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The impact of green economy on sustainable development in the Jordanian Islamic bank environment

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Abstract
The study aimed to demonstrate the impact of the green economy on sustainable development in Jordanian Islamic banks, and to identify the advantages, characteristics and concepts of transitioning to the green economy and its relationship in Jordanian Islamic banks also the study aim to clarify the importance of the banking system supporting the green economy by providing the necessary financing and its effective role as a major financial intermediary between investors and savers, in addition to developing a strategy to enable the transition to the green economy and full support for green projects in the coming years and maintaining sustainable development of Islamic banks environment. The descriptive analytical approach was used, 160 questionnaires were distributed, 149 were retrieved valid for statistical analysis, and the data were analyzed by the SPSS program. The results showed a significant impact of the green economy on sustainable development in its dimensions (environmental development, social development, and economic development) in Jordanian Islamic banks. The study recommended the need to develop comprehensive strategies for transitioning to the green economy shared in all sectors and programs and to adhere to Sharia and ethical controls in all Islamic financing operations in order to reduce economic and environmental risks.

Keywords: Green economy, Sustainable development, Banking environment, Islamic banks

1. Introduction

In recent years, the world has witnessed fluctuations in the markets for basic goods and services as a result of economic and financial crises, which led to ongoing impacts on the achievement of sustainable development and credit goals. These crises posed risks to the economic, social, technological, and environmental dimensions and threatened the future of future generations. In light of the economic, social, and political instability in the region, the transition to a green economy has emerged as a solution that contributes to achieving stability and sustainable development, with a focus on social justice and the optimal use of natural resources.

Sustainable development has emerged as a global priority, combining economic growth, environmental preservation, and social equity. The first beginnings of "sustainability" as an official term can be dated back to the eighties of the last century, where it addressed the survival of humanity on the planet – The most common sustainability concepts [1]. In 1987, the Brundtland committee asked institutions and companies to include plans that reveal their environmental and social activity within its overall strategy by setting up a special management for sustainability and approve this new management to the regulatory framework [2].

The green economy is one of the tools of sustainable development, aiming to reduce poverty and unemployment, achieve fair income distribution, diversify the economy, and stabilize global economic fluctuations. From this standpoint, Islamic banks play a prominent role in supporting and financing service, production, and social institutions, as they combine theoretical principles with practical application, and prove their efficiency in meeting the needs of customers and achieving balanced economic development in Jordan, by exploiting economic resources and providing services such as good loans and supporting charitable societies. Hence, the idea of the study came to identify the green economy and its impact on sustainable development in Jordanian Islamic banks.

This study aims to clarify the impact of the green economy on the three dimensions of sustainable development—environmental, social, and economic—within Jordanian Islamic banks. It also seeks to explore methods of preserving available societal resources to achieve sustainable development across all sectors by transitioning toward a green economy. The green economy is seen as a key pathway to achieving sustainable development by redirecting economic activities and proposing modern solutions that enhance the role of Islamic banks in supporting green initiatives. Despite Islamic banks possessing high levels of liquidity, their role in environmental financing remains underutilized, and the connection between available deposits and green investments is still vague. As major financial intermediaries and central pillars of the national economy, Islamic banks have a critical role in guiding investments toward sectors that promote environmental sustainability, under the principles of Islamic Sharia. This research addresses the core problem of limited green economic engagement despite significant opportunities, and formulates its main research question: What is the impact of the green economy on sustainable development in its environmental, social, and economic dimensions within Jordanian Islamic banks? Supporting this, the study explores sub-questions relating to each individual dimension. Recognizing the vital role of banks—especially Islamic banks—in economic reform and development, the study underscores the importance of green financing in boosting national production, creating employment opportunities, generating savings, and conserving resources. It responds to contemporary financial challenges such as declining credit rates, inflation, and savings surpluses by highlighting the need to channel these savings into real investments aligned with green economy principles to support sustainable growth.

1.1. Theoretical framework and previous studies

Islamic banks are defined as "financial institutions with an economic, social and religious message that aims to achieve public benefit for an Islamic society based on moral, humanitarian and economic foundations. They are institutions that do not seek profit primarily" [3].

