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Fintech's transformative power in paving the path to sustainable development: Perspective from the Jordanian context

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Abstract

By making it possible for many social groups to use digital services, the convergence of financial technology and sustainable development has grown into a major paradigm in the global economic environment. This paper examines how fintech has revolutionized the promotion of sustainable development, putting particular emphasis on the context of Jordan. This paper analyzes how fintech is altering financial systems to encourage social, economic, and environmental sustainability through a thorough analysis of existing literature and empirical evidence. The study used a questionnaire with 20 items as a tool and relied on an analytical descriptive approach. Then the questionnaire was analyzed to test the hypothesis of the study, bearing in mind that the problem was to shed light on how financial technology contributes to achieving the goals of sustainable development. The outcomes of this study, which indicate that financial technology significantly impacts sustainable growth, illustrate the potential of fintech to function as a driving force behind sustainable development. The findings are also beneficial for financial institutions, companies, and policymakers that attempt to employ fintech to support socioeconomic development while navigating the difficulties of a rapidly evolving technological environment.

Keywords: Financial technology, Sustainable development, Electronic services, Financial inclusion, Innovation, Digital transformation

1. Introduction

The delivery and consumption of financial services have been transformed by financial technology. It includes a broad variety of technological advancements with the goal of improving and streamlining several facets of financial operations, including banking, investing, lending, payments, and insurance. Moreover, [1] assessed a significant effect of digital remittances, debit and credit cards, and macroeconomic indicators on financial inclusion in high and middle-income countries. A new paradigm known as sustainable finance or green finance has emerged as a result of the recent intersection of sustainability and environmental responsibility with the fintech industry. Additionally, the fusion of sustainability and fintech has transformed the financial sector by addressing not only conventional financial requirements but also broader societal and environmental issues. The way companies, customers, and investors interact with money, resources, and the environment may change as a result of this integration. Compared to conventional methods, these innovations were distinguished by their great degree of development flexibility. Additionally, banks were able to respond to the public's desire for these electronic services, which allowed them to expand into new markets and businesses and, ultimately, resulted in higher returns for financial institutions as a whole. The rapid expansion of the digital economy in recent decades

has expedited national and international attempts to modernize the financial system, leading to the financialization of the global economy [2]. The growing focus on examining digital technologies in sustainability, along with the surge in related research, highlights the necessity for deeper investigation into these subjects within both academic and business settings [3].

A few years ago, Jordan began incorporating these technologies into various financial transactions. As reliance on these tools grows, questions arise about how effectively they enhance performance and promote sustainability in a competitive and rapidly changing economic landscape. While some studies have explored the impact of financial technology, many have concentrated on metrics like adoption rates and customer satisfaction, overlooking the causal links between the use of these tools, institutional performance, and sustainability. This research seeks to address this gap by investigating these relationships in emerging institutional contexts, an area that still calls for more applied studies. This topic is crucial for decision-makers, as it could help in crafting regulatory and operational frameworks that promote the effective adoption of financial technology, ultimately boosting competitiveness and sustainability. In an effort to shed light on one of the most crucial subjects, financial technology and its active role in reviving companies to deliver the finest services while guaranteeing the implementation of sustainable development principles, this study was developed. Through the aforementioned, the study's challenge can be phrased as the following query: whether financial technology plays a role in achieving sustainable development.

2. Literature review

Financial technology, according to the Financial Stability Board, was defined as "financial innovations using technological advances, as it may produce business models and applications, along with processes and products, which also have an observable material impact on the financial system and institutions through its enhancements to financial services." A topic known as "fintech" combines the administration of finance, technology, and innovation. Furthermore, according to [4], fintech activities frequently result in new business models or even new businesses. Promoting financial inclusion, enhancing lending taking decisions, facilitating diverse business ideas, providing alternative investment opportunities, expanding risk coverage, and mobilizing the capital markets, improving the variety of innovative endeavors, reducing the cost of transactions, opening up new distribution channels, improving fund transfer efficiency, modernizing the regulatory observing system, and enhancing payment process security are just a few of the aspects of fintech efforts for sustainable development that depend on technological advancements.

