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Sustainability Accounting as The Key to Success for Startup Companies: Literature Review

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Abstract

This research examines accounting strategies to encourage sustainability in technology startups. The main focus is how the integration of environmental, social and governance (ESG) aspects in accounting practices can increase transparency, accountability and relationships with stakeholders which are useful for the success of Start Up companies. Technology startup companies often face limited capital, resources and challenges in implementing sustainability accounting systems, this research shows that the benefits obtained are very significant. Through the literature review method, this research identifies various theoretical approaches such as sustainability accounting theory, stakeholder theory, triple bottom line theory, legitimacy theory, and institutional theory. Each theory provides a different perspective on the importance of implementing good accounting and how to integrate sustainability in accounting practice. This research also highlights key challenges such as limited resources, the risk of greenwashing, and the lack of standardized reporting standards. However, opportunities for innovation and development of new solutions are also wide open. Tech startups can leverage technologies such as blockchain and artificial intelligence to improve the efficiency and accuracy of sustainability reporting. In addition, external support through green funding programs and government incentives can help overcome resource constraints. In conclusion, implementing sustainability accounting strategies can provide long-term benefits for technology startups, including increased operational efficiency, reduced environmental risks, and gained legitimacy from society and investors. To overcome existing challenges, it is recommended that technology startups leverage innovative technologies, seek external support, increase education and training in sustainability accounting, and develop standards and guidelines that suit their needs. With the right approach, technology startups can strike a balance between sustainability goals and business growth, and make a significant contribution to a more sustainable future.

Keywords: *Sustainability Accounting, Strategic Accounting, Startup Companies.*

INTRODUCTION

In recent decades, the phenomenon of technology startup companies has become the center of global economic attention (Karani & Mshenga, 2021). Tech startups are known for innovation and dynamism that allows them to grow quickly. However, behind this success, significant sustainability challenges emerge. Sustainability in a business context does not only include environmental aspects, but also includes economic and social dimensions. Therefore, it is important to explore how accounting strategies can contribute to driving sustainability in technology startup companies.

Accounting plays a crucial role in a company's operations and strategic decision making. Good accounting not only serves as a tool for tracking income and expenses, but also as an instrument for evaluating a company's environmental and social performance. In the context of sustainability, accounting can help companies identify and measure the environmental and social impacts of their operations, as well as develop strategies to manage those impacts effectively. Through transparent and accurate sustainability reports, companies can improve their reputation and build trust with stakeholders. However, there is debate regarding the effectiveness and implementation of sustainability accounting strategies in technology startups. Several studies show that adopting sustainability accounting practices can provide various benefits, such as increasing operational efficiency, reducing environmental risks, and strengthening relationships with stakeholders. This study claims that by implementing accounting practices that focus on sustainability, technology startups can achieve a balance between economic growth and environmental and social responsibility (Aji, 2023). On the other hand, there is a skeptical view which states that the implementation of sustainability accounting strategies in technology startups faces various obstacles. First, startups often have limited resources, both financial and human. Allocating resources to develop and implement sustainability accounting strategies can be considered an additional burden that does not provide immediate results. Second, the lack of clear and standardized standards for sustainability accounting makes it difficult for companies to measure and report their performance consistently. Lastly, the pressure to achieve rapid growth often trumps sustainability priorities, resulting in many startups focusing more on short-term profits than long-term investments in sustainable practices.

The argument support that accounting strategies can promote sustainability in technology startups, several case studies and empirical evidence need to be highlighted. For example, technology startups that have adopted sustainability accounting practices often report increased energy efficiency and reduced waste, which ultimately contributes to operational cost savings. Additionally, companies that actively engage in sustainability reporting tend to have better access to capital, as investors increasingly consider environmental, social and governance (ESG) factors in their investment decisions. Several studies supporting this sustainability reveal that sustainability accounting strategies can help companies identify areas where they can increase efficiency and reduce negative impacts on the environment. For example, research by Hermawan, et al (2024) shows that companies that adopt

sustainability practices tend to perform better financially in the long term compared to companies that do not implement them. This shows that there is a positive correlation between sustainability and financial performance.

