

Implementation of E-Business in Realizing Green Banking in Sustainable Islamic Banking: A Literature Study

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Keywords:	ABSTRACT
E-Business; Green Banking; Islamic Banking; Sustainability	Digital transformation in the banking industry has driven the implementation of e-business as a primary strategy in realizing green banking, especially in Islamic banking based on the principles of sustainability and fairness. Digitalization through internet banking, mobile banking, and electronic payment systems enables operational efficiency, reduced use of physical resources, and reduced carbon footprint. In addition to increasing financial inclusion, e-business also strengthens transparency and transaction security. However, its implementation faces various challenges, such as digital infrastructure readiness, data security risks, and adaptation to Islamic regulations. Therefore, a comprehensive strategy and policy support are needed to ensure that this transformation is in accordance with Islamic principles and supports sustainability goals. The success of e-business integration in green banking in Islamic banking is highly dependent on technological readiness, supportive regulations, and awareness and active participation from various stakeholders. With proper implementation, Islamic banking can not only increase its competitiveness in the digital era, but also contribute to a more inclusive, efficient, and environmentally friendly financial system. Therefore, further research is needed on the most effective policies and business models to ensure that digitalization in Islamic banking is in line with the principles of green banking and long-term sustainability.
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infrastructure readiness, data security risks, and adaptation to Islamic regulations. Therefore, a comprehensive strategy and policy support are needed to ensure that this transformation is in accordance with Islamic principles and supports sustainability goals. The success of e-business integration in green banking in Islamic banking is highly dependent on technological readiness, supportive regulations, and awareness and active participation from various stakeholders. With proper implementation, Islamic banking can not only increase its competitiveness in the digital era, but also contribute to a more inclusive, efficient, and environmentally friendly financial system. Therefore, further research is needed on the most effective policies and business models to ensure that digitalization in Islamic banking is in line with the principles of green banking and long-term sustainability.

INTRODUCTION

Today all activities are inseparable from the name of internet and online technology. The Internet has changed people's behavior in meeting economic demands. And now businesses have also used the internet to facilitate these business activities or what is familiarly called E-Business. Starting from the business of selling products to selling services has also been using the online system. E Business becomes a strategy for business people to introduce and distribute their products or services to their consumers. Online business began to be widely done after the Corona Virus pandemic hit, government policies that require all activities to be done from home, from work, school to shopping were done from home, this is what made business people start switching their business to online. But many companies or business actors who have already used the online system for their business (Cindi et al., 2022). E-business itself is a technology to develop business both internally such as HR, administration and finance, and external processes such as sales, provision of goods and services and consumer relations.

In today's fast-paced e-business world, there are four stages of evolution. There are four main aspects that can be used as a basis in the implementation of e-business, namely: (1) channel Enhancement; (2) Value - Chain Integration; (3)Industrial Transformation; and (4) convergence as stated by (Cindi et al., 2022).

The concept of e-business was first introduced by IBM in 1996 in the context of marketing, where the company defined it as a fundamental change in key business processes through the utilization of the internet. Today, the implementation of e-business by various companies is based on the fact that this technology can significantly simplify business processes and increase the speed of response to customers. In general, a well-structured e-business strategy can prevent companies from wasting resources, strengthen system integration, and enlarge available business opportunities. The implementation of an e-business system, which is seen as a form of innovation, is highly dependent on how a company assesses and accepts technological advances (Wijoyo et al., 2020).

E-business has the main objective to improve the competitiveness of an organization or company by disseminating innovative information and communication technologies

throughout the organizational structure, including through relationships with business partners and customers. More than just the use of technology to automate business processes, e-business must also be able to realize fundamental changes in the work system by applying technology that can transform existing business models (Wibowo, 2014). On a broader scale, the concept of sustainable development and environmental conservation efforts are now recognized globally as a necessity in order to maintain the survival of the planet from the various negative impacts caused by human activities. Currently, various global initiatives have been implemented to reduce the adverse effects of unsustainable development, such as the phenomenon of global warming and climate change. One of the main strategies in this initiative is to reduce dependence on fossil fuels by applying the 3R principles, namely reducing (Reduce), Reuse, and recycle (Recycle).

On the other hand, increasing levels of pollution and environmental pollution have posed an increasingly serious threat. The global health crisis is also increasingly worrying, with data from the World Health Organization (WHO) noting that around 7 million people die each year from adverse environmental factors. Awareness of the importance of better environmental management has now become a common concern, with the slogan "back to nature" being increasingly echoed in various sectors, including the banking industry in Indonesia. In recent years, the concept of "green banking" has been increasingly discussed as part of sustainable finance initiatives (Galyani & Henny, 2022). Banks as well as various financial institutions have great potential to play an active role in this global effort, contributing to creating a more livable and sustainable world for future generations.

