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A Study on Organizational Innovation as a Mediator between Fintech Innovation and Sustainability Performance Relationship

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ABSTRACT

The study examines how blockchain technology, AI/ML, and digital payment systems affect sustainability and innovation in financial institutions. An explanatory research approach was used for the analysis, and SmartPLS was utilized to examine the information gathered from 230 experts in various domains using a structured questionnaire. The findings demonstrate that blockchain technology and digital payment systems have a favorable influence on businesses' innovations, with digital payments having the most noticeable effect. Depending on metrics of internal consistency and discriminant validity among the suggested variables, empirical findings indicate that these technologies are significant for enhancing sustainable performance. The significance and effectiveness of such approaches are shown by the fact that Al, machine learning, and environmental sustainability are most closely related. The report also shows why the business must adopt these innovations in order to improve customer happiness, organizational operations, and legal compliance, all of which are based on the Resource-Based View (RBV) paradigm. The study emphasizes how fintech may improve social objectives and alleviate environmental concerns, but its transportability may be hindered by regional constraints.

1. INTRODUCTION

Similar to the Industrial Revolution 4.0, the modern financial industry is about to undergo a new stage of growth that will emphasize fintech and innovation. The Fourth Industrial Revolution borrows characteristics from the use of many digital technologies, such as blockchain, IoT, and artificial intelligence. Fintech, which employs technology to disrupt the traditional banking system, is revolutionizing the efficiency and sustainability of financial services. Organizational innovation and the deployment of fintech technology may both be explained by the Resource-Based View (RBV) hypothesis. AI facilitates decision-making and streamlines procedures, while blockchain provides a decentralized, genuine approach to accountability and trust. Mobile payments advance innovation that aids in sustainability initiatives by reforming payments, lowering costs, and enhancing consumer relations. And this link demonstrates how fintech contributes to the resilience and sustainable growth of enterprises.

The two trends that impact the financial services industry are fintech and sustainability, which combine services with sustainable solutions. Furthermore, it has been noted that data protection, encryption, autonomous, and decentralized structures ensure that systems are

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protected, secure, and accountable and drive the sustainable development of the global economy. Fintech is improving efficiency and sustainable practices, while traditional banking models are being transformed to enhance sustainability outcomes. Both exploratory and exploitative innovation skills are improved by fintech, and these relationships are moderated by organizational resilience. By combining mobile payments, equity crowdfunding, loan services, and blockchain-based supply chain financing, AI-based fintech improves sustainable finance, credit rating reliability, and financial circumstances.

Through the use of fintech, current technologies are redefining the entrepreneurial growth process, particularly in the financial sector, allowing for sound frameworks for both banks and startups. Therefore, when used appropriately, fintech may play a very important role in achieving sustainable development by enhancing financial services and implementing sustainable development. Fintech is a technology-driven strategy that integrates sustainable development and financial services to make the economy more efficient, inclusive, and ecologically conscious. According to Legowo, 68.8% of respondents said that technology is the most important business driver in the banking sector, followed by money flow and organization. With governments encouraging green finance and sustainable banking to increase sustainability, fintech and environmental sustainability are becoming more and more significant in the banking and asset management industries. Fintech is a significant development in the financial sector that uses information technology and computer programs to simplify conventional financial services. The understudied intersection of digitalization and sustainability in the financial services sector is highlighted by process-related metrics and sustainable performance outcomes brought about by fintech deployment. By bringing digital innovation and altering the way financial services are delivered, the emergence of fintech has drastically changed the old banking paradigm. The goal of fintech innovation is to improve the accessibility, affordability, and ease of use of financial services. Financial services are disrupted by technological advancements that increase productivity and cut expenses. On the other hand, Wang has said that conventional providers compete with fintech startups, while fintech innovations have a significant impact on Industry 4.0, resulting in a single global transaction medium.