Fintech was chosen as the direction the world will go for various reasons. It develops financial products like remittances and company credit cards, for instance, and offers solutions [5]. Additionally, it develops user-friendly digital sites and appealing alternatives. The technology used to provide financial markets with a financial product or service that can be distinguished by technological advances in comparison to that market's existing technology is referred to as fintech, which is a subcategory of technology [6]. Financial technology is an organization that aspires to offer public services under its own name or to offer public services to other businesses, according to [7].

Fintech benefits the financial industry in various ways, including boosting financial inclusion, increasing domestic savings, and streamlining payment operations. For instance, obtaining funding from banks can be difficult for many small to medium-sized businesses (SMEs). To address this issue, Finexkap, a French financial technology firm, constructed a combined system that allows SMEs to access capital via a fully digitalized, flexible, and fast factoring procedure [8]. As businesses depend on technologies to grow, advance, and acquire finance through online platforms, as well as with the guidance and support of business incubators, the establishment of financial technology is driven by an entrepreneur looking to produce unique financial goods or services to offer in the market [9].

As stated by [10], their research looks into the development and dissemination of fintech in Africa. According to the survey, Africa has attained a respectable high rate of people using financial technology services, in 2019,

at a 12% rate. Additionally, the poll revealed that rural areas have seen an increase in the adoption of financial technologies over time. Furthermore, it was shown that 39% different South Africans use mobile money transfer services. In Kenya, for example, the percentage of bank transfers done through system of M-Pesa system increased from 19% to 58% from 2007 to 2015, and it peaked at 80% in the year of 2019.

Fintech also encompasses the use of the internet as well as technological advancements in the financial services industry, as described by [11]. In the financial sector, fintech is expected to introduce new tactics, goods, applications, and cycles. Software applications and other technological advancements that support financial services and bank operations are also included in fintech. This has enabled a wide range of financial transactions, such as electronic money, ATM/debit cards, credit cards, cash transfers, and other payment processors. According to [12], who studied the growth of finrech throughout the COVID-19 pandemic, the development of digital platforms bridges gaps between technology and those involved in financial promotion, networking, and the success of the FinTech industry, resulting in an unconventional economy. Online search engine usage of the term "fintech" in the "jobs and education" category increased steadily between September 2012 and August 2018 [13].

Researchers [14] explored how fintech impacted Islamic banking's mobile banking and freelancing labor during the outbreak of the epidemic. They found that Islamic financial institutions' growing use of financial technology encourages work-from-home activities and compels consumers to embrace new practices, such as the recently popular mobile banking.

Global attention has shifted in recent years to emphasize environmental responsibility and sustainability. The term "fintech for sustainable development" or "sustainable fintech" refers to the incorporation of sustainability ideas into the fintech industry. This refers to the application of technical developments to problems in governance, social interaction, and the environment while simultaneously generating benefits for business and society.

Contrarily, as environmental issues and social responsibility have risen to the top of people's minds, sustainability has become more important. Businesses and people alike are becoming increasingly aware of the necessity of making the shift to more sustainable practices in order to combat climate change, advance social fairness, and guarantee responsible resource consumption. According to [15], sustainable development is continuous, just, balanced, and integrated expansion that considers the environmental aspect in every project and does not benefit the present generation at the price of the next. A precise resource rationalization is a hallmark of sustainable development, which is an interdependent, connected, and integrated development that can only be realized via integration and close dependency between the components. It is primarily represented by a variety of characteristics, including the economic dimension, where sustainability refers to continuity and maximizing economic satisfaction for the longest amount of time possible by supplying components of human well-being of the highest caliber [16].