METHOD

This study uses qualitative research methods that are described descriptively. This method is based on the philosophy of postpositivism, which places more emphasis on aspects of deep understanding of phenomena. This method aims to understand in depth to a problem that is not for generalization, so this method is suitable for this study. The data in the study came from documents and data analysis. The analysis is done inductively which is presented in the form of exposure related to system creation, content curation, replication, and future development.

RESULT AND DISCUSSION

Implementation of E-Business in the form of Digital Banking in Islamic Banking

Since the online banking service was conducted by Stanford Federal Credit in 1994, online banking spread rapidly throughout the world. Internet banking was developed and implemented in Indonesia in 1998 by BI and mobile banking was implemented by BCA in 2001, Islamic mobile banking was implemented by BCA Syariah in 2014 and followed by other banks. Transactions using digital banking are increasingly massive after the growth of Start-up Business in 2010 and continue to grow until now. Technological developments, changes in consumer behavior, and business trendscompetitiveness are driving factors for banks to continue to innovate, especially Islamic banks that have two rules in conducting their business (Islamic law and government regulations) (A'yun & Putri, 2022).

In the following decade, in the 2010s and beyond digital banking took advantage of it to be one of the key points that allowed banks to survive the second economic crisis. This phase encourages banks to invest more in digital projects, creating a second wave of digitalization in Indonesia. Some banks are starting to use various social media platforms to convey, introduce and socialize various product features that are beneficial to their customers such as: opening customer complaint service channels; and encourage interactive two-way communication, so that customers feel more connected and respected. This strategy eliminates the paradigm that banking services can only be accessed through conventional branches. The demands of banking digitalization are also amplified by the shift in business ownership, which is currently dominated by millennials, who prefer the convenience of online and mobile transactions (A'yun & Putri, 2022).

Along with the development of technology, digital banking began to color every customer's financial activity. The ease provided makes customers feel benefited. But unfortunately, there are still some Indonesian people who enjoy this digital banking service. Based on data from world financial institutions, only 54% of Indonesians are touched by banking services. Millennials now think that ATMs, mobile banking, internet banking, SMS banking and others are commonplace, or mainstream things. Now people think, how people want to open an account, save, and apply for credit or loans and other banking services, without having to present themselves physically or come directly to the bank concerned. This is what is captured as a potential and opportunity by the bank, to increase the interest of prospective customers by providing services that customers want so loyal to the bank (Maulidya & Afifah, 2021).

In Indonesia, the number of internet users increased significantly from 42 million in 2010 to 143.26 million in 2018. Thus, the increase has more than tripled in the last seven years. Economic activities carried out by Indonesians through internet facilities are as follows: knowing prices (45.14 percent), assistance at work (41.04 percent), product and service information (37.82 percent), online purchases (32.19 percent), such as finding a job (26.19 percent), banking transactions (17.04 percent), and online trading (16.83 percent). Internet user information and its purpose. Mobile banking is one form of digital banking, E-business banking services provided by banks to their customers to be able to use banking services without space and time limits and based on mobile and internet technology that provides convenience in conducting various banking transactions without having to come directly to the bank because it can be accessed at any time (Sugiarto et al., 2024).

Implementation of Green Banking in Sharia banking

The quality of Education according to Permendiknas No. 63 of 2009 is the level of intelligence of the nation's life that can be achieved from the implementation of the National Education System. Quality education is education that is able to make the process of maturation of the quality of students is developed by freeing students from ignorance, incompetence, helplessness, untruth, dishonesty, and from bad morals and faith. Sustainable banking as an effort of financial institutions for sustainability has direct or indirect implications on banking performance. Several studies report that the implementation of sustainable issues in banking business practices will affect the

performance of banks, both financially and non-financially (Cindi et al., 2022). As a key stakeholder in the industrial sector, banks face difficulties in managing credit and liability risks, asset quality and rates of return over the long term. Therefore, to solve the problem, it is important for banks to be proactive and play their role in going green. Banks must include ecological and environmental aspects in their lending principles. This will force the industry to take mandatory measures for Environmental Management, the implementation of appropriate technologies and management systems (Mahendra et al., 2024). Green Banking has a wider scope, not only green or related to environmental development, but also a mockup of Community Empowerment towards a better social life.

Green Banking is defined as banking in conducting its business based on the principles of sustainable development. Especially in credit and financing is the existence of ecological balance (environment). (Rachman & Saudi, 2021) in practical managerial aspects, the adoption of green banking in the banking business needs to be fully supported by strengthening the use of information technology to carry out electronic banking transactions, securing and storing bank confidential documents and other banking transaction documents to support paperless policies as a consequence of green banking practices in carrying out bank operations.

