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Integrating fintech into strategic management practices for achieving sustainable development goals

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Abstract

This research investigates the implementation of financial technology (FinTech) into strategic management practices to enable the accomplishment of sustainable development goals (SDGs) in Jordan's financial sector. The study focused on 20 financial firms and distributed 369 electronic questionnaires to financial and administrative staff. Analysis was carried out with the help of Smart PLS 4 software. Findings indicated that the integration of FinTech has a positive effect on strategic management practices, boosting the accomplishment of SDGs. Besides, FinTech integration directly affects sustainable outcomes and has a partial mediating role in strategic management. The research emphasizes the use of FinTech technologies like blockchain, digital payments, and AI in enhancing strategic agility and financial inclusion. The research offers actionable insights to financial institutions and policymakers regarding integrating innovation with sustainability objectives, leading to economic growth and sustainable development initiatives.

Keywords: Financial companies, FinTech, Jordan, Strategic management practices, Sustainable development goals.

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Institutional Review Board Statement: This study involved human subjects and was conducted under guidelines for ethical research. The Institutional Review Board at [Amman Arab University] reviewed and approved the study to ensure that ethical standards were met in the collection of data and regarding the protection of participants' confidentiality.

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1. Introduction

In the continuously changing nature of finance in the modern age, the current research is heavily responsible for catching up with the rate of technological development, especially the phenomenon of Financial Technology (FinTech) [1]. Conventional management models usually fail to incorporate digital solutions well, and hence, there is always a disparity between innovation and strategic choice [2]. Additionally, the worldwide drive for the accomplishment of Sustainable Development Goals (SDGs) has put additional pressure on organizations to coordinate their operations with overall economic, societal, and environmental goals [3, 4]. Thus, there is a critical need to examine how emerging technological innovations, including FinTech, can be integrated systematically into strategic management practices to foster sustainable growth [5].

While interest in FinTech and sustainability continues to grow, there is a lack of available literature on the practical application of FinTech instruments to strategic management models, particularly in emerging markets such as Jordan [2, 6]. Much research that has been conducted has tended to be narrowly focused on the technological or financial side without analyzing how strategic management can use FinTech to achieve sustainable performance [7]. This research bridges this knowledge gap by examining the inter-relational intersection of FinTech adoption, strategic management practices, and SDGs achievement in the finance industry in Jordan [8, 9].

The overall aim of this research is to measure the impact that the integration of FinTech into strategic management has on achieving Sustainable Development Goals. By examining remarks from financial and administrative managers in 20 Jordanian banks, this research aims to make worthwhile suggestions regarding the use of FinTech innovation in improving strategic flexibility, enabling financial inclusion, and ensuring sustainable economic growth.

2. Theoretical Framework

2.1. FinTech

Financial technology, or FinTech, can be defined as the application of emerging technology for the provision and management of financial services [9]. These FinTech technologies, like mobile payment, Blockchain system, peer-to-peer lending, and artificial intelligence analytics, are changing how companies relate to markets and customers [10]. From a business's perspective, integrating FinTech means establishing digital platforms for automating financial transactions processing, risk management, and processes for customer engagement [11]. Successful integration of FinTech is emerging as an essential element of contemporary business strategy to develop flexibility, effectiveness, and innovation in increasingly competitive markets [6].

2.2. Strategic Management Practices

Strategic management is the process of developing, implementing, and evaluating cross-functional decisions that allow an organization to reach its goals [12]. During the period of digitalization, strategic management should be responsive to technology disruption through incorporating innovation and technology within core strategies [13]. Successful strategic management in these times is the acknowledgment of FinTech's contribution to developing competitive differentiators, improved decision-making, and optimal operations [14]. Organizations that utilize FinTech effectively for strategic planning are well equipped to deal with changing market forces and stakeholder expectations [14].

2.3. Sustainable Development Goals (SDGs)

The United Nations' Sustainable Development Goals (SDGs) constitute a world plan to build a better and sustainable future [15]. Organizations, particularly from the financial sector, are being called upon to contribute more to such SDGs as financial inclusion, lower inequality, decent work, and innovation [10, 11]. Companies can make strategic application of FinTech solutions to increase access to financial services, drive economic participation, and sustain environmentally and socially sound investments [16]. Achieving SDGs is no longer on the periphery but is front and center today of an organization's long-term success as well as for the welfare of its people [17].

