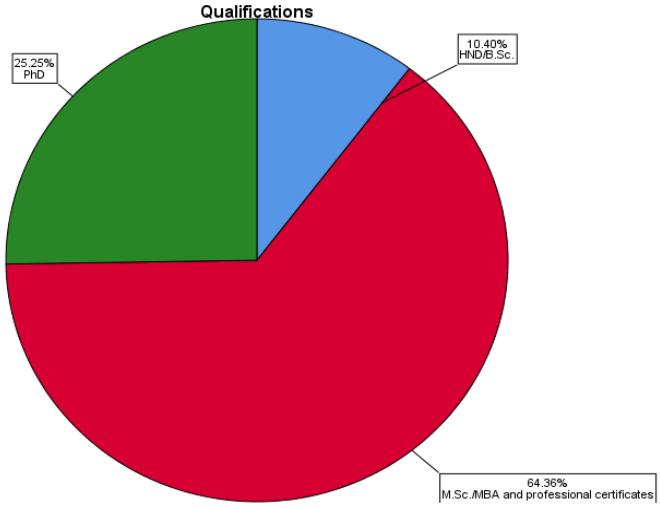


Figure 4. Qualifications.

Results display in Figure 5 reveals that almost a three-quarter(72.8 percent) of the Fintech companies engage in lending credit service, followed by 18.8 percent in digital banking service, while only 2 percent of the Fintech companies render all Fintech services as licensed by the Central Bank of Nigeria (CBN) in this study. This indicates that Fintech companies' service is narrow and not broad to meet all customers' financial services in Nigeria.

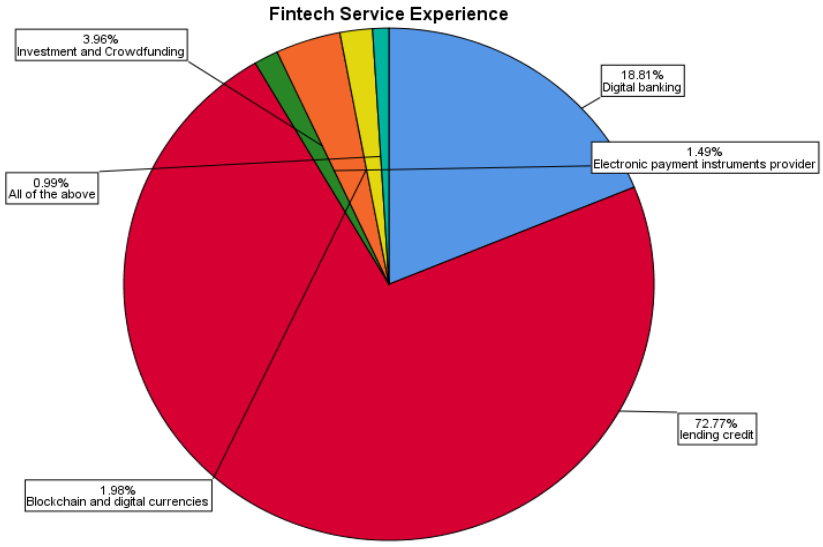


Figure 5. Fintech Service Experience.

Table 5. Descriptive statistics and correlation matrix results.

Variable	Mean	Std.	1	2	3	4	5	6	7	8	9	10	11	12
1. Org. Antecedent	4.83	0.34	1.00											
2. Technology Intensity	4.50	0.28	0.64**	1.00										
3.Environment	4.67	0.24	0.93**	0.91	1.00									
4.Financial	4.86	0.26	0.933**	0.71	0.70	1.00								
5.Customer	4.73	0.36	0.85**	0.84	0.87	0.91	1.00							
6.Internal process	4.60	3.44	0.78**	0.79	0.74	0.94	0.90	1.00						
7.Learning & Growth	4.68	0.39	0.83**	0.73	0.65	0.88	0.87	0.92	1.00					
8.Learning Capability	4.56	0.34	0.78**	0.82	0.73	0.84	0.85	0.87	0.79	1.00				
9.Knowledge Management Capability	4.65	0.25	0.78	0.78	0.25	0.46	0.64	0.55	0.63	0.62	1.00			
10.Information Technology Capability	4.19	0.30	0.31	0.81	0.30	0.55	0.70	0.65	0.73	0.55	0.95	1.00		
11.Adhocracy Culture	4.24	0.32	0.39	0.89	0.49	0.81	0.82	0.85	0.90	0.73	0.51	0.73	1.00	
12.Top Management Capability	4.68	0.33	0.57	0.86	0.48	0.81	0.82	0.85	0.90	0.73	0.51	0.73	0.65	1.00
E-business Adoption	4.67	0.26	1.00											
Org. Balanced Scorecard	4.7	0.32	0.91	1.00										
Org. capability	4.48	0.27	0.76	0.85	1.00									

Note: ***, **, and * are 1%, 5%, and 10% respectively; std represent standard deviation.