By facilitating accountability, security, and transparency, blockchain technology can enhance organizational procedures. By improving supply chain management, it may lower fraud, boost stakeholder confidence, and assist businesses in meeting sustainability goals. Industry 4.0 places a strong emphasis on technology across the board, and blockchain technology has great promise for enhancing corporate processes. SCF (supply chain finance) is disrupted by blockchain and ICOs (initial coin offerings), which offer creative financing options outside traditional capital and give SMEs (small and medium-sized enterprises) new ways to profit from and exploit digital technology. On the other hand, AI and ML are being used in advanced analytics for innovation creation, which allows businesses to better use resources, analyze data, and improve goods in response to shifting customer habits and environmental shifts. AI's distinct character and ontology are drastically changing the course and results of digital innovation. It has also been noted that businesses are using AI in fintech to take the role of people and direct the shift to a digital organization of innovation. Financial institutions have been seen to collaborate with fintech businesses in order to purchase technology.

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This study examines how blockchain technology, AI/ML, fintech advances, and digital payment systems affect organizational innovation. The majority of earlier research has examined many factors, but they haven't examined these factors collectively in light of organizational innovation's mediation function in the relationship between innovation and environmental sustainability. Nonetheless, by demonstrating the connection between fintech and sustainability performance, the study helps stakeholders and policymakers create sustainable fintech solutions that advance social justice and environmental sustainability.

2. LIMITATION OF THE STUDY

Self-administered questionnaires are the study's most pertinent methodology, and they can lead to biases based on social desirability. But even with the application of statistical methods, there can be some subjectivity in the study's findings. These restrictions necessitate more research that has used the objective metrics and been carried out in many cultural and geographic contexts. Additionally, the review in this study contains included the research conducted in different places.

2. REVIEW OF LITERATURE:

According to data, Fintech investment has increased considerably in recent years. As a result, there has been a significant growth in scholarly writing on the topic, mostly since 2015 (Zavolokina, Dolata, & Schwabe, 2016a, 2016b).

Accenture (2016) reports that between 2014 and 2015, the total amount of investment in Fintech in Europe quadrupled (by 120%), and the number of agreements rose by 51%. However, in 2015, investment in Asia-Pacific more than doubled to $4.3 billion, with the majority of that investment occurring in China ($1.97 billion) and India ($1.65 billion). In 2015, fintech investment in North America increased 44% to $14.8 billion, with the United States maintaining its dominant position with 667 Fintech deals, a 16% rise. Many studies utilize terms like "digital innovation" or "digital transformation" to try to pinpoint innovations and disruptions.

According to Fichman, Dos Santos, and Zheng (2014), digital innovation is "a product, process, or business model that is perceived as new, requires some significant changes on the part of adopters, and is embodied in or enabled by IT." "Digital transformation is the digitization of previously analog machine and service operations, organizational tasks, and managerial processes," claim Guellec and Paunov (2017).

Digital finance, which refers to the digitization of the financial sector, is the intersection of IT and finances (Gomber, Koch, &Siering, 2017). Nonetheless, Arner, Barberis, and Buckley (2015) describe the ongoing transformation in the field of digital finance in three distinct phases. Globalization made cross-border payments, financial linkages, and other financial transactions possible during the first stage (1866–1967). Additionally, the first ATM was created in 1967, marking the first time that technology and banking were merged in the world. The first indications of internet banking emerged during the second stage (1967–2008), which also saw the introduction of credit cards and SWIFT communications (a system that facilitates financial transactions between banks). Lastly, the digitization process quickly shifts onto a route where businesses begin integrating cutting-edge technology into their

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operations in the third stage (2008 forward). With technology as the primary motivator, new financial start-ups known as Fintech are emerging as a substitute for traditional banking to fill The void the void left by the banks after the 2008 financial crisis.