2.4. Hypotheses Development

FinTech technology evolves at a high pace and offers organizations unrivaled access to real-time capital market information, sophisticated predictive data analysis, and deep customer behavior insights [9]. They are necessary for facilitating contemporary organizations to strengthen their foresight strategy, make better decisions, and exhibit strategic flexibility [11]. FinTech solutions like AI predictive forecasting, intelligent contracts on the Blockchain, and mobile money systems enable more advanced market analysis, enhanced utilization of resources, and effective adaptation to unexpected external shocks [10].

Firms that can implement FinTech both in their strategy and operations can develop more powerful strategies, rapidly react to emerging trends, and build an environment of innovation [4, 18]. Moreover, FinTech diminishes information asymmetry and enhances value chain transparency, enabling strategic managers to make decisions based on evidence and envision the future [19]. Hence, it is contended that FinTech adoption has a great impact on increasing the competence and flexibility of strategic management practices [20, 21]. Which gives rise to the hypothesis that:

 H_1 : FinTech has a positive impact on strategic management practices.

Strategic management takes on enormous significance in realigning organizational activities to broader socio-economic and environmental objectives [17]. Organizations that incorporate principles of sustainability within their strategic structures are more capable of addressing the most critical global issues, including poverty, inequality, and climate change [22]. With support from effective strategic management, organizations can create sustainability-led visions, develop measurable targets for the SDGs, and incorporate CSR initiatives into business operations [23, 24].

Additionally, strategic management provides for ongoing evaluation and measurement of sustainability performance to enable companies to adapt and scale up their activities [25]. Companies that exhibit good ethical leadership, stakeholder engagement, and long-term value creation will be well-positioned to contribute significantly to the SDGs [26, 27]. Effective strategic management practice is therefore set to make a significant contribution to an organization's contribution to sustainable development [28]. Which gives rise to the hypothesis that:

H₂: Strategic management practices have a positive impact on Sustainable Development Goals.

FinTech has revolutionized possibilities to enhance sustainable development through the democratization of access to financial services, economic inclusion, transparency, and green financing [15]. Mobile banking and microfinance platforms, for example, facilitate the unbanked to engage in economic activities and thereby fight poverty and entrepreneurship (SDG 1, SDG 8) [16]. Blockchain technologies enhance accountability and governance, functioning as institutional trust and integrity [1, 3].

Moreover, FinTech innovations may facilitate environmentally friendly investment flows using crowdfunding renewable energy plans or AI-based ESG rating tools to make responsible investment decisions [29]. Through such means, FinTech encourages inclusive growth, innovation, and environmental protection and aligns company and societal interests [11, 30]. It is thus hypothesized that the implementation of FinTech contributes directly to achieving Sustainable Development Goals [7, 10, 31]. Which means the hypothesis that:

 H_3 : FinTech positively impacts Sustainable Development Goals.

Though FinTech gives businesses the technologies that can promote efficiency, transparency, and inclusion, existing studies are in the culture of presupposing a linear, direct relationship between FinTech adoption and the fulfillment of Sustainable Development Goals (SDGs) [18, 32]. Such an assumption omits organizational, ethical, and strategic difficulties in technology assimilation [5, 33]. Adoption of FinTech instruments alone cannot provide sustainable impacts [8]. Unregulated or ill-controlled adoption of FinTech may result in goal misalignment of the organization, rising social and regulatory risk, or even exacerbating economic inequality [3]. Several studies have shown that though FinTech may facilitate financial inclusion, it may turn the inequalities more visible if regulated [21].

This is where strategic management as a mediator steps in to make FinTech adoption consistent with overall organizational values and sustainability objectives [22, 26]. Strategic management offers the vehicle for sustainable governance, ethical behavior, risk management policies, and inclusivity of stakeholders [24]. It makes sure that FinTech instruments are maximally utilized to facilitate SDG-related functions such as financial inclusion, green tech innovation, and economic growth in tandem [19, 22]. Without strategic direction, the potential of FinTech to make meaningful contributions to the SDGs could be left unrealized or become misguided and thus miss its long-term contribution [27, 30, 34]. Therefore, it is assumed that strategic management practices act as catalysts of the positive effects of FinTech integration and the realization of Sustainable Development Goals [4, 6, 29]. Which brings us to the hypothesis that:

 H_4 : Strategic management practices mediate positive impacts between FinTech integration and Sustainable Development Goals.