The banking business environment refers to all the factors that indirectly affect banking activity, which require the bank to monitor and collect data about it, then analyze it in order to reach the opportunities and challenges that may arise from it. Banking is an economic activity that is an open system that affects and is affected by the surrounding environment due to the variables and competitive, economic, political financial and banking systems it includes [4]. Islamic banks are based on the functions of traditional banks, such as savings and financing services, transaction management, bank transfers, and attracting deposits, but they are distinguished by characteristics from usurious banks, which can be summarized as follows:

- They are based on a contractual basis, i.e., on the Islamic faith derived from its comprehensiveness, entity, and components.
- They are based on an investment basis, i.e., investment as an alternative to usurious interest.

- They are based on a social basis, i.e., they aim to achieve social solidarity by managing the Zakat fund, donations, charity, and endowments in setting its development policy for the benefit of the Islamic community.
- They are based on a cultural basis, i.e., they aim to spread Islamic culture and introduce Islamic banking through commercial, financial, and banking transactions [5].

Islamic banks seek to achieve objectives and the feasibility of projects for Islamic values and the application of legitimate objectives in the field of transactions, money, and the economy in a way that effectively contributes to eliminating duality in the Islamic faith and the reality of practical practices in society and the application of Islamic law. The most important objectives are:

- Financial objectives: The bank plays the role of a financial intermediary in participation and reflects the extent of its success in performing the provisions of Islamic law, such as attracting and developing deposits, investing money, and achieving profits [6].
- Internal objectives: The bank carries out several internal objectives, such as developing human resources and achieving growth and geographical and social expansion [7].
- Social objectives: The Islamic bank seeks to contribute to serving and developing society, meeting social needs, financing projects and activities that achieve general social benefit, and serving individuals by providing good loans, charitable projects, collecting money from zakat, and others, in accordance with Islamic law [8].
- Customer-specific objectives: The Islamic bank has several objectives with customers, such as providing banking services, providing financing for investors, and providing security for depositors [9].

It is established in the rules of Islamic banks that money is not a profitable asset and that activities in Islamic banks take the positions of Sharia in their application, social justice, and fair distribution of wealth.

A set of rules affecting Islamic banks:

- Sharia rules such as succession, no harm or damage, profit and loss, and not dealing with usury [10].
- Social and cultural rules that lie in the reality of fighting poverty, justice, responsibility, security, and stability [11].
- Economic banking rules, such as commitment to Islamic Sharia in all transactions and adopting the principle of sharing in profit and loss, effective employment of bank resources, and interest in the development of small and medium enterprises [12].

The Islamic bank seeks to achieve profit by providing a set of services to customers in return for an agreed commission, if the services are within the framework of Islamic law and are represented by banking services and bankcards which can be listed as following:

- The instant debit card is a banking service that does not include credit and the Sharia ruling on its permissibility and the fees charged by banks are permissible as issuance fees, cash withdrawals, or renewal, whether as a relative fee or a fixed amount.
- The monthly debit card in which the amount due from the customer is deducted at the end of each period without any increase and is used in the cash due, and its issuance is not accompanied by a fine for late payment of the debt due on him.
- Documentary credit is one of the means of payment in foreign trade operations. It is a pledge from the bank to the beneficiary (seller) based on the request of the opener of the credit (buyer), in which the bank decides that it has approved at the disposal of the beneficiary an amount of money to be paid to him in return for specific documents showing the shipment of the goods within a specific period [13].
- Renting iron safes specifically for customers.
- Letters of guarantee are a pledge from the bank to accept payment of an amount upon request to the beneficiary on behalf of the applicant for the guarantee when he is unable to fulfil certain obligations

on the part of the beneficiary. It takes the form of a guarantee and is originally permissible in Islamic law [14].

Banking services in the field of investment: Achieved through investment trustees such as establishing companies, managing the company on behalf of others, marketing real estate, studying economic feasibility and evaluating investment opportunities, and finally public subscription services for securities for the public [15].

Banking services in the field of consulting: It is considered a house of expertise and economic and financial consultations for all Muslims, and high expertise and competencies to provide honest advice, whether through specialists or employees in management. Among the most important areas it provides are: areas of economic cooperation, areas of financial investment, areas of organization, areas of planning, and areas of financial and legal settlements.

Social services provided by Islamic banks: The Islamic bank is an institution that does not aim to maximize profit, but rather it is a social project aimed at social return and developing its resources to maximize economic returns and creates social solidarity that works to provide a sufficiency level for the individual in society. The bank achieves this through the service of collecting and distributing Zakat, granting good loans, establishing religious and social organizations and providing support to them.