The social dimension of the inherent human right to a clean environment lies in the way individuals use environmental resources to meet both their basic needs and additional needs that reflect their degree of desire for an improved quality of life [17]. This enables people to participate fully in society while retaining their rightful access to natural resources, environmental protections, and essential social services. Additionally, the environmental dimension is how the economy's resources and order are preserved. The only way to guarantee providing the requirements of the present and future, as well as returns, is through the rational exploitation of the existing environmental and climatic potential and the safeguarding of it within the framework of priorities. The current expansion and development pattern is frequently cited as one of the reasons for the environmental problem. The exhaustion of natural resources, as well as the deployment of environmentally hazardous technology and practices. Along with treating natural resources as public property, society also bears external environmental costs that do not show up in institutional or overall national economy accounts [18]. The technological aspect is another, and it entails upgrading to cleaner and more effective technologies as well as efficiency levels to hasten the development of renewable energy sources [19]. It is estimated that developing

nations face an annual investment shortfall of over US$2.5 trillion in infrastructure, including buildings, transit, power, telecommunications, water, and agriculture [20].

2.1. Financial technology and sustainable development intersection

The widespread adoption of smartphones and internet access has made it feasible for all societal groups to take advantage of digital financial technology, which facilitates the accomplishment of the following key objectives of sustainable development [21]. By giving low-income families access to affordable resources and services that assist them in improving their long-term standard of living and raising their economic chances, poverty can be eradicated. The goal is to completely eradicate hunger by making it simple for male and female farmers to acquire the capital they need to boost yield and output at a reduced cost, which raises overall productivity**.** In addition to giving those who are poor suitable venues for social transfers, nourishment. Digital payments, on the other hand, make it possible to expand healthcare services in isolated rural areas and respond to medical emergencies. The quality of education is one of the sustainability goals that may be attained through digital finance, which aids low-income families in managing their finances and saving money so they can budget for and pay for their children's education. By empowering and improving the financial capacity of women, financial technology can contribute to gender equality. Digital technologies collect data on female business owners, allowing for a better understanding of their needs and a more accurate evaluation of their creditworthiness, which allows for the creation of digital financial products geared specifically toward women.

Digital payment systems lower operational costs, hence increasing access to clean, inexpensive energy and boosting investment in the industry. Additionally, digital financial services that enable small and medium-sized firms to obtain funding via crowdfunding platforms, a surge in the digitization of employee records, and trade payments to consumers and suppliers help achieve decent work and economic expansion. Additionally, through assisting enterprises, digital financial technology supports infrastructure, innovation, and industry. It also enables them to create a record of their payment and credit scores, which improves their chances of securing future financing. It aids small firms in their efforts to expand, develop, and enter new markets.

By offering low-income women's families new instruments for digital financial services that will boost their income, expand their financial flexibility, and provide them access to new opportunities in the economy and in society, the financial summit also reduces inequality. One of the main objectives of sustainability is to create sustainable cities and communities, and this may be done by making digital payment systems accessible to the general public. Living in unplanned communities. Putting money into tiny real estate loans to get a decent place to live. Along with the aforementioned, digital finance makes it easier for people, businesses, and the government to fight climate change and get ready for its negative repercussions through flexibility and encouraging ongoing investments. The objectives of sustainable development in peace, justice, and the creation of strong institutions are attained by increasing the transparency of transactions between and within governments and increasing the level of accountability for how they use public funds. This is done by using digital payments, which also increase the amount of money available for essential investments and public services.

It's crucial to understand the difficulties and factors surrounding this convergence. To fully realize FinTech's potential for sustainability, issues with privacy, data security, legal structures, and the capacity for technology to worsen existing imbalances must all be addressed. In summary, the nexus of financial technology as well as sustainability is a revolutionary and dynamic frontier. Collaboration between entrepreneurs, legislators, financial institutions, as well as environmental campaigners will be essential in defining a future in which finance acts as a catalyst for beneficial environmental and social change, as both areas continue to develop.