3. Methodology

3.1. Research Design

The research utilizes a quantitative research approach with a study design that concerns the interconnectivity between integrating FinTech, strategic management practices, and the accomplishment of Sustainable Development Goals (SDGs) by financial institutions within Jordan. It is a cross-sectional design whereby data are measured at a specific point in time to analyze associations among variables. The data will be collected through surveys with a focus on gathering information from financial institutions regarding their adoption of FinTech innovations, management practices, and sustainability initiatives. The research design is structured such that descriptive and inferential data concerning the relationship between the variables will be possible [35].

Before mass data collection, a pilot study using a small sample size of approximately 30 respondents will be undertaken. This is aimed at pre-testing the reliability and validity of the survey instrument, ensuring that questions are properly worded, clear, and capable of collecting the information required. The pilot study will also assist in identifying any factors that may likely cause problems in survey distribution or participant understanding, so that these can be addressed before the main data collection exercise. The pilot study will be tested for internal consistency through Cronbach's alpha and factor analysis. This will establish that the scales employed for measuring FinTech integration, strategic management practices, and SDGs are reliable and valid. According to pilot findings, any necessary survey changes will be applied before the actual main data collection is conducted [35].

3.2. Participants

The research will sample 20 Jordanian financial institutions that consist of banks, investment firms, insurance firms, and other financial firms. They are a representation of companies that continuously adopt FinTech into their activities. The sample will be chosen from the population using non-probability purposive sampling so that the sampled firms will be highly FinTech-integrated firms. In such companies, the sample will consist of 369 people acting as administrators and managers in the finance, strategy, or sustainability fields. They are chosen in such a way that they will offer information on the strategy and operational situation involving the adjustment of FinTech and how it is useful for the SDGs. The respondents will be requested to complete a designed questionnaire eliciting their opinions regarding how FinTech works, strategic management practices, and sustainability goals in their organizations [35].

3.3. Measurements

The rationale for the above measurement scales is based on a robust theory and empirical base drawn from the most recent FinTech integration, strategic management, and sustainable development literature. FinTech Adoption (FA) is quantified through indicators like mobile financial services, blockchain solutions, AI-based analytics, and digital payment systems, as evidenced in research by Buckley et al. [10], Danladi et al. [12], and David et al. [13]. These technologies form the foundation for financial digitalization and are universally accepted to ensure that financial efficiency, access, and innovation are enhanced. Strategic Management Practices (SM) are assessed based on how firms implement FinTech tools in strategic formulation, implementation, and performance evaluation processes. This is echoed by Bustami et al. [11] who emphasize strategic fit with digital platforms, and is supplemented by Khawaldeh et al. [18] and Mizrak [24] who emphasize data-driven strategy in contemporary management. Lastly, the Sustainable Development Goals (SDGs) standard evaluates companies' contribution to financial inclusion, sustainable finance, and green innovation, indicating their corporate social responsibility. Studies by Pauliukevičienė et al. [30], Ahmad et al. [2], and Aysan et al. [9] give valid rationale for connecting FinTech and strategic actions with the fulfillment of wider sustainability goals. The measures are such that they can comprehensively define how adoption of FinTech is not only an advancement in terms of technology but also a strategically and socially inspired transformation.

3.4. Procedures

Data collection will start by seeking permission from the financial firms participating in the study. After permission is obtained, the online questionnaire will be sent via email to the target respondents. The questionnaire will be sent electronically using survey tools like Google Forms or Qualtrics, which offer easy data collection and handling features. Respondents will be explicitly informed of the study's purpose, the anonymity of responses, and an approximate time to complete the questionnaire (about 15-20 minutes). Respondents will also be informed that their participation is voluntary, and they may withdraw at any point in time without any constraints. The questionnaire will remain available for two weeks, and a non-respondent reminder will be sent after seven days [35].