The following outlines the various internal and external sources of funds utilized by Islamic banks, along with the financing mechanisms based on Islamic principles, which avoid usurious interest and offer a range of services categorized by profit-sharing, profit margin, and interest-free structures.

- Internal sources of funds: represented by capital, reserves (legal reserve, optional reserve, special reserve, retained or carried forward earnings, and allocations) [16].
- External sources of funds: represented by deposits and their types, which are a major source for the bank, such as demand deposits (current accounts), investment accounts (joint investment account, savings account, notice account, and term account), and the dedicated investment account (good loan fund account).
- The bank uses the aforementioned resources to finance projects as a legitimate alternative to avoid usurious interest according to Islamic rulings and to provide many financing formulas, which have been divided into several categories, namely:
- Services based on participation in profit and loss, represented by speculation and sharecropping.
- Services based on the profit margin principle, represented by Islamic probability contract, exclude contract, and leases.
- Services are built without a profit margin and represented in the good loan.

1.2. Green economy

The green economy emerged because of responding to many crises, in order to achieve economic development through environmentally friendly projects and using new technology in the field of renewable and clean energy. It calls for the transformation of sectors into a green economy and managing unsustainable consumption patterns, which leads to the creation of new job opportunities that reduce poverty levels. In addition, it aims to reduce the intensity of energy use and resource consumption and production. Countries seek to develop a vision for issuing an economy based on a strategy of transition and transformation to a green economy, taking into account important axes. These are the energy crisis and the rise in fossil fuel prices, whose reserves are now threatened with depletion, and the economic crisis. It is important to understand the role of banks in employing green investments, specifically Islamic banks, as a means of economic recovery, as well as policies to mitigate the emission of harmful gases in the atmosphere. A great conviction of many countries is also necessary for developing new models for sustainable development based on changing consumer behavior and marketing models at the present time.

Smith considered economics the science of producing and multiplying wealth, while Ricardo noted that studying, the distribution of wealth among the classes of society, and the laws governing this distribution, is the main task of economics [17]. It was not concerned with studying economic activity (consumption, production, distribution, exchange) and the phenomena and relationships that arise from this activity. Accordingly, the definition we choose for Islamic economics is a science concerned with studying economic activity (consumption, production, distribution, exchange), and the phenomena and relationships that arise from this activity, in light of the provisions of the economic doctrine in Islam, and its value system [18].

The green economy is defined as "a clean energy economy that consists mainly of four sectors: renewable energy such as solar energy, wind energy, thermal energy and geothermal energy, green buildings, transportation, recycling and waste-to-energy [19]. The researchers define the green economy as "one of the new models of rapid economic development based on good knowledge of the environment, the most important of which is to address the interrelationship between human economies and the ecosystem".

There are many benefits to implementing the green economy as following:

1. It works to reduce poverty, especially in rural areas, which creates job opportunities and supports social equality [20]
2. Rationalizing water use and avoiding pollution
3. Addressing solid waste and recycling problems
4. Reducing energy price subsidies and the public transportation sector
5. Increasing the level of sustainable investments in the energy sector and raising energy efficiency [21].

In 2008, the United Nations called for the Global Green New Deal (GGND), where the proposed agreement recommended, as an appropriate political response to the economic crisis, a set of public investments, complementary policies, and price reforms aimed at starting the transition to a green economy. The report, which is the main product of the Green Economy Initiative, indicated that greening the economy and generating new jobs is a strategy for growth in general and is the ideal engine for eliminating poverty [22].

The aim is to reach a prosperous green economy and for the state to transform from a traditional and stagnant economy to a green economy that includes the entity of the state while preserves the environment. Many benefits are gained from a green economy, and this is through several matters, the most important of which are [23]:

- Caring for water resources, treating unclean water, rationalizing consumption, working to preserve water resources, and preventing pollution.
- The state develops the countryside, cares for agriculture, preserves forests, and uses them as important resources in the state, and improves the standard of living for rural residents.
- Subjecting all government policies to the green economy system, where they are democratic and work in market policy to encourage production.
- Not imposing restrictions on international trade and the green economy and addressing trade distortions such as taxes imposed on exports and imports.
- Supporting the public transportation sector and the education sector and encouraging innovations.
- Stimulating the participation of the private sector in the public sector in the advancement of green products.
- Addressing waste problems, working to treat them by the state, and remanufacturing them again until they become a resource instead of causing environmental pollution problems [24].