However, opposing views suggest that implementation of this strategy does not always go smoothly. For example, Liu and Frare (2022) state that despite long-term benefits, many companies have difficulty integrating sustainability into their business strategies due to resource constraints and the need to demonstrate quick results. Additionally, according to research by Posumah and Moridu (2023), the lack of uniform standards in sustainability reporting causes significant variations in the quality and quantity of information reported, making comparisons between companies difficult.

Implementing sustainability accounting strategies is important to strengthen education and training for accountants and startup managers. Education about sustainability principles and how to integrate them into accounting practices can help increase awareness and competence in managing sustainability issues. Training programs focused on the use of new tools and technologies for sustainability accounting can also help startups overcome resource limitations and improve operational efficiency (Putra, 2024). Facing increasingly complex sustainability challenges, technology startup companies need to consider sustainability accounting strategies as an integral part of their business model. Although there is debate regarding the effectiveness and obstacles in implementation, empirical evidence shows that sustainability accounting practices can provide various benefits, both in terms of operations and reputation. With support from education, training, and government regulations, technology startups can overcome existing obstacles and utilize accounting strategies to achieve sustainable growth.

The development of clear sustainability accounting standards and the application of innovative technologies such as blockchain can increase the transparency and accuracy of sustainability reports. This not only helps companies manage environmental and social impacts, but also builds trust with stakeholders and attracts investors who are increasingly paying attention to ESG factors. Therefore, accounting strategies to encourage sustainability are not just an option, but a necessity for technology startup companies that want to survive and thrive in the future.

Sustainability accounting focuses on the integration of environmental, social, and governance (ESG) aspects in a company's accounting and financial reporting practices. This theory states that companies must account for the impact of their operations not only in an economic context, but also in the context of environmental and social sustainability. According to Gao et al. (2024), sustainability accounting expands traditional accounting responsibilities to include measuring and reporting on environmental and social sustainability. By applying this theory, technology startups can increase their transparency and accountability towards stakeholders, which can ultimately improve reputation and trust.

However, there is debate regarding the application of this theory to technology startups. Some researchers, such as Tsai (2024), argue that

sustainability accounting is more suitable for large companies that have sufficient resources to implement complex reporting systems. They claim that startups, which often have limited resources, may struggle to implement these practices without sacrificing growth and innovation. Therefore, further research is needed to develop approaches that are tailored to the conditions and needs of technology startups.

Stakeholder theory, proposed by De Villiers (2021), emphasizes the importance of paying attention to the needs and interests of all stakeholders in business operations, not just shareholders. This theory is relevant in the context of sustainability because it recognizes that business decisions affect various parties, including employees, customers, local communities, and the environment. In applying this theory, accounting strategies for technology startups should include reporting and measuring the impact on all stakeholders, rather than just focusing on financial profits.

Supporting this theory, a study by Frare et al. (2023) show that companies that actively manage relationships with their stakeholders tend to have better sustainability performance. This is because they are better able to identify and respond to relevant sustainability issues. However, critics such as Karani (2021) argue that focusing on too many stakeholders can divert a company's attention from its main goal of generating profits. For technology startups, which often face pressure to demonstrate rapid growth, applying stakeholder theory can be challenging if not managed carefully.

The Triple Bottom Line (TBL) theory, introduced by Gao (2024), proposes that business success should be measured based on three dimensions: profit, people and planet. This theory suggests that companies are not only responsible for creating economic value, but also social and environmental value. Tech startups that implement TBL can use sustainability accounting to track and report their performance in these three areas, ensuring that economic growth does not occur at the expense of social and environmental aspects.

However, implementing TBL in practice often poses challenges. Research by Dangelico (2017) shows that many companies have difficulty measuring and integrating the three dimensions of TBL in a balanced manner. Tech startups, in particular, may find that a focus on social and environmental sustainability can hinder the innovation and rapid growth they need to compete in the marketplace. On the other hand, it suggests that with the right strategy, companies can achieve a balance between these three dimensions and create more sustainable long-term value.