3.5. Data Analysis

After the data are collected, the data will be cleaned and preprocessed for analysis. Descriptive statistics will be calculated first to know the overall demographic data and the response distribution. These include frequencies, means, and standard deviations for every survey item. In hypothesis testing, Structural Equation Modeling (SEM) will be applied through the use of Smart PLS 4 software. SEM is suitable for this research since it enables testing complex relationships among several variables and sheds light on direct and indirect effects. The four hypotheses presented in the research will be examined through the application of this method, enabling a thorough analysis of how FinTech integration affects strategic management practices and, consequently, the attainment of SDGs. The initial task for SEM will be to evaluate the measurement model in terms of validity and reliability based on measures like factor loadings, Cronbach's alpha, and Average Variance Extracted (AVE). The structural model will be tested to evaluate the direct and indirect effects among the variables. Path coefficients will be evaluated to identify the strength and direction of the relationship between FinTech, strategic management practices, and SDGs. In addition to SEM, mediation analysis will be performed to examine the mediating effect of strategic management practices on the association between FinTech integration and the attainment of SDGs. This will be achieved through indirect effect testing using bootstrapping methods in Smart PLS [36].

Table 1. Demographic Profile of Respondents

Variable	Category	Frequency	Percentage (%)	
Gender	Male	218	59.1%	
	Female	151	40.9%	
	25–34 years	98	26.6%	
Age	35–44 years	173	46.9%	
	45–54 years	74	20.1%	
	55 years and above	24	6.5%	
	Bachelor's Degree	191	51.8%	
Educational Level	Master's Degree	139	37.7%	
	Doctorate Degree	39	10.5%	
	Less than 5 years	56	15.2%	
Years of Experience	5–10 years	144	39.0%	
	11–15 years	110	29.8%	
	More than 15 years	59	16.0%	

4. Results

Table 1 indicates that the sample was comprised of 369 participants from 20 Jordan-based financial institutions. The gender split is extremely slightly male biased, with 59.1% male respondents and 40.9% female respondents, reflecting a relatively even split. In terms of age, most of the participants (46.9%) were between 35 and 44 years old, which indicates an experienced workforce with long professional history, followed by 26.6% between 25 and 34 years old, indicating a good number of young professionals too. In terms of education level, over half of the respondents (51.8%) were Bachelor's degree

holders, followed by 37.7% Master's degree holders, and 10.5% Doctorate holders. This represents an educated sample that is appropriate for analysis of strategic and technological issues like the adoption of FinTech. In terms of professional experience in years, 39% of the respondents said that they had between 5 to 10 years of experience, and 29.8% said they had between 11 to 15 years of experience, reflecting a majority with long exposure to organizational practices and technological enhancements and hence is providing good insights into the study topic [36].

Table 2. Descriptive Statistics of Study Variables.

Variable	Mean	SD	Minimum	Maximum
FinTech Integration (FI)	4.18	0.55	2.80	5.00
Strategic Management (SM)	4.25	0.51	3.00	5.00
Sustainable Development Goals (SDGs)	4.12	0.59	2.70	5.00

Table 2 presents descriptive statistics to convey that the mean scores of all research variables were above 4.00, indicating that the respondents were practically viewing a high level of FinTech integration, strategic management practices, and contribution to the sustainable development goals. The low standard deviations carry the implication that there was consistency in responses [36].

Table 3. Reliability and Validity Statistics.

Construct	Cronbach's Alpha	CR	AVE
FinTech Integration (FI)	0.903	0.927	0.681
Strategic Management (SM)	0.912	0.935	0.742
Sustainable Development Goals (SDGs)	0.888	0.917	0.688

Table 3 shows that all the constructs were found to have high internal consistency, as indicated by Cronbach's Alpha values of greater than 0.70. Composite Reliability was greater than 0.90, indicating high reliability. Moreover, Average Variance Extracted (AVE) for all the constructs was greater than the desirable cut-off of 0.50, indicating good convergent validity [36].