There is a set of procedures and mechanisms for transitioning to a green economy, the most important of which are as follows:

- Reviewing and reconsidering economic policies to achieve a transition to sustainable patterns of consumption, production, and investment [25].

- Preparing a comprehensive strategy for transitioning to a green economy with the participation of the private sector and civil society organizations and achieving clear goals and measurable indicators [26].
- Focusing on developing rural areas with the aim of achieving sustainable development goals, the most prominent of which is achieving balanced development between cities and villages and creating job opportunities in those areas [27].
- Establishing partnerships with the private sector and the local community to mobilize investments and direct them to green sectors, support green initiatives, and encourage national competencies [28].
- Developing current economic and administrative mechanisms and procedures to be consistent with the implementation of priority programs such as rationalizing water use, transitioning to clean energy, increasing the efficiency of energy sources, sustainable transportation, green buildings, and combating desertification [29].

Some Products related to the green economy such as:

- Renewable energy: The increase in energy supply through renewable sources reduces the risks of high and unstable fossil fuel prices and mitigates the effects of climate change, as the current energy system is based on fossil fuels. The current system is considered one of the biggest causes of climate change and is responsible for increasing the percentage of carbon emissions and greenhouse gases. Thus, renewable energy is a major economic opportunity.
- Green buildings: The transition to a green economy focuses on green architecture, which is represented by the use of environmentally friendly materials and conserves water in limited quantities, thus reducing the consumption of electrical energy despite the increased demand for it and reducing the percentage of emissions that change the climate. The green transformation of the construction sector is an important economic and social issue, as it creates new jobs and industries. Construction will have a far-reaching impact that encourages the transition to achieve sustainability and significant economic growth [30].
- Sustainable transportation: Sustainable transportation provides the basic needs of individuals and communities in a safe manner without causing any harm to health or the ecosystem. It is considered the least polluting to water or soil, and the least noisy, and does not negatively affect the climate, because transportation means depend on renewable energy sources and cars and public transportation operate partially on electricity [31].
- Sustainable water management: The essential and fundamental element of development, as ecosystems play a major role in preserving water quantitatively and qualitatively, and water management is linked to providing drinking water, irrigation, and health. The solutions come in changing the institutional structure of water management and calling for investing public and private capital directly in water supply networks, which will provide low-skilled job opportunities. The green economy will be based on collecting rainwater and reusing it, desalinating seawater, and generating energy from water, in return for preserving the water reserve [32].
- Waste management: It is the recycling of waste to produce products of lower quality than the original product, such as recycling paper, plastic, metal waste, recycling biological waste, and treating toxic waste. Green waste management creates jobs and provides unique investment opportunities for recycling and producing organic fertilizer and generating energy, and benefiting from agricultural waste within the agricultural production system and converting it into fertilizers, feed and food for animals or into clean energy, and improving the economic situation and raising the health and social level [33].
- Employment management: The transition to an environmentally sustainable green economy helps in the emergence of green jobs, as they are one of the newly emerging types of jobs that play the greatest vital role in the green economy in establishments (such as Islamic banks and commercial banks) and societies.

1.3. Sustainable development

The World Commission on Environment and Development (WCED) of the United Nations in 1987 defined sustainable development as “the type of development that responds to the needs of the present without threatening the ability of future generations to meet their own needs” [34]. Islamic banks in Jordan have proven their ability to meet the needs of customers and their efficiency in achieving economic development or sustainable development and optimal use of economic resources by developing sectors in a balanced manner and their effectiveness in providing social services. Activities such as good loans and managing associations, through Islamic banks, achieve the requirements of the green economy through sustainable development represented in the economic, social, environmental and technological dimensions from the point of view of customers [35].

The ethical social responsibility of the Islamic banking industry comes from achieving the goal for which the bank was established, such as providing banking services and banking financing under the umbrella of Islamic laws and provisions. Islamic banks seek to raise the standard of living to eliminate poverty and achieve social justice, not to achieve profit, in addition to keeping pace with developments in the financial market and finding innovative solutions to the problems suffered by Islamic countries. It has become necessary to include the green economy when formulating their strategies to achieve sustainable development, but it faces many problems in financing that require us to search for radical solutions that are in line with the principles of Islamic law and the desire of investors to feel reassured when investing their money in green projects [36].

Many studies have examined the subject of sustainable development from several aspects and its impact on different areas. Regarding sustainable development, Abdullah clarifies the relationship between the green economy and sustainable development, as the green economy is considered a path to sustainable development, and the latter can only be achieved through the mechanisms of implementing the green economy. The study recommended the contribution of the green economy to achieving sustainable growth, unlike the traditional economy, and correcting the negative impact of left by climate change [37].