The study by Marta Barroso and Juan Laborda (2022) on the rise of new technologies in the financial sector and how they are applied to financial and investment activities shows that companies have the technological know-how to surpass more established financial institutions. A thorough literature study also examines and analyzes in detail three of this sector's most significant and contentious areas: obstacles, regulation, and partnership. Using clustering techniques, the VOS Viewer program has been used to categorize the various terms based on their co-citation. It has been feasible to clearly outline the distribution and patterns in the financial industry, indicating potential future trends and study needs, thanks to the studies conducted by other researchers.

3. HYPOTHESIS

H1. The link between digital payment systems and environmental sustainability is mediated by organizational innovation, which is positively impacted by digital payment systems. Blockchain Technology's Effect on SustainabilityRegardless of the parties involved in the transaction, blockchain technology guarantees payment security. Additionally, the majority of big businesses are using blockchain technology to give investors a transparent and decentralized way to check how their cash is being used. Additionally, initial coin offerings can help blockchainstartup companies in the finance industry increase their income. By avoiding conventional middlemen and facilitating efficient monitoring, reporting, and verification, fintech and blockchain open up new financial sources. In the Middle East, managers may get insights from the causal relationships between blockchain and fintech innovation continuance-use intention to promote sustainable development, enhance IT quality, lower risks, and increase user confidence. Fintech technologies promote collaborative governance, improve public involvement, and optimize resource management. A useful industry case study is used, and future blockchain technology advancements are suggested as a result of the usage of digital ecosystems to improve trust in interorganizational business operations. The majority of research has demonstrated how blockchain technology improves organizational sustainability, emphasizing its role in governance, ethics, and morality while offering guidance to practitioners and policymakers on effective implementation. The RBV hypothesis states that because blockchain technology may increase process efficiency, security, and transparency, it can be regarded as a valuable resource. But in order to bridge the gap between innovation and sustainability, this has sparked the creation of innovations with an underlying framework for economic sustainability and encouraged the adoption of sustainable business models and commercial sustainable practices.

H2. The link between blockchain technology and environmental sustainability is mediated by organizational innovation, which is positively impacted by blockchain technology.

Innovation and Sustainability using AI and Machine Learning global company operations depend heavily on fintech, the term for the use of information technology to improve conventional business models and offer financial services. Platforms for AI and machine learning are essential for businesses looking to track their development and boost profits.

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Predictive analytics is being revolutionized by big data platforms like Hadoop and Spark, which allow companies to store, process, and analyze enormous information effectively. Furthermore, AI-enabled fintech is the main focus of the integration of sustainable practices in digital accounting and finance. This demonstrates its revolutionary effects on industries including healthcare, banking, and transportation, underscoring the necessity of a thorough investigation. Technology and money are driving the evolution of the digital economy, which encourages sustainable practices and creative financial solutions. Building a resilient economy and promoting environmentally sensitive investment are the goals of circular economic theories and fintech advancements like blockchain and artificial intelligence. However, economic dynamics are changing as a result of the digital revolution. With an emphasis on AI ethics, regulatory technology, and intelligent data use, the framework proposes a harmonic relationship between data science and fintech that will have a significant positive impact on the company. RBV emphasizes resources that are uncommon, precious, unique, and non-replaceable, like AI and machine learning, to gain a competitive edge, spur innovation, enhance workflows, and promote sustainability for increased resilience and performance.

H3. The link between AI and machine learning and environmental sustainability is mediated by organizational innovation, which is enhanced by AI and machine learning technology.

Connecting Sustainability Performance with Organizational Innovationt the correlation between competitiveness, digital transformation, fintech adoption, financial literacy, and sustainable business performance shows that financial literacy has a major impact on these elements, which in turn improves sustainable performance. Additionally, the performance of Indonesian MSMEs' supply chains has been proven to benefit from e-payments in terms of digitalization. Furthermore, fintech's impact on the economic performance of MENA region nations under political unrest indicates that loan operations may raise inflation, but they may also be restrained.