3. Research method

This section will focus on the degree to that financial technology promotes sustainable development after demonstrating the theoretical basis for the study's subject and numerous previous investigations that are directly

relevant to it, whereas previous studies, such as the study by [22] and [23] indicated the importance of the theoretical framework and previous work in constructing the study methodology. Given that the study serves as the crucial foundation for all subsequent scientific research, this section will do so. Which facts and data are precisely gathered in order to provide outcomes that perfectly reflect the real world and provide a whole picture? Choosing the approach and steps to take to accomplish the study's goals, comprising a description of the technique employed, the tools used for data collecting, the study's population and its sample, and confirming the validity and dependability of the study tools. This has a good impact on the design of a reliable investigation that is consistent with the research question and the criteria for data collection, and this framework serves as a crucial foundation for the actual application of the methodology and the accurate and trustworthy analysis of discoveries.

3.1. Sample and study population

The population used for statistics for this study consists of all employees of regional Jordanian banks. To collect the opinions of a randomly chosen set of employees, 400 questionnaires were issued in compliance with the study sample's specifications, involving 400 respondents in the study population. 348 of the 400 surveys were successfully recovered.

3.2. Data and information collection tools

The study used scientific research, studies pertaining to the study's factors, as well as network information and the electronic research contained in it, to give and complement the theoretical aspect with information meant for the study. Additionally, the study depended on developing the questionnaire's field component. In order to assess the extent of potential application and determine whether Jordanian institutions have a clear understanding of the significance of financial technology, a study on the measurement of financial technology and its role in accomplishing sustainable development processes was conducted. The majority of the earlier research that was mentioned in our present research relies on a Likert scale with five points, according to those studies.

3.3. The study tool's reliability and validity

The views of a group of arbitrators were used to guarantee the validity of the questionnaire, as suggested by some previous studies such as [24] and [25]. As a result, the items were corrected and rearranged to ensure that the expressions of the independent variable, financial technology, and the dependent variable, sustainable development, are accurate representations of the variables they were intended to measure. As a result, the questionnaire has a high level of validity, and the study may rely on its formulations and variables in its statistical analysis of the respondents. According to [26], the Cronbach's alpha coefficient is the most widely used indicator for assessing a study tool's reliability, which is also asserted by many previous studies, such as [27], which stated that to ensure internal consistency, Cronbach’s alpha was calculated for each scale to verify reliability. A tool is considered to be of a high level if the value of this coefficient exceeds 0.90, and it must not be less than 0.65 for a level that is only marginally acceptable.

Table 1. Results of reliability analysis

Item number in the questionnaire	Variable	Cronbach’s alpha coefficient
1-10	Financial Technology	0.937
11-20	Sustainable Development	0.914
1-20	Overall Reliability Coefficient	0.908

Table 1 demonstrates the high value of the Cronbach's alpha coefficient, which reaches 0.937 for the dependent variable of financial technology, 0.914 for the variable related to sustainable development, as well as an overall coefficient for the survey of 0.908, which is an extremely high value and suggests the validity of the outcomes that will be obtained. This indicates that the tool's results are dependable if it is used again, and it can be argued that this questionnaire is regarded as being very reliable in general.

3.4. Hypothesis development

Based on an examination of the findings from earlier research, which can be compared to this one, and the magnitude of the influence of financial technology on attaining sustainable development. This study puts out the following hypothesis:

There is a statistically significant impact of financial technology in achieving sustainable development at a significant level, $\alpha \leq 0.05$.