Al-Kabsi formulates a knowledge and intellectual base through the vocabulary of the Islamic economy, through which many paths towards the green economy, green banking, and sustainable development were stimulated, rationalized, and developed in the Islamic community among individuals, countries, and peoples. The research problems that this research answers are related to the global trend towards adopting the vocabulary and concepts of the green economy and sustainable development in contemporary economies. The study recommended that the Islamic economy pay attention to the concepts of the green economy through its interest in the environment and its resources and preventing the corruption of the environment in its various forms. Natural resources have value in the Islamic community, according to the concept of human stewardship on earth, which regulates the Muslim's use of available resources according to the provisions of God Almighty, such as balance, moderation, and not being extravagant in consumption and production. Resources have an economic message, and that the cultivation of the earth is with goodness and truth and for the benefit of humanity. The existence of a legislative and implementation framework that achieves the foundations and rules and their application, in a way that ensures sustainability and stability, and achieves the greatest degree of self-control to preserve and protect the concepts of the green economy [38].

Al-Shammari aims to demonstrate the role of the green economy in achieving sustainable development, which many international experiences have been able to achieve, in light of the goals set by the United Nations Environment Program which are to increase economic growth, create more job opportunities, reduce the problem of unemployment and poverty and preserve the ecosystem. The study recommended that economic growth is real growth if it is achieved through economic policies that preserve the ecosystem and ensure the achievement of sustainable economic development. Otherwise, it is considered relative economic growth regardless of its rates due to its consequences such as pollution, desertification, drought, and the destruction of biological ecological diversity, or other factors that negatively affect the well-being of society, present and

future, and the ecosystem. The green economy focuses on the real productive economy and is considered complementary to sustainable development [39].

Khalidiya measures the extent of the banking sector's contribution to directing customer savings to bank credit for economic activity sectors in the United Arab Emirates and the Arab Republic of Egypt. They also explore ways to increase this contribution and to measure the means of supporting the banking sector to move towards the green economy by innovating more advanced means that lead to directing customer savings (the banking sector suffers from their accumulation). According to the UN report, the orientation towards the green economy as one of the most important means that lead to achieving sustainable development by directing all aspects of economic activity can achieve savings estimated by the report at $2.4 billion annually in Egypt and providing 8 million job opportunities annually as a result of this. The study recommended that it may be useful in improving the state of the national economy as a whole by proposing some relatively modern solutions to increase the contribution of the banking sector in supporting the green economy; providing financial support for the group of targeted investments and converting them from the current economy to the green economy [40].

Al-Rifai and Farhat shed light on the extent of climate change in Bangladesh and the role of green banks in combating its effects, clarifying the banking models and policies in the country until the end of 2015 and showing the banking policies that provide green banking products. The study reached multiple results, the most important of which is that the majority of customers of banks and financial institutions have great knowledge of the green economy but are not aware of the importance of green banking products. In addition to the challenges facing banks in their transition to green banking and the lack of a regulatory framework for the problem of customer default. The study recommended presenting a proposed model for green banks consisting of three groups: banks, customers, and stakeholders [41].

Hair et al. find ways to implement the green economy in Egypt in order to achieve sustainable development, encourage investment, and reduce the gap between the rich and the poor in order to secure a decent life. It is also important to compare with countries similar to Egypt in terms of circumstances and social status to benefit from their experiences in sustainable development and to clarify the best ways that help achieve sustainable development using the green economy. The study concluded that the Arab Republic of Egypt is able to reach high rates of electricity and energy generation by relying on renewable sources such as solar energy. The study showed the capabilities to reach that electricity can be generated using the solar cell system, which enables it to reach sustainable development in 2030 due to the many large projects that work to implement the green system, and that foreign investment has a major and direct role in the field of renewable energy in many countries that have used sustainable development [42]. Based on the study questions and objectives, the study hypotheses are as follows:

H0: There is no statistically significant effect of the green economy on sustainable development in its dimensions (environmental development, social development, and economic development) in Jordanian Islamic banks.

From this hypothesis, the following sub-hypotheses emerge:

H01: There is no statistically significant effect of the green economy on environmental development in Jordanian Islamic banks.
H02: There is no statistically significant effect of the green economy on social development in Jordanian Islamic banks.
H03: There is no statistically significant effect of the green economy on economic development in Jordanian Islamic banks.