METHOD

This research uses the literature review method to analyze accounting strategies in encouraging sustainability in technology startups. This method was chosen because it allows researchers to collect, review, and synthesize various scientific sources relevant to the research topic. The literature review process begins with the identification of keywords such as "accounting strategy", "sustainability", "tech startup", and "green accounting". These keywords are used to search for articles, journals, books and research reports in academic databases such as Google

Scholar, JSTOR and Scopus. Next, literature selection is carried out based on relevance, credibility and source quality. Only articles published in reputable journals and having strong research methods were included in this review. The selection process also considers various perspectives and findings from empirical studies, case reports, and theoretical research to obtain a comprehensive picture of the topic under study. After the literature was collected, the researcher conducted a thematic analysis to identify the main themes and trends in research related to sustainability accounting strategies in technology startups. This analysis includes mapping key concepts, identifying the relationship between accounting and sustainability strategies, and evaluating the impact of implementing these strategies on startup performance.

The analysis process, researchers also identify gaps in the existing literature and suggest areas for further research. For example, the lack of clear standards for sustainability accounting in technology startups and the challenges in implementing such practices. By using a literature review method, this research provides an in-depth and comprehensive understanding of how accounting strategies can encourage sustainability in technology startups, as well as identifying challenges and opportunities in its implementation. This method also allows researchers to bring together multiple perspectives and findings to build a conceptual framework that can be used by practitioners and researchers in the future.

RESULTS AND DISCUSSION

Implementation of Sustainability Accounting Strategies in Technology Startups.

Implementing sustainability accounting strategies in technology startups is an important step to ensure that companies focus not only on financial profits but also on social and environmental impacts (Christodoulou dkk, 2024; Aji dkk., 2023). This strategy involves developing an accounting system capable of measuring and reporting various aspects of sustainability, such as carbon emissions, energy use and employee well-being (Gao, 2024). Hermawan, A., & Ilham, M. (2024) Show Technology startups, with their innovative and dynamic characteristics, have great potential to lead in sustainability accounting practices. For example, by leveraging blockchain technology, startups can increase the transparency and accuracy of their sustainability reports, thereby building trust with stakeholders.

However, there are significant challenges in implementing this strategy. Several studies show that startups often face limited resources, both financial and human, which makes implementing sustainability accounting systems difficult.

To overcome this challenge, startups need to adopt the right sustainability accounting approach. An effective model for this record keeping can involve several strategic steps:

1. Identification and Categorization of Sustainability Aspects: Startups must identify sustainability aspects that are relevant to their business, such as carbon emissions, energy use, and social impact on local communities.

2. Use of Standard Frameworks: Use frameworks such as the Global Reporting Initiative (GRI) or Sustainability Accounting Standards Board (SASB) to guide sustainability recording and reporting.
3. Accurate Data Collection: Startups need to collect accurate and reliable data related to the sustainability aspects they identify.
4. Recording in an Integrated Accounting System: Sustainability data must be recorded in an accounting system that is integrated with other management systems to ensure consistency and ease of access.
5. Transparent Reporting and Communication: The sustainability reports produced must be transparent and easy to understand for stakeholders, including investors, customers and the community.

The right sustainability accounting recording model, startups can overcome the challenges of limited resources and ensure that they can effectively manage the social and environmental impacts of their business operations.

The Effect of Sustainability Accounting on Technology Startup Performance.