3.5. Methods of statistical treatment of the respondents' data

In order to examine the responses and viewpoints gathered from the sample and test the hypothesis, which was established in the study, a number of statistical techniques were employed. The following are the descriptive statistical techniques:

- The arithmetic mean, an indicator of central tendency used to establish a central value of data, is utilized in the descriptive analysis of the variables. By summing up all the values and dividing them by their respective numbers, it is calculated. Additionally, the level of deviation in respondents' responses to each of the questionnaire's items and variables is measured using the standard deviation as a gauge of dispersion.
- A versatile statistical method for analyzing the relationship between independent and dependent variables is regression analysis. It can be used to assess the strength of the relationship, the extent to which the independent variable may clarify significant variations in the dependent variable, and the degree to which differences in the dependent variable can be explained by the independent variable.

4. Results and discussion

In order to present the descriptive analysis of the outcomes of the independent and dependent variables and to test the study hypothesis, this section of the study was created.

4.1. Descriptive analysis of the study's variables

This analysis intends to shed light on how the study sample's participants interact with the variables that were represented through specially created items. Whereas the study employed standard deviation and arithmetic mean to gauge the data's dispersion. The following targets were calculated for participant responses that reflect the financial technology variable:

4.1.1. Analysis of the independent variable used to gauge financial technology

Building on previous works such as Joshi et al. (2015), once a Likert measure of 1-5 is typically used to construct a questionnaire, items importance is ordered based on the statistical mean. The minimum of intervals may vary, but the most commonly used criteria are: Very high importance when the mean ≥ 4.20; High importance when $3.40 \leq$ mean < 4.20; Moderate importance when $2.60 \leq$ mean < 3.40; and Low importance when mean < 2.60

Table 2. Analysis of the independent variable related to the measurement of financial technology

No.	Item	Mean	Standard Deviation	Rank	Level
1	My organization is equipped with the tools and technology needed for financial services to be provided effectively and efficiently, as well as the mechanisms for doing so.	4.29	0.942	2	Very High
2	According to my organization, the usage of financial technology makes it possible to offer high-quality financial services.	3.86	1.005	8	High

No.	Item	Mean	Standard Deviation	Rank	Level
3	Utilizing financial technology to deliver banking services reduces the amount of time and effort required to receive the service.	4.22	0.757	3	Very High
4	Financial technology makes it possible for customers to access financial services with quality and ease.	4.17	0.687	4	High
5	Through financial technology, banking consumers can effortlessly pay all of their financial obligations.	3.98	0.921	6	High
6	Through financial technology, a banker makes it simple for his clients to receive numerous loan facilities.	3.78	0.932	9	High
7	Banking transactions that rely on financial technology can create international electronic markets that help the economy expand.	3.72	0.954	10	High
8	A banker argues that financial technology is essential to implementing financial inclusion tactics, which are centered on providing financial services to all consumers.	4.12	0.735	5	High
9	Relying on financial technology allows for the improvement of operational efficiency, the development of digital knowledge, and an increase in worker productivity.	4.38	0.691	1	Very High
10	Electronic financial transfers must be used in the process of increasing international trade.	3.91	0.854	7	High
	Total	4.15	0.792		High

The opinions and attitudes of the sample members regarding the degree of their agreement, disagreement, or the neutrality toward the descriptions of the first variable pertaining to measuring the degree of application of financial technology from the perspective of view of the sample are presented in Table 2 along with the results of determining the value of the arithmetic mean in addition standard deviation. Participants' responses to all of the variable expressions had an overall arithmetic mean of 4.15, which is within the bounds of high agreement and has a standard deviation of 0.792. The values above give us a statistical result demonstrating that there is no significant dispersion in the respondents' opinions, which supports the results. It shows the convergence of the respondents' opinions and their focus around the amount of the total arithmetic mean, indicating that there is a weakened dispersion between their opinions. This was observed in relation to their responses to the content of these variable expressions, since their responses varied from high to very high degrees, and the total reflects the data center for the patterns of the sample individuals. According to their points of view, all of them agree that financial technology is applied at a high rate. The item with the greatest arithmetic mean (4.38) and lowest standard deviation (0.691) was number 9. In light of the aforementioned, it is evident that respondents are becoming more interested in the concept of financial technology, particularly as it relates to improving operational efficiency, expanding digital knowledge, and raising worker productivity.