2. Research method

The study community consisted of Jordanian Islamic banks, which are 4 banks. Due to the small size of the community, the study sample consisted of the same community. The researcher decided to distribute 160

questionnaires to these banks, with 40 questionnaires in each bank. The distribution process was done electronically using Google documents and in cooperation with the main departments in Islamic banks.

The researcher was able to retrieve 93.1% of the questionnaires distributed electronically, with 149 questionnaires, all of which were valid for applying statistical analysis.

The researcher relied on secondary and primary sources as main sources to collect the necessary data to achieve the study objectives and answer its questions. The secondary sources were represented by theoretical, scientific, and literary references that addressed the topics of green economy and sustainable development in a comprehensive scientific manner. These references helped the researchers to view the latest scientific and literary developments related to the study topics, in addition to analyzing the results reached by previous research, which contributed to building the theoretical framework for the current study and developing its research tool.

The primary sources were a questionnaire that was specifically designed to suit the study topics and to benefit from the information extracted from secondary sources. The questionnaire aimed to collect the opinions of the study community members on the study axes and analyze them. To determine the degree of agreement with the questionnaire, the questionnaire consisted of 5 degrees of agreement that were determined according to the five-point Likert scale, which are: strongly agree = 5, agree = 4, somewhat agree = 3, disagree = 2, and strongly disagree = 1. The level of importance was also classified into 3 levels that were determined according to the arithmetic averages of the five-point Likert scale (Table 1).

Table 1. Relative importance level and corresponding arithmetic mean limits

Relative importance level	Low	Middle	High
Arithmetic mean limits	-1 < 2.33	2.33 < 3.66	3.66 – 5.00

2.1. Data analysis

The data analysis phase was conducted using the Statistical Package for the Social Sciences (SPSS) to explore the relationship between the green economy and sustainable development in Jordanian Islamic banks. The analysis involved several key stages: testing the reliability of the study instrument, and describing the variables.

To ensure the internal consistency of the questionnaire items, Cronbach's alpha reliability coefficient was calculated for each variable. The results showed that all variables had alpha values above 0.70, indicating high reliability. The green economy variable had the highest alpha (0.955), followed by sustainable development (0.949), social development (0.936), economic development (0.912), and environmental development (0.866). These results confirmed that the study tool was suitable for further statistical analysis.

Descriptive statistics were used to determine the extent of interest in the green economy and sustainable development among Jordanian Islamic banks. The results revealed high mean scores for all key variables. The green economy variable had a mean of 4.014 (SD = 0.702), indicating high importance. Among the sustainable development dimensions, environmental development scored the highest (M = 4.021, SD = 0.785), followed by economic development (M = 3.991, SD = 0.745), and social development (M = 3.974, SD = 0.741). Overall, sustainable development scored a mean of 3.995 (SD = 0.778), reflecting high interest.

3. Results and discussion

The study used reliability test as a tool to measure the degree of coherence and consistency between the answers to its paragraphs. Cronbach's alpha coefficient is one of the tests used in this field, with values ranging between 0 and 1. The higher the values of the coefficients are over 0.70, the higher the degree of reliability in the study tool, and thus the validity of its use in statistical analysis. The following table shows the values of Cronbach's alpha coefficients to measure the reliability of the study tool. All values of Cronbach's alpha coefficients

exceeded the value of 0.70, as these values ranged between 0.866 and 0.955, which indicates a high degree of stability in the study tool (Table 2).

Table 2. Cronbach's alpha coefficient values for the study tool

No.	Variable	Number of paragraphs	Alpha value
1	Green economy	10	0.955
2	Environmental development	5	0.866
3	Economic development	5	0.912
4	Social development	5	0.936
5	Sustainable development	15	0.949

The description of the study variables aims to identify the extent of interest of Jordanian Islamic banks in both the green economy and sustainable development by finding the arithmetic averages and standard deviations of these variables and their dimensions and determining their level of relative importance.

The sample members agreed on the existence of a high interest in the green economy, with an arithmetic mean of 4.014 and a standard deviation of 0.702. The sample members also agreed on the existence of a high interest in sustainable development, with an arithmetic mean of 3.995 and a standard deviation of 0.778. All dimensions of sustainable development appeared with high relative importance, with environmental development coming in first place with an arithmetic mean of 4.021 and a standard deviation of 0.785, while economic development came in second place with an arithmetic mean of 3.991 and a standard deviation of 0.745, while social development came in last place with an arithmetic mean of 3.974 and a standard deviation of 0.741 (Table 3).