Table 4.Items and Loadings for Study Constructs

Construct	Code	Item Description	Loading
	FI1	Adoption of mobile financial services	0.832
	FI2	Use of blockchain-based solutions	0.816
FinTech Integration (FI)	FI3	Application of AI-driven financial analytics	0.845
	FI4	Integration of digital payment systems	0.862
	SM1	Formulating strategies with FinTech integration	0.864
	SM2	Implementing FinTech-driven strategic initiatives	0.848
Strategic Management Practices (SM)	SM3	Evaluating performance considering FinTech impact	0.873
	SDG1	Supporting financial inclusion	0.818
Sustainable Development Goals (SDGs) SDG2 Pro		Promoting sustainable financial practices	0.841
	SDG3	Investing in green financial innovation	0.859

Table 4 shows that all the item loadings were considerably higher than the 0.70 threshold recommended, further testifying to the reliability of the constructs and confirming that each item measured its intended variable well [36].

Table 5. Discriminant Validity (Fornell-Larcker Criterion).

Construct	FI	SM	SDG
FinTech Integration (FI)	0.825		
Strategic Management (SM)	0.682	0.861	
Sustainable Development Goals (SDGs)	0.651	0.703	0.829

Table 5 illustrates that the Fornell-Larcker Criterion had been met since the square root of the AVE of every construct (diagonal values) was higher than that for its correlations with other constructs (off-diagonal values), thereby establishing good discriminant validity [36].

Table 6. Path Coefficients for Direct Hypotheses.

Hypothesis	Path	β (Beta)	t-Value	p-Value	Result
H1	$FI \rightarrow SM$	0.682	15.734	0.008	Supported
H2	$SMP \rightarrow SDG$	0.703	18.921	0.004	Supported
НЗ	$FI \rightarrow SDG$	0.324	6.832	0.045	Supported

Table 6 and Figure 1 indicate that path analysis identified that FinTech integration is positively significantly related to strategic achievement (β = 0.682, p < 0.01), and strategic management practices are also positively significantly related to SDG achievement (β = 0.703, p < 0.01) and FinTech integration being directly positively related to SDGs (β = 0.324, p < 0.05). Hence, H1, H2, and H3 were statistically supported [36].

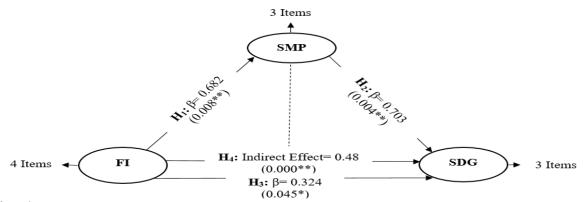


Figure 1.

The Structural Research Model Illustrates the Relationship between FinTech Integration (FI), Strategic Management Practices (SMP), and Sustainable Development Goals (SDG).

Table 7.Mediation Effect of Strategic Management.

Hypothesis	Path	Indirect Effect	t-Value	p-Value	Mediation Type
H4	$FI \rightarrow SMP \rightarrow SDG$	0.479	11.231	0.000	Partial Mediation

Table 7 indicates that mediation analysis revealed that strategic management practices partially mediated the relationship between FinTech integration and the attainment of SDGs. The indirect effect was significant (β = 0.479, p < 0.001), implying that while FinTech directly affects SDGs, a significant proportion of the effect is mediated through strategic management practices [36].

Table 8. Model Fit Indices.

Fit Index		Threshold	Conclusion
SRMR (Standardized Root Mean Square Residual)	0.048	< 0.08	Good Fit
NFI (Normed Fit Index)	0.921	> 0.90	Good Fit
Chi-square/df	2.89	< 3	Acceptable Fit

Table 8 reveals that the model fit indices indicate that the general structural model provided a good fit to the data. The SRMR was less than 0.08, and the NFI was more than 0.90, both of which indicated strong model adequacy. The chi-square/df ratio was also within acceptable bounds, further highlighting the strength of the model [36].

5. Discussion

The empirical analysis confirmed that there was a strong and positive association between FinTech integration and strategic management practices, affirming H1. The result is consistent with new literature that highlights how digital financial tools enhance decision-making speed, data-driven strategy design, and responsiveness to market movements. New studies, however, tend to ignore organizational preparedness that is necessary for realizing the benefits of FinTech. Most companies implement FinTech tools without altering their strategic designs, resulting in incremental or ineffectual integration [2, 3]. Our study critically suggests that, beyond technology deployment, firms must restructure their strategic capabilities to fully realize FinTech's potential, challenging overly optimistic views found in much of the existing literature [19, 22].