4.1.2. Analysis of the dependent variable used to gauge sustainability

Table 3. Independent variable analysis for the purpose of quantifying sustainable development

No.	Item	Mean	Standard Deviation	Rank	Level
1	Encouragement of innovation and diversity in financial services improves the nation's development aspect and leads to sustainable development.	3.89	0.835	5	High
2	Small-scale project financing through a package of loan services helps to boost the economy and lower unemployment.	3.72	0.748	9	High
3	The community is encouraged to invest their funds in various investment initiatives that promote sustainable development by being educated about the concept of financial inclusion.	4.37	0.628	1	Very High
4	Encouragement of those with low incomes to create bank accounts and use them for transactions helps foster financial institution competitiveness in a way that benefits the nation's economic development.	4.21	0.764	3	Very High
5	Being innovative and developing the banking services it offers helps it maintain a competitive edge and grow its financial capacity in a way that benefits the nation's economy.	4.07	0.893	4	High
6	Financial technology makes it possible for human resources to have their material requirements met, allowing them to finance investments that lead to sustainable development.	3.64	0.879	10	High
7	Financial technology makes it possible for the many targeted social groups to work together financially and socially in order to achieve sustained social development.	3.86	0.927	7	High
8	The use of financial technology can help people achieve sustainable development by fostering an environment that is both socially and economically favorable.	3.79	0.935	8	High
9	When agricultural development initiatives are financed through financial technology, green spaces are preserved while achieving sustainable development.	4.23	0.754	2	Very High
10	Financial technology makes it possible to invest in environmentally friendly projects that help achieve sustainable development.	3.87	0.915	6	High
	Total	3.96	0.967		High

The statistics in Table 3 clearly show that item 3, which corresponds to the dependent variable of sustainable development, had the highest arithmetic mean (4.37), with the lowest deviation (0.628). In light of the aforementioned, it is evident that teaching the local population about the concept of financial inclusion encourages people to invest their resources through financial institutions in a variety of ventures that promote sustainable development. Since it is possible to accomplish this by allocating their financial assets and assisting the community by funding small and medium-sized investment projects that benefit all sectors, which include agricultural and industrial ones, these projects will, in turn, contribute to the growth of the national economy

and the enhancement of the social environment. It is important to note that financial institutions must spend a lot of money on outreach to various segments of society. However, with the development of financial technology, this situation will change as customers can easily access these institutions' services through electronic channels, allowing them to get the loans they need while also making other payments and financial transfers. As a result, financial technology advancements are crucial for attaining sustainable development. According to the models of statistics, all the items improved because the paragraphs obtained a general arithmetic mean of 3.96, which is higher than the fictitious mean of 3, along with an overall standard deviation of 0.967, and this shows that there is no appreciable variation in the answers.

4.2. Hypothesis testing by regression analysis

The most popular approach involves computing the correlation coefficients to ascertain the relationship between the independent and dependent variables. The regression method is then used to evaluate the hypothesis.

Table 4. Correlation coefficients between variables

Pearson Correlation	0.836
Sig. (2-tailed)	000
N	348

Source: Generated by the author of this study.
*Indicates Significance level at 0.05.

By looking at Table 4 above, it is clear that there is a direct and strong correlation between the financial technology component and sustainable development, with a correlation coefficient of 0.836. The results of regression analysis, which is utilized to ascertain and comprehend the relationship between the independent and dependent variables, are displayed in Table 5 below.

Table 5. Results of regression analysis

F-statistic= 38.09 Prob(F-statistic) = 0.0000 α=0.05				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	1.027	0.319	2.209	0.0001
Financial technology	0.682	0.132	1.657	0.0000
R= 0.791				
R^2= 0.548				
S.E of Regression = 0.525				

Source: Generated by the author of this study.
* Indicates Significance level at 0.05.