Table 3. Description of study variables

No.	Variable	Arithmetic mean	Standard deviation	Rank	Relative importance
1	Green economy	4.014	0.702	-	High
2	Environmental development	4.021	0.785	1	High
3	Economic development	3.991	0.745	2	High
4	Social development	3.974	0.741	3	High
5	sustainable development	3.995	0.778	-	High

To test the major hypothesis of the study which is formulated to identify the potential impact of the green economy on sustainable development and to identify the potential impact of the green economy on environmental development, economic development, and social development., from which three sub-hypotheses were derived, and they were subjected to simple linear regression analysis.

The main hypothesis of the study:

H01: There is no statistically significant effect at a significance level ($0.05 \geq \alpha$) of the green economy on sustainable development in its dimensions (environmental development, social development, and economic development) in Jordanian Islamic banks.

A strong relationship between the green economy and sustainable development, as the correlation coefficient value reached 0.881=R, and the table shows that the green economy contributed to explaining 77.4% of the difference in sustainable development, as the coefficient of determination value reached 0.774=R2. The table shows a significant impact of the green economy on sustainable development, as the F value reached 298.952 with a significance level of less than 0.05 (SigF=0.000). The table also shows a direct relationship between the green economy and sustainable development, as the coefficient value reached B=0.885, and it also shows an impact of the green economy on sustainable development, as the T value reached 15.259 with a significance level of less than 0.05 (SigT=0.000).

As a result of the above, it is clear that there is a statistically significant effect at a significance level (0.05≥α) of the green economy on sustainable development in its dimensions (environmental development, social development, and economic development) in Jordanian Islamic banks (Table 4).

Table 4. Testing the impact of the green economy on sustainable development

Independent variable	Non-standard coefficients		Standard coefficients		
	B	Standard error	β	T	Sig. T
Regression constant	0.131	0.225	-	0.583	0.630
Green economy	0.885	0.058	0.881	15.259	0.000
R			0.881		
R^2			0.776		
F			298.952		
Sig. F			0.000		

Dependent variable: sustainable development

The sub-hypotheses of the study aimed to identify the potential impact of the green economy on the dimensions of sustainable development, represented in environmental development, economic development, and social development. After testing sub hypothesis, the results were as follows:

H01: "There is no statistically significant impact at a significance level (α≤0.05) of the green economy on environmental development in Jordanian Islamic banks."

A strong relationship between the green economy and environmental development, as the correlation coefficient value reached 0.899=R, and the table shows that the green economy contributed to explaining 80.8% of the difference in environmental development, as the coefficient of determination value reached 0.808=R2. The table shows a significant effect of the green economy on environmental development, as the F value reached 328.484 and a significance level of less than 0.05 (SigF=0.000). The table also shows a direct relationship between the green economy and environmental development, as the coefficient value reached B=0.925, and it also shows an effect of the green economy on environmental development, as the T value reached 17.788 and a significance level of less than 0.05 (SigT=0.000). As a result of the above, it is clear that there is a statistically significant effect at a significance level (α≤0.05) of the green economy on environmental development in Jordanian Islamic banks (Table 5).

Table 5. Testing the impact of the green economy on environmental development

Independent variable	Non-standard coefficients		Standard coefficients		
	B	Standard error	β	T	Sig. T
Regression constant	0.135	0.249	-	0.542	0.544
Green economy	0.925	0.052	0.912	17.788	0.000
R			0.899		
R^2			0.808		
F			328.484		
Sig. F			0.000		

Dependent variable: Environmental development

H02: "There is no statistically significant impact at a significance level (α≤0.05) of the green economy on economic development in Jordanian Islamic banks."

A strong relationship between the green economy and economic development, as the value of the correlation coefficient reached 0.813=R, and the table shows that the green economy contributed to explaining 66.1% of the difference in economic development, as the value of the coefficient of determination reached 0.661=R2. The table shows a significant impact of the green economy on economic development, as the value of F reached

224.214 and a significance level of less than 0.05 (SigF=0.000). The table also shows a direct relationship between the green economy and economic development, as the value of the coefficient reached B=0.835, and it also shows an impact of the green economy on economic development, as the value of T reached 12.651 and a significance level of less than 0.05 (SigT=0.000). As a result of the above, the following is clear: “There is a statistically significant effect at a significance level (α≤0.05) of the green economy on economic development in Jordanian Islamic banks” (Table 6).