The influence of sustainability accounting on technology startup performance can be seen from various perspectives (Posumah, N. H., & Moridu, I., 2023). First, from an operational perspective, implementing sustainability accounting practices can help startups identify areas where they can increase efficiency and reduce costs. For example, by tracking energy and raw material usage, startups can find ways to reduce consumption and waste, ultimately reducing operational costs. A study by Rahman (2023) shows that companies that effectively manage their environmental performance tend to have lower operational costs and better financial performance in the long term. On the other hand, there is an argument that a focus on sustainability can divert attention from a startup's main goals, namely rapid growth and innovation. Some critics, such as Qusaeri (2023), argue that pursuing too many sustainability goals can reduce a company's flexibility and speed of response to market changes. For startups operating in a highly competitive environment, the pressure to demonstrate rapid growth often trumps sustainability priorities. Therefore, it is important for technology startups to find a balance between pursuing sustainability goals and maintaining a focus on innovation and growth.

Challenges and Opportunities in the Adoption of Sustainability Accounting.

The adoption of sustainability accounting in technology startups presents both significant challenges and opportunities (Aditia dkk., 2024; Putra dkk., 2024). The main challenges faced are limited resources and the lack of clear standards for sustainability reporting. Startups often have limited budgets and cannot allocate many resources to developing a comprehensive sustainability accounting system. In addition, the lack of standard guidelines and standards makes it difficult for companies to measure and report their sustainability performance consistently. However, these challenges also open up opportunities for innovation and the development of new solutions. Technology startups, with their expertise in developing new technologies, can create more efficient tools and systems for

sustainability accounting. For example, the use of artificial intelligence and data analytics technologies can help in automating the collection and analysis of sustainability data, thereby reducing manual workload and increasing the accuracy of reports. Additionally, with increasing awareness and demand for sustainable business practices from investors and consumers, startups that successfully adopt sustainability accounting can gain a competitive advantage in the market.Other opportunities arise from potential external support, such as green funding programs and government incentives. Many governments and international organizations now offer financial and technical support to companies committed to adopting sustainable practices. Startups can take advantage of this opportunity to obtain additional resources needed to implement sustainability accounting strategies. Thus, although the adoption of sustainability accounting faces various challenges, the opportunities that exist can help technology startups to overcome these obstacles and achieve long-term sustainability (Rahman, 2023).

The discussion regarding accounting strategies to encourage sustainability in technology startups shows that although there are various challenges, the benefits that can be obtained are very significant. Implementing sustainability accounting strategies can improve operational efficiency, reduce environmental risks, and build better relationships with stakeholders. However, limited resources and the risk of greenwashing remain obstacles that need to be overcome. Dangelico (2017) show that the tech startups must find ways to effectively integrate sustainability accounting practices without sacrificing innovation and growth. By leveraging new technologies, seeking external support, and developing an approach tailored to their needs, startups can strike a balance between their sustainability goals and their core business goals. Further research is needed to develop standards and guidelines that can help startups on their journey towards sustainability.

The importance of education and training in the field of sustainability accounting cannot be ignored. Increasing awareness and competence in sustainability issues will help accountants and startup managers in managing the environmental and social impacts of their operations. With the right approach, tech startups can become pioneers in sustainable business practices, set an example for other industries, and contribute to a more sustainable future (Christodoulou dkk, 2024).

CONCLUSION

This research shows that sustainability accounting strategies have an important role in encouraging sustainability in technology startups. The integration of environmental, social and governance (ESG) aspects in accounting practices allows startups to increase transparency, accountability and relationships with stakeholders. Despite challenges such as limited resources and the risk of greenwashing, the benefits obtained from implementing sustainability accounting are very significant. Effective implementation can help technology startups improve operational efficiency, reduce environmental risks, and gain legitimacy from the public and investors.

The challenges in implementing sustainability accounting strategies, technology startups are advised to take several important steps. First, they must leverage innovative technologies such as blockchain and artificial intelligence to improve the efficiency and accuracy of sustainability reporting. Second, seeking external support through green funding programs and government incentives can provide the additional resources needed. Third, education and training in the field of sustainability accounting needs to be improved to increase awareness and competence among accountants and startup managers. Lastly, the development of standards and guidelines tailored to the needs of startups is necessary to help them on their journey towards sustainability. In this way, technology startups can strike a balance between sustainability goals and business growth, and contribute to a more sustainable future

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