Fintech, which uses cutting-edge technologies and creative solutions, is a major force behind the positive developments in the financial sector. It improves efficiency and advances sustainability objectives by bringing technology, data, and customer-focused initiatives into alignment. Fintech businesses may improve operations while promoting sustainability, especially in emerging regions. Innovation, environmentally friendly investments, and sustainable financial products are the keys to the sustainability of the fintech sector. Fintech businesses also provide online platforms for investors to support sustainability initiatives.

By using blockchain technology in auditing, fintech organizations may improve sustainability by increasing accountability and transparency, decreasing fraud instances, and conserving energy and paper. Fintech services can include data analytics that facilitate decision-making and the assessment of sustainability balances, which will improve supply chain management's sustainable status. Fintech services may use data analytics to make decisions, benchmark supply chain management, and identify sustainability balances, which will improve a nation's overall sustainability status. In particular, the RBV framework emphasizes an organization's assets and competencies that may set it apart from competitors. Organizational innovation is required, since this culture will support sustainable practices, regulations, and customer needs.

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H4. Environmental sustainability is favorably impacted by organizational innovation

This study investigates the mediating role based on the technique for identifying it.The function of organizational innovation in integrating digital and environmental sustainabilityblockchain technology, AI and machine learning, and payment. With the aid of intelligent people, analysis was done. The study has examined how blockchain technology, digital payments, AI and machine learning, environmental sustainability, and organizational innovation. TheArrows show whether a notion influences or is influenced by another in other"cause" or "effect." The study found a close connection between block chain and digital payments.Technology, showing a substantial positive correlation (coefficient of 0.372) between twovariables. Organizational innovation appears to be impacted by blockchain technology as well having an estimated coefficient of 0.188. Additionally, there is a correlation between AI and machine learning andinnovation in organizations with a 0.182 correlation. According to the conceptual model, thekinds of organizational and technical elements that support the relationship more study is needed to understand the relationship between human activity and environmental sustainability.

4. MATERIALS AND PROCEDURES

4.1. Design of Research

To investigate the mediating factors, the study employed an explanatory research approach.influence of organizational innovation, environmental sustainability, and fintech advancements.The research used a survey-based methodology, Smart PLS, andorganized survey to gather numerical data for statistical evaluation. With theUsing the use of a five-point Likert scale, a psychometric assessment tooltool commonly used in social science research that places its reliability, validity, andanalysis. A five-point Likert scale is used in a structured questionnaire to record respondents'stance on sustainability and fintech was applied. Its specific phase’s ofThere is no detailed description of development and validation. This might lead to a rise inthe instrument's validity and dependability by demonstrating that it accurately assesses theconnection between fintech developments to achieve sustainability, and the outcomes ofThe research may boost readers' confidence in the study.

4.2. Development of Questionnaires

The closed-ended survey includes questions about blockchain and digital payments, technology, artificial intelligence (AI) and machine learning, environmental sustainability, and organizational innovation.A collection of indicators is used to assess each characteristic, although respondents arerequested to use a 5-point Likert scale to express how much they agree, starting with"Strongly Disagree" to "Agree." The statements evaluate the respondents' frequent usage of digitalpayment options, the time-saving and convenient advantages, and the degree of confidence in thesecurity protocols of online payment systems. The part on blockchain technology assesses respondents' familiarity with how financial transactions are believed to be secure and transparent.Financial services are where blockchain technology is used. The part on AI and machine learning examines respondents' opinions on the effectiveness gains of digital payment systems, their trust in AI's capacity to identifyto stop fraud, as well as the machine learning algorithms' capacity for personalization.The section on organizational innovation focuses on how the company has adopted innovativetechnology, how innovation helps businesses achieve their objectives, the culture ofresearch & development expenditures as well as innovation. Lastly, the part on environmental

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sustainability examines how the company takes into account the effects on the environment while implementing new technology, the perceivedFintech technologies' role in lessening environmental effect and their applicationof ch they agree or disagree with each statement by using the Likert scale, which offers insightful information about theirviews and encounters pertaining to these many facets.