The findings indicated that effective strategic management practices play an important role in driving Sustainable Development Goals (SDGs). This aligns with the increasing recognition that strategic alignment is key to embedding sustainability throughout organizational activities. However, most recent research tends to depict strategic management as naturally sustainable without reference to its reliance on ethical leadership and stakeholder involvement [22, 26]. The research contradicts this simplicity by highlighting that in the absence of proactive and socially responsible approaches, even well-

designed management systems may never achieve true sustainable development [27, 29]. Therefore, strategic management needs to deliberately incorporate sustainability values as opposed to viewing them as secondary benefits [27, 30].

The direct contribution of FinTech to the attainment of SDGs was statistically significant but significantly weaker than other routes. Although in line with research emphasizing FinTech's contribution to financial inclusion and transparency, this finding calls for caution against overstating FinTech's inherent contributions to sustainability [21, 32]. Current literature tends to portray FinTech as an across-the-board facilitator of good, but our findings indicate that technology per se, left without appropriate contextualization, may not be the solution to long-standing social or environmental challenges [4]. Hence, the research emphasizes with caution that FinTech must be deliberately focused towards sustainable goals, and not on the presumption that innovation necessarily leads to sustainability [21, 32].

The mediation analysis validated the fact that strategic management practices function as mediators, to some extent, of the impact of FinTech integration and the realization of SDGs. Such an observation transcends shallow cause-and-effect analysis characteristic of the current FinTech studies [24, 25]. Most previous research overlooks the governance and alignment process involved in driving technological potential into social outcomes [16, 31]. The results rigorously underscore strategic management as a key transformation layer, connecting FinTech competencies to tangible, sustained effects [3, 9]. Lacking strategic mediation, organizations risk promoting superficial technological adoption that may enhance inequalities or lacunae in regulation rather than inclusive development [2, 3].

6. Conclusion

This research tested how much Financial Technology (FinTech) has been incorporated into strategic management practices and utilized in attaining Sustainable Development Goals (SDGs) within 20 Jordanian financial institutions. Applying data analysis through Smart PLS 4, the research identified that FinTech has a positive impact on strategic management and the attainment of SDGs, and strategic management practices mediate the effect of FinTech on sustainability performance. The study refutes overly simplistic presumptions in the available literature that technology by itself can foster sustainability and underscores the importance of strategic governance and organizational coordination. The study develops an understanding of how FinTech needs to be positioned within wider strategic contexts to leverage its highest facilitative impact on sustainable development.

6.1. Theoretical and Practical Implications

This study advances theoretical debate around FinTech and sustainability by presenting strategic management practice as a mediating variable [37]. In contrast to earlier studies, which treated FinTech and SDG attainment as a direct relationship, this research presents a more sophisticated, process-based model [19, 22]. It emphasizes strategic control, ethical awareness, and organizational capacity as critical in rendering technological innovation as real, sustainable outcomes, hence filling a very wide gap in the literature [19, 22].

To the practitioners, the research provides definitive proof that FinTech uptake needs to be tackled strategically to support sustainability initiatives [21, 32]. The financial institutions are encouraged to create strategic plans that deliberately synchronize technology instruments with sustainability missions [27]. The senior management is also encouraged to invest in organizational restructuring and training to ensure that FinTech initiatives not only result in operational efficiency but also economic, social, and environmental overall benefits [17].

6.2. Limitations

There are some limitations. First, the research only involved financial institutions in Jordan and potentially limits generalizability to other industries or geographic locations. Second, the cross-sectional design inhibits causal inference. Third, the use of self-reported survey data creates, even with statistical controls, concerns about common method bias. Future research can circumvent these issues by using longitudinal designs, involving multiple industries, and utilizing multiple data sources.

6.3. Future Research

Future studies can explore the adoption of FinTech in various organizational settings, i.e., in healthcare or education organizations, to examine the generalizability of the hypothesized model. Studies can also examine how certain types of FinTech innovations e.g., blockchain or AI-based platforms particularly target certain SDGs. Future studies can also incorporate moderating variables like organizational culture, regulatory regimes, or leadership styles to better understand how FinTech-enabled strategies unfold in intricate socio-economic systems.

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