The concept of green banking has 2 (two) dimensions, namely lending and operating activities. Lending activities carried out by banks to entrepreneurs taking into account the impact on the environment. (Karyani & Obrien, 2020) the concept of green banking was developed from the Triple Bottom Line, which refers to three main aspects: Profit, People, and Planet. But has a different understanding of the concept and application of the Triple Bottom Line theory, because it reduces accountability to God, which motivates him to complete the Triple Bottom Line by adding two accountability to the Hadith of the Prophet Muhammad and Allah SWT (God) to create a Pentuple Bottom Line with five aspects: Profit, People, Planet, Prophet, God) (Mahendra et al., 2024).

Human welfare, and the socio-cultural development of the Green Finance community have proven their mettle in the field of trade and finance. No one knew that so soon such a concept would spread in a much faster way. The goal of sustainable economic growth seems to be coming true. By the end of the decade this concept had become a boon to the financial system. This modern innovative instrument has a brighter future conditioned if policymakers work on the gaps and obstacles in the way of its success. With the passage of time as awareness increases, we need to accept the fate that not only the public but the private sector must also contribute to saving the planet through monetary tools such as Green Finance.

Recommendations and policies need to be strictly implemented. A timely analysis of risks and opportunities is necessary. The legal basis related to the practice of Green Banking in Indonesia, among others, is the regulation of Bank Indonesia Regulation Number 14/15/PBI/2012 assessment of Environmental Management by the debtor in terms of credit disbursement. Regulation of the Financial Services Authority (POJK) number 51/POJK.03/2017 on Sustainable Finance, on this regulation banks are encouraged to provide sufficient sources of funding for Sustainable Development and climate change-related funding (Winarto & Nurhidayah, 2021; Katili & Kadir, 2024).

Initially, Bank Indonesia has required all national banks to pay attention to the sustainability of the environment in developing its business. Where Bank Indonesia (BI) which initially issued a pro-environmental policy which is guided by law No. 32 of 2009 on Environmental Protection and management and then continued the seriousness of the government through the OJK which appointed seven banks, one of which is BRI Syariah as one of the pilot projects first mover on sustainable development in Indonesia or first mover on sustainable banking.” This is the first step in the financial services industry to contribute in supporting sustainable development (sustainable development goals) and the real step is the issuance of regulations from OJK Regulation No. 51 / POJK.03/2017 on the implementation of Sustainable Finance for Financial Services Institutions, issuers and public companies (Widyaningrum, 2020). Based on POJK Policy No. 51 / POJK.03/2017 on sustainable finance requires all financial services institutions, including banks to apply the principles of sustainable finance. With regard to the bank's efforts to uncover issues related to green banking, the bank is actually trying to gain legitimacy from regulators and the public.

Some banks have used green banking as a powerful management tool because through the green banking report the company will get a green banking performance rating that will help improve the company's reputation (Handajani et al., 2019). It further stated that green banking includes the bank's concern for the environment and other positive activities to preserve the environment and prevent environmental pollution. This principle accommodates protecting and improving the environment as well as conserving; protecting current and future natural resources, biodiversity, wetlands and Wildlife. Thus sustainable development has become a constitutional obligation in Indonesia and sustainable banking is the forefront of sustainable development through sustainable business (Cindi et al., 2022). The implementation of the green banking pattern is an extension of the company's legal responsibility to anticipate global environmental issues. So it must be imperative (mamaksa), not just philanthropy as it is now seolaholah for charity for the environment.

CONCLUSION AND RECOMMENDATION

The overall content of this scientific paper is in accordance with the data and facts, but should need to be developed further for the discussion to be more interesting. Given the importance of Indonesian citizens to know this, it is hoped that the next research can make more detailed and clear scientific work. If there are shortcomings and mistakes in writing I apologize because humans are the wrong place and wrong. Criticism and suggestions are needed so that there are improvements for future authors. From the literature study that has been done, it can be concluded that the implementation of e-business in Islamic banking plays an important role in realizing the concept of sustainable green banking. The use of digital technologies such as internet banking, mobile banking, and electronic payment systems not only improves operational efficiency and transaction transparency, but also reduces the use of physical resources such as paper and reduces carbon emissions. This shows that the digitalization of banking services is in line with the principle of sustainability, both in terms of the environment and business efficiency. In addition, the implementation of e-business also supports financial inclusion, enabling Islamic banking services to reach

more people, including those who previously did not have access to conventional banking services.

However, the successful implementation of e-business in green banking is inseparable from various challenges, such as digital infrastructure readiness, data security, and adaptation to Sharia regulations. In addition, there are still obstacles in terms of digital literacy and the readiness of the banking industry to apply technology optimally. Therefore, collaboration between the government, regulators, and Islamic banking is needed to create supportive policies and appropriate strategies in integrating e-business with the concept of green banking. Thus, Islamic banking can not only increase its competitiveness in the digital era, but also contribute to creating a more environmentally friendly, efficient and sustainable financial system.

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