4.3. Methods of Research

The study examines the relationships between digital payment systems using Smart PLS. blockchain technology, artificial intelligence, creativity, and sustainability in the financial sector, supplying information on how innovation improves sustainability performance. Additionally, a logical method is employed to examine the connection between fintech adoption, using a structural equation model (SEM) to analyze organizational innovation and sustainability resultsmodeling) strategy using Smart PLS.

4.4. Information Gathering

A study surveyed 230 experts in the fields of finance, technology, and sustainability were polled utilizinga systematic survey questionnaire to examine how financial innovation is perceived; Table 1 illustrates environmental sustainability with organizational innovation. Furthermore, Likert scale items with a range of 1 to 5 were included in the survey to ensure variation throughout thedemography and industries. The study has examined sustainability and fintech advances.procedures utilizing 230 participants from a range of industries, such as technology, finance, medical care as well as education. A varied group of professionals was guaranteed via purposeful sampling.and those who are knowledgeable with fintech technology. The report investigates advancements in fintech, utilizing a systematic approach to environmental sustainability and organizational innovationsurvey, structural equation modeling, process improvement analysis, and resourceusage as well as trash minimization

Table 1. Analysis of demographics

DemographicVariable	Categories	Frequency(n)	Percentage(%)
Gender	Male	120	52.20%
	Female	110	47.80%
	18–24	45	19.60%
	25–34	85	37.00%
	35–44	60	26.10%
	45–54	40	17.40%
Educational Level	High school or equivalent	20	8.70%
	Bachelor’sdegree	110	47.80%
	Master’sdegree	70	30.40%
	Doctorate or equivalent	30	13.10%
EmploymentStatus	Employed	130	56.50%
	Self-employed	45	19.60%
	Unemployed	20	8.70%
	Student	25	10.90%

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	Retired	10	4.30%
Industry	Technology	70	30.40%
	Finance	60	26.10%
	Healthcare	40	17.40%
	Education	35	15.20%
	Other	25	10.90%
Years of Work Experience	0–2 years	30	13.00%
	3–5 years	50	21.70%
	6–10 years	70	30.40%
	11–15 years	40	17.40%
	16+ years	40	17.40%

5. DEMOGRAPHICS

Digital payments, blockchain technology, artificial intelligence and machine learning, organizational innovation, and environmental sustainability are all covered in the closed-ended inquiry. Although a collection of indicators is used to assess each aspect, respondents are asked to rate their agreement on a 5-point Likert scale that goes from "Strongly Agree" to "Strongly Disagree." The statements evaluate the respondents' frequency of usage of digital payment methods, the time-saving and convenience advantages, and their degree of confidence in the security features of digital payment platforms. The respondents' knowledge of how blockchain technology functions in financial services is assessed in the blockchain technology part, along with the perceived influence on the security and transparency of financial transactions. The respondents' opinions about the efficiency gains of digital payment systems, their trust in AI's capacity to identify and stop fraud, and the personalization potential of machine learning algorithms are all examined in the section on AI and machine learning. The adoption of innovative technologies by the organization, the contribution of innovation to the attainment of corporate objectives, the innovation culture, and the investment in R&D are the main topics of the section on organizational innovation. Lastly, the environmental sustainability section looks into how the company considers the impact on the environment when implementing new technologies, how fintech innovations are perceived to help reduce environmental impact, and how sustainable and eco-friendly business practices are implemented.Respondents can indicate how much they agree or disagree with each statement using the Likert scale, which offers important information into their experiences and perspectives of these different characteristics.

6. EMPIRICAL EVIDENCE OF INNOVATION AND SUSTAINABILITY

This table represents important findings from the examination of the connections between different technical advancements and their effects on organizational innovation and sustainability. "Digital payment → Organizational innovation" has the greatest mean (0.372), indicating a substantial positive contribution. The mean values reveal the average effect of each variable. The organization's creativity is greatly enhanced by electronic payment methods, which is crucial in the dynamic world of today.