Table 6. Testing the impact of the green economy on economic development

Independent variable	Non-standard coefficients		Standard coefficients		
	B	**Standard error**	**β**	**T**	**Sig. T**
Regression constant	0.605	0.250	-	2.420	0.022
Green economy	0.835	0.066	0.831	12.651	0.000
R			0.813		
R^2			0.661		
F			224.214		
Sig. F			0.000		

Dependent variable: economic development

H03: "There is no statistically significant impact at a significance level (α≤0.05) of the green economy on social development in Jordanian Islamic banks."

A strong relationship between the green economy and social development, as the correlation coefficient value reached 0.791=R, and the table shows that the green economy contributed to explaining 62.6% of the difference in social development, as the coefficient of determination value reached (0.626=R2). The table shows a significant impact of the green economy on social development, as the F value reached 165.541 with a significance level of less than 0.05 (SigF=0.000). The table also shows a direct relationship between the green economy and social development, as the coefficient value reached B=0.794, and it also shows an impact of the green economy on social development, as the T value reached 11.851 with a significance level of less than 0.05 (SigT=0.000). As a result of the above, the following is clear: “There is a statistically significant effect at a significance level (α≤0.05) of the green economy on social development in Jordanian Islamic banks" (Table 7).

Table 7. Testing the impact of the green economy on social development

Independent variable	Non-standard coefficients		Standard coefficients		
	B	Standard error	β	T	Sig. T
Regression constant	0.551	0.241	-	2.120	0.020
Green economy	0.794	0.067	0.789	11.851	0.000
R			0.791		
R^2			0.626		
F			165.541		
Sig. F			0.000		

Dependent variable: social development

The findings highlight the significant role of the green economy—especially within Jordanian Islamic banks—in supporting sustainable development through its positive impact on economic growth, environmental protection, social equity, and the effective use of Islamic financing mechanisms, all within a supportive legislative framework, as follows:

1. The transition to a green economy supports growth, income, and job creation.
2. The green economy focuses on the real productive economy and is complementary to sustainable development.

3. The existence of a relationship between the green economy and sustainable development, and there is a strong interconnected relationship in their performance towards sustainable development and achieving continuous economic growth.
4. The existence of a significant impact of the green economy on sustainable development in its dimensions (environmental development, social development, and economic development) in Jordanian Islamic banks.
5. There is a statistically significant impact of the green economy on environmental development in Jordanian Islamic banks.
6. There is a statistically significant impact of the green economy on economic development in Jordanian Islamic banks.
7. There is a statistically significant impact of the green economy on social development in Jordanian Islamic banks.
8. The existence of a legislative and applied space that enables the realization of these rules and foundations into executive mechanisms ensures the perception of stability and sustainability and provides a great deal of self-control to protect the concepts of the green economy.
9. The Islamic economy is distinguished by its consideration and inclusiveness of the beneficiaries of natural and economic resources from those in need and current and future generations.
10. The diversity of Islamic financing mechanisms for the green economy does not determine a mechanism more appropriate than others without studying the economic conditions prevailing in each country.
11. Islamic formulas contribute through the economic dimension to rationalizing financial resources and directing them in the best possible way.

4. Conclusions

Many conclusions were reached based on the results and recommendations of the research that Islamic banking institutions, when following the green economy strategy, will achieve the institution's strategy drawn up by the management. Ensuring consistency at all levels has, in turn, supported the sustainability of their banking operations, aligning them with practices and procedures that uphold the principles and regulations of Islamic law. In light of the results, many recommendations were reached:

1. Developing comprehensive strategies for transitioning to a green economy that are shared across all sectors and programs.
2. Adhering to Sharia and ethical controls in all Islamic financing operations in order to reduce economic and environmental risks.
3. Promoting the goals of the green economy for investors and the government in order to finance green projects.
4. Directing Islamic financing towards investing in areas that benefit society and the environment and what it entails in serving all members of society.
5. How do Islamic banks in Jordan meet the requirements of the economic dimension of sustainable development from the point of view of their customers?
6. Islamic banks in Jordan are fulfilling the economic dimension of sustainable development by striving to ensure equitable access to resources and products for all members of society. They offer diverse financing options and a range of banking services that contribute positively to economic growth.

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.

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Author contribution

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