The descriptive statistics results display in Table 5 shows that the mean ranges between 4.86 and 4.19 for both primary and secondary variables. The highest and lowest averages are financial and information technology capability of 4.86 and 4.19 respectively. This indicates that many Fintech companies earn financial performance while fewer Fintech companies possess information technology capacity in Nigeria. Furthermore, the standard deviation values in Table 5 shows that the internal process has the highest standard value of 3.44, while the knowledge management capacity that has the lowest standard deviation value of 0.25. This indicates that all Fintech companies exhibit differences mostly in internal process and least in environment in Nigeria. Lastly, the correlation matrix results in Table 5 shows that there is a positive bivariate association among the variables which ranges from 0.31 to 0.93. This indicates that there are low, moderate and high degree of associations, and the possibility of collinearity issues prevalence when the bivariate exceeds 0.85.

Table 6. Hypotheses testing results (Direct and Indirect effects)

Hypotheses	Paths	β	Constant	t-Stat	R^2	F-Stat
H1	E-business adoption → Organizational Balanced Scorecard Performance	1.123***	-0.525***	31.77	0.835	1009.27*
H1.1	E-business adoption →Financial	0.924***	0.555***	35.93	0.866	1291.001***
H1.2	E-business adoption →Customer	1.217	-0.944***	23.76	0.738	564.77**
H1.3	E-business adoption →Internal Process	1.10***	-0.531****	22.68	0.720	514.58**
H1.4	E-business adoption → Learning & Growth	1.253***	-1.168***	26.00	0.772	1009.27**
H2	E-business adoption→ Organizational Balanced Scorecard Performance	0.799***	0.752***	16.45	0.575	270.54***
H2.1	E-business adoption →Learning capability	1.092***	-0.435***	20.77	0.683	431.28***
H2.2	E-business adoption → Knowledge management capability	0.828***	0.782**	24.80	0.755	614.97***
H2.3	E-business adoption → Information technology	0.577***	1.491***	8.22	0.253	67.58***
H2.4	E-business adoption → Adhocracy culture capability	0.673***	1.094**	9.28	0.301	86.19***
H2.5	E-business adoption → Top management support	0.828***	0.827***	12.05	0.421	146.30***
H3	Organization capabilities → Organizational Balanced Scorecard Performance	0.995***	0.302	22.31	0.713	497.77***
H3.1	Organization capabilities → Financial	0.625***	2.059***	12.55	0.441	157.99***
H3.2	Organization capabilities → Customer	1.074***	-0.082	18.801	0.639	353.46***
H3.3	Organization capabilities → Internal process	1.072***	-0.205	25.21	0.761	635.74***
H3.4	Organization capabilities → Learning & Growth	1.170***	-0.565***	24.338	0.748	592.33***

Note: ***, **, and * are 1%, 5%, and 10% respectively; R2 represent coefficient of determination.

5.2.2. Hypotheses Testing Results

Results in Table 6 shows the direct and indirect effects on the relationship between e-business adoption and organizational balanced scorecard performance in the Fintech companies in Nigeria. In hypothesis I, e-business adoption has a positive and significant effect on organizational balanced scorecard performance in Fintech companies in Nigeria ($\beta = 1.123$; $P < 0.01$) and its sub-dimensions, financial ($\beta = 0.927$, $P < 0.01$), customer ($\beta = 1.217$, $P < 0.01$), internal process ($\beta = 1.10$, $P < 0.01$), and learning and growth ($\beta = 1.253$, $P < 0.01$). This results indicate that e-business adoption affect learning and growth the most, followed by customer and the least effect is financial in the fintech companies in Nigeria. Furthermore, the constant coefficients has a negative and significant effect on organizational balanced scorecard performance and all its dimensions except financial in this study. These results confirm that without e-business adoption, organizational balanced scorecard performance will decrease, except the financial dimension that reveals that without e-business adoption, the Fitch companies can increase their financial performance in this study. Lastly, the F-statistics values for all these models are statistically significant at 1% level of significance, hence, the alternative hypothesis that e-business adoption has a positive and significant effect on organizational balanced scorecard Performance and its dimensions is accepted in this study. This findings in line with the study of Gazi, Atan & Kilic (2022) that examines the role of accounting information system on balanced scorecard performance in the banking system in North Cyprus.

Results in hypothesis 2 shows that e-business adoption has a positive and significant effects on organization capabilities ($\beta = 0.799$; $P < 0.01$) and its dimensions, learning capability ($\beta = 1.092$; $P < 0.01$), knowledge

management capability ($\beta = 0.828$; $P < 0.01$), information technology capability ($\beta = 0.577$; $P < 0.01$), adhocracy culture ($\beta = 0.673$; $P < 0.01$), and top management support ($\beta = 0.828$; $P < 0.01$). This results imply that e-business adoption affect learning capability mostly and the least effect on information technology in the Fintech companies in Nigeria. Similarly, the variations in knowledge management capability and information technology capability are the highest (0.75) and lowest (0.253) explained by e-business adoptions. Importantly, this results support that there is a low positive and indirect significant relationship between e-business adoption and organizational capabilities and among all its dimensions in this study.