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Table 2: Empirical evidence of sustainability and innovation

Variables	Mean	Standard Deviation	T Statistics	*p* Value
AI and machine learning→ Environmental sustainability	0.062	0.028	2.254	0.024
AI and machine learning→ Organizational innovation	0.182	0.065	2.784	0.005
Blockchain technology→ Environmental sustainability	0.068	0.028	2.468	0.014
Blockchain technology→ Organizational innovation	0.198	0.068	2.91	0.004
Digital payment→ Environmental sustainability	0.128	0.032	3.971	0
Digital payment→ Organizational innovation	0.372	0.062	5.964	0
Organizational innovation→ Environmental sustainability	0.344	0.056	6.115	0

The importance of these correlations is further demonstrated by the T statistics, particularly the independent variables' negative coefficients. The association between "Organizational innovation → Environmental sustainability" has the biggest T statistic (6.115), indicating that the closer the T statistic is near 1, the greater the correlation. This suggests that organizational innovation, a component of the organizational environment, has a great potential for enhancing environmental sustainability, demonstrating the integration of these two elements. Any result below 0 is considered a P value, which indicates the degree of statistical significance. With a value of 0.05 for digital payment connections, the study demonstrates a significant value against the null hypothesis. This suggests that innovation and sustainability depend heavily on technical advancements. Therefore, in order to promote sustainability and enhance sustainable business models, companies should concentrate on digital payment systems and foster innovation.

7. p-Value, MEAN, AND STANDARD VALUE

The results demonstrate that the constructs under investigation have positive connections with one another.According to the study in Table 3, machine learning and artificial intelligence both show a slight, but0.074 is the sample mean effect on environmental sustainability, which is statistically significant.0.214 ($p < 0.001$) on organizational innovation. A blockchain's effect is greater; this is corroborated by substantial ($p < 0.001$) mean impacts of 0.142 for bothsustainability of the environment and 0.409 for creativity in organizations. Additionally, analysisAmong the findings has demonstrated how organizational innovation greatly and favourably effects on sustainability of the ecosystem (mean = 0.345, $p < 0.001$). According to these investigations,Blockchain and artificial intelligence are both crucial instruments for enhancing organizational innovation and operational sustainability

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Table 3: Analysis of validity and reliability.

Categories	Sample Mean (M)	Standard Deviation (STDEV)	*p*Values
AI and machine learning→ Environmental sustainability	0.074	0.022	0.001
AI and machine learning→ Organizational innovation	0.214	0.055	0.000
Blockchain technology→ Environmental sustainability	0.142	0.028	0.000
Blockchain technology→ Organizational innovation	0.409	0.052	0.000
Organizational innovation→ Environmental sustainability	0.345	0.051	0.000

8. REALIBILITY AND VALIDITY ANALYSIS

Every construct's Cronbach's Alpha value was examined and found to be acceptable.values that guarantee the corresponding construct consistently assessed the same idea,as seen in Table 4. The composite reliability ratings exceeded the suggested threshold, whichindicated that the level of internal consistency was high. The Mean DeviationSince the extracted (AVE) values exceeded zero, it appears that the present model has highability to predict. The claim that more than 50% can be explained was supported by five criterion.of the construct's volatility. Each construct's items showed a respectable level of convergence.with digital payment being the most dependable at 0.875 in relation to the respective build.