Table 5 presents findings of the study according to the linear regression model to show the impact of the independent variable represented by financial technology on the dependent variable represented by sustainable development, where the study used a significance level of 0.05. This is done to test the study hypothesis that there is a statistically significant impact of financial technology in achieving sustainable development at a significant level, $\alpha \leq 0.05$.

Determination coefficient R2, a measure of the degree of fit, indicates that the regression connection can only account for 0.548 of the changes in the dependent variable; the remaining 0.552 are the result of additional factors that were not taken into consideration in the model. The regression coefficient value was 0.682 as well. Since a significant level of 0.0000, or less than 0.05, arose, which affirms that the adoption of financial technology can achieve sustainable development, the hypothesis is accepted. As a result, any increase in financial technology by one unit leads to an increase in the sustainable development variable of 0.682. The findings also support the respondents' belief that using financial technology can help achieve sustainable development. This is because the world's rapid technological advancement has greatly aided in the delivery of services quickly and easily, which has improved quality of life and driven financial technology to serve a variety of social groups. Additionally, modern technology can now be used to supply services outside of national borders, giving users access to high-quality financial services at competitive prices.

5. Conclusions

The significance of using financial technologies as a strategy for accomplishing sustainable development objectives was examined in the current study. According to the study, financial technologies continue to be a key factor in accomplishing the majority of the goals of sustainable development. The statistical findings showed a seeming relationship between the potential use of financial technology and the possibility of attaining sustainable development.

Fintech innovations have greatly increased the accessibility of financial and transactional products and services. When compared to traditional ways, streamlined banking procedures offer a variety of operations at significantly lower costs. They also excel at providing premium electronic services, exceeding the quality benchmarks established by conventional methods. These findings are consistent with the respondents' viewpoints in the survey. The fight against hunger and poverty can be improved by making digital financial services easier to use, especially in distant areas and for vulnerable people who are financially excluded. Additionally, this strategy can help with the financial support of small-scale initiatives, the expansion of education and health care, and the development of jobs. Additionally, it facilitates the empowerment of women while providing security and advancing social justice, laying the foundation for long-term growth in both the economy and society. The progression of financial inclusion and the achievement of sustainable development goals are the two primary conditions for the adoption of digital financial technologies to be successful. This success depends on the development of an all-encompassing strategy that includes developing a digital platform, maintaining conformity to regulatory compliance requirements, tackling cybersecurity risks, and training a skilled workforce knowledgeable about the field of financial technologies.

This outcome carries significant implications, paving the way for new research opportunities at the crossroads of financial technology and sustainable development. There's a particular need to develop both theoretical frameworks and practical models that explore how financial technology can foster sustainable innovation. These insights also emphasize the importance for decision-makers and practitioners to incorporate digital strategies that weave financial technology into their corporate sustainability initiatives. This integration can help strike a balance between pursuing economic growth and upholding environmental and social responsibilities. Additionally, at the policy level, these findings advocate for the establishment of flexible and effective regulatory frameworks that encourage the responsible application of financial technology, ensuring it aligns with sustainable development goals, especially within the banking and financial sectors in developing nations. As financial technology emerges as a catalyst for creating adaptable, sustainable business models, it calls for enhanced collaboration between academic institutions and the private sector to steer innovation in a direction that yields positive societal outcomes. Moreover, Future academics are advised to study other variables that affect sustainable development and to conduct sectoral studies. Additionally, comparisons with other nations might be made.

Declaration of competing interest

The authors declare that they have no known financial or non-financial competing interests in any material discussed in this paper.

Author contribution

The contribution to the paper is as follows: Ayman Mansour Khalaf Alkhazaleh: study conception and design; Ayman Mansour Khalaf Alkhazaleh: data collection; Ayman Mansour Khalaf Alkhazaleh: analysis and interpretation of results; Ayman Mansour Khalaf Alkhazaleh: draft preparation. The author approved the final version of the manuscript.

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