Lastly, the hypothesis 3 results in Table 6 also reveals that organizational capabilities has a positive and significant effect on organizational balanced scorecard performance (($\beta = 0.995$; $P < 0.01$) and as well as its dimensions, financial ($\beta = 0.625$; $P < 0.01$), customer ($\beta = 1.074$; $P < 0.01$), internal process ($\beta = 1.072$; $P < 0.01$), and learning and growth ($\beta = 1.170$; $P < 0.01$). Furthermore, Table 5 reveals that organizational capabilities has the highest significant impact on learning and growth, while organizational capability has the least effect on financial performance in the Fintech company in Nigeria. Like hypotheses 1-2, this study inferred that there is a positive and indirect relationship between organizational capabilities and organizational balanced scorecard performance in the Fintech companies in Nigeria.

In comparison, Results in Table 6 reveals that the direct effects of the relationship between e-business adoption and organizational balance scorecard performance has a greater multiplier effect than the two indirect effects, and thus, affirming the importance of e-business adoption over organizational capabilities in influencing organizational balanced scorecard performance in the Fintech companies in Nigeria.

Table 7. Hypothesis testing on mediating effect result.

Hypothesis	Paths	β	SE	t-stat	R^2	F-stat
H4	E-business adoption → Organizational capabilities→ Organizational balanced scorecard performance	0.780***	0.045	17.730	0.889	795.93***
H4.1	E-business adoption → Organizational capabilities→ Organizational balanced scorecard performance	0.625***	0.046	13.512	0.911	1014.99***
H4.2	E-business adoption → Knowledge management capability → Organization	0.722***	0.084	11.346	0.889	661.86***
H4.3	E-business adoption → Information Technology Capabilities → Organizational balanced scorecard performance	1.065***	0.040	28.51	0.841	527.48***
H4.4	E-business adoption → Adhocracy Culture → Organizational balanced scorecard performance	1.015***	0.040	25.36	0.853	575.15***
H4.5	E-business adoption → Top Management Support → Organizational balanced scorecard performance	0.811***	0.032	0.559	0.924	1202.16***

Note: Computation from SPSS 25 version; ***, **, and * are 1%, 5%, and 10% respectively; SE represents standard error; R2 represents co-efficient of determination.

Results in Table 7 shows that organizational capabilities has a significant mediating effect on the relationship between e-business adoption and organizational balanced scorecard performance in the Fintech companies in Nigeria ($\beta = 0.780$; $P < 0.01$ from $\beta = 1.123$; $P < 0.01$ in Table 6) and its dimensions, learning capability ($\beta = 0.625$; $P < 0.01$ from $\beta = 1,123$; $P < 0.01$ in Table 6), knowledge management capability ($\beta = 0.722$; $P < 0.01$ from $\beta = 1.123$; $P < 0.01$ in Table 6), information technology capability ($\beta = 1.065$; $P < 0.01$ from $\beta = 1.123$; $P < 0.01$ in table 6), adhocracy culture capability ($\beta = 1.015$; $P < 0.01$ from $\beta = 1.125$; $P < 0.01$ in Table 6) and top management support ($\beta = 1.015$; $P < 0.01$ from $\beta = 1.125$; $P < 0.01$ in Table 6). This indicates that organizational capabilities and its dimensions are partial mediating factor(s) that partly inhibit the direct relationship between e-business adoption and organizational balanced scorecard performance. Also, Table 7 shows that the closest and widest mediating factors on the relationship between e-business adoption and organizational balanced scorecard performance are information technology capacity and learning capability respectively.

Therefore, hypotheses H4 - H4.5 support a partial mediation effect in this study. The finding that knowledge management has a partial mediating effect on the relationship between e-business adoption and organizational balanced scorecard performance is in line with the study of Al Khasabah (2024) that examined the knowledge management mediating effect on the nexus between electronic business and organizational performance.

6. CONCLUSION AND RECOMMENDATIONS

This study empirically investigate the mediating effect of organizational capabilities on the relationship between e-business adoption and organizational balanced scorecard performance in the Fintech companies in Nigeria, using a confirmatory factor analysis (CFA) for data measurement and an ordinary least squares (OLS) regression to estimate the mediating regression analysis. Evidences from this study concludes that e-business adoption directly influences organizational balanced scorecard performance and e-business adoption has the highest multiplier impact on learning and growth than other dimensional impacts of balanced scorecard performance. Furthermore, this study concludes that organizational capabilities partially mediate the relationship between e-business adoption and organizational balanced scorecard performance while the closest and widest

mediating variables are information technology capability and learning capability in the Fintech companies in Nigeria.

Based on these findings, the recommendations are as follows. First, the management should not only intensify on the adoption of e-business but effectively optimize e-business adoption to enhance organizational financial performance. Second, the management should invest massively in all organizational capabilities dimensions and more attention to learning capability knowledge management capability and top management support to greatly reduce the mediation effect in the relationship between e-business adoption and organizational balanced scorecard performance. Going forward, the research should empirically examine the role of e-business adoption on financial performance while investigating the mediating effect of learning capability, knowledge management capacity and top management and also consider the use of moderation regression and partial least square regression analyses for robustness of findings.

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