Table 4.Reliability and validity analysis

	Construct Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)	Convergent Validity (Loadings > 0.5)	Discriminant Validity (AVE > Squared Correlations)
AI and Machine Learning	0.77	0.788	0.852	0.59	Yes	Yes
Blockchain Technology	0.786	0.807	0.859	0.603	Yes	Yes
Digital Payment	0.81	0.814	0.875	0.637	Yes	Yes
Environmental Sustainability	0.794	0.806	0.866	0.619	Yes	Yes
Organizational Innovation	0.794	0.797	0.857	0.544	Yes	Yes

9 .THE FORNELL-LARCKER STANDARD

The Fornell-Larcker criteria, which is shown above in Table 5, aids in comprehending the discriminant validity of the constructs under study. The communality of each construct that is, the proportion of each construct that accounts for variance is indicated by the values at the diagonal, which represent the square root of the Average Variance Extracted (AVE) of each construct. For instance, the AVE of digital payments is zero, the AVE of environmental

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sustainability is 0.798, and the AVE of AI technical development as measured by the use of analytical and machine learning is 0.768. Each sub-scale's coefficients were =0.589 and 787, respectively; these high values demonstrate the construct's strong validity. Conversely, the constructs' correlation values are below the square root of their AVE, indicating good discriminant validity. For example, the correlation between blockchain technology advancements and AI and machine learning is 0.445, which is less than the AVE of 0.777 for blockchain technology alone. However, the association between organizational innovation and the other dimensions is zero, and the AVE we got with organizational innovation is somewhat lower than that of individual innovation (0.738). Environmental sustainability was 0.344 and digital payment was 475. The authors claim that while it measures some variance, it appears to measure the same thing as the other constructs. Overall, these findings provide credence to the claim that the constructs are obvious and unique, however caution may be needed to maintain organizational innovation's specificity inside the model.

Table 5: Analysis using the Fornell-Larcker criteria

AI and Machine Learning	Blockchain Technology	Digital Payment	Environmental Sustainability	Organizational Innovation	
AI and machine learning	0.768				
Blockchain technology	0.445	0.777			
Digital payment	0.326	0.221	0.798		
Environmental sustainability	0.53	0.441	0.43	0.787	
Organizational innovation	0.391	0.362	0.475	0.344	0.738

10. MATRIX OF CROSSLOADINGS

Understanding the measurement validity of constructs such as artificial intelligence (AI), blockchain technology, digital payment systems, environmental sustainability, and organizational innovation is made easier by the cross-loadings data in Table 6. Strong relationships between these constructs and items with significant loadings are shown. High loadings for blockchain technology goods demonstrate its use. The connection between digital payment systems and money transfer is seen in digital payment items. Particularly in ES1, environmental sustainability elements have large loadings. OI2 has the highest loading of all organizational innovation elements. Though frequent cross-loadings are required to prevent major overlaps, the results indicate significant difference among constructs.

Table 6: Cross-loadings matrix analysis

Item	AI and Machine Learning	Blockchain Technology	Digital Payment	Environmental Sustainability	Organizational Innovation
AI1	0.733				
AI2	0.822				
AI3	0.783				
AI4	0.730				

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BCT1	0.811				
BCT2	0.773				
BCT3	0.725				
BCT4	0.795				
DP1		0.769			
DP2		0.779			
DP3		0.827			
DP4		0.815			
ES1			0.855		
ES2			0.804		
ES3			0.754		
ES4			0.728		
OI1				0.734	
OI2				0.749	
OI3				0.739	
OI4				0.758	
OI5				0.709	

11. CORRELATIONSMATRIX

A thorough summary of the connections between the concepts of artificial intelligence and machine learning, blockchain technology, digital payments, environmental sustainability, and organizational innovation can be found in Table 7's correlation matrix. Each construct's complete connection with itself is represented by diagonal values equal to 1. Different levels of relationships are revealed by the correlations between the constructs. Interestingly, the largest link between AI and machine learning (0.530) and environmental sustainability suggests that advances in AI might have a big influence on sustainable practices in businesses. Blockchain technology, on the other hand, has the poorest correlation (0.221) with digital payments, suggesting that although these constructs are connected, their relationship is not as strong as it might be. The correlations between organizational innovation and the other dimensions vary from 0.344 to 0.475, indicating a moderate link in which blockchain technology has less of an impact on organizational innovation than other aspects like digital payments and environmental sustainability.

Table 7: Correlations matrix analysis

AI and Machine Learning	Blockchain Technology	Digital Payment	Environmental Sustainability	Organizational Innovation	
AI and machine learning	1	0.445	0.326	0.53	0.391
Blockchain technology	0.445	1	0.221	0.441	0.362
Digital payment	0.326	0.221	1	0.43	0.475
Environmental sustainability	0.53	0.441	0.43	1	0.344
Organizational innovation	0.391	0.362	0.475	0.344	1

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The connections between block chain technology, digital payments, organizational innovation, and environmental sustainability are depicted Block chain technology is beneficial and digital payment systems foster creativity. Through other structures, AI and machine learning have an indirect impact on innovation. Although the path coefficient from innovation to sustainability is positive and organizational innovation results in improved environmental sustainability practices, the effect magnitude is not very large. In an attempt to determine the direct relationships between the various constructs, SEM has been used. Specifically, the route coefficient values, like 0.372, between digital paymentsand organizational innovations indicate how closely the specified latent variables are related. To determine the impact of the independent factors on the direct dependent variables, these route coefficients will be calculated and assessed. Effect size is one of the most crucial ideas when it comes to interpreting the findings of both quantitative and qualitative research. It provides an interpretation of the data' importance that surpasses the significance test. A substantial and not very small impact size, for instance, is indicated by the value of 0.372 between digital payment and organizational innovation, demonstrating that the implementation of the digital payment system leads to improved organizational innovation. One may determine the strength of these interactions by adjusting for effect size, also known as Cohen's f2, when assessing the influence of atypical antecedents like AI and machine learning on innovation and sustainability. A lower p value, on the other hand, indicates that while links may exist, their significance may be limited.connections among blockchain technology, digital payments, environmental sustainability, and organizational innovation.

12. THEORITICAL IMPLICATION

Instead of concentrating just on strategic resources, the Resource Based View (RBV) highlights a firm's capacity to generate long-term competitive advantages through resource heterogeneity and immobility. In order to promote innovation and operational efficiency, the theory has also highlighted the significance of resources such as fintech, digital payment systems, blockchain technology, and artificial intelligence. By supporting sustainable practices and enhancing environmental performance, the research has helped businesses gain a competitive edge in the environmental market.

According to the survey, companies may increase innovation, operational efficiency, customer happiness, and competitiveness in the fintech industry by integrating digital payment systems, blockchain technology, and artificial intelligence (AI) while maintaining regulatory compliance. Blockchain technology and artificial intelligence are being used in business innovation to enhance procedures, safe interactions, value creation, proposals, business capture, organizational capabilities, and employee competencies.

In addition to the various business sectors, future research should look at how these technologies affect organizational performance over the long term. Research into the technology's synergistic effects, such as how blockchain and artificial intelligence (AI) might work together to advance sustainability, may thus be more illuminating. Future studies should also examine how these technologies affect actual corporate innovation that results from their use, in addition to the cultural and geographical effects on adoption.

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13. CONCLUSIONS

The report also shows that blockchain technology, AI/machine learning, and digital payment systems have a significant impact on financial organizations' sustainability and innovation. According to the report, blockchain technology is crucial for enhancing operational performance, and digital payment systems have the most influence on organizational innovation. In this context, AI and machine learning also touch on issues like environmental sustainability, emphasizing that financial institutions have little choice but to adopt the technologies in order to meet regulatory obligations and improve consumer happiness. This study offers a clear overview of the strategic importance of fintech innovations for businesses and their capacity to address significant environmental challenges in addition to improving organizational competence, using the Resource-Based View (RBV) paradigm. The study is aware, although, that some geographic limitations would restrict how broadly the results can be applied in other areas. Therefore, in order to validate the results, future research should try to determine whether these technologies are applicable in other contexts. The study as a whole shows how fintech may have a big impact on encouraging sustainable habits.while achieving societal objectives and highlighting the fact that fintech is the primary force behind the continuous transformations in the financial services industry.