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Sustainable Business Models: Integrating Profitability with Planetary Responsibility

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Abstract

Traditional business models have become increasingly difficult to achieve long-term ecological benefits and sustainability in the context of the scaling up of climate change, resource depletion, environmental degradation and social pressures, with a strong emphasis on short-term monetary gains. These business models provide an alternative that is profitable and at the same time places responsibility on the use of resources, environmental responsibility and value creation for the stakeholders. This paper explores the possibility of using planetary responsibility as an element of business models without compromising on financial sustainability and competitiveness of the organization. It discusses the implications of sustainable value creation, circular economy principles, responsible innovation, resource efficiency, environmental, social and governance (ESG) and engaging with the stakeholders in the shift from traditional business models. The study highlights the importance of rethinking value propositions, value creation processes, value chain, revenues and performance measurement systems, in order to include economic and ecological aspects. It also looks at the possibility of technological innovation, organizational capacities and strategies to support the shift toward business models that generate economic value over the long term, while reducing environmental footprint. Recent research has demonstrated that circular and sustainable practices can have positive impacts on operational efficiency, new revenue streams, resilience and financial performance, but at the same time, the implementation may be expensive, complex and have uncertain benefits. Therefore, the paper suggests that planetary responsibility must not only be considered a CSR project but also as part of the design of the business model. Business models can contribute to the competitiveness and sustainability of a business in the long term and can have a positive impact on the environment that are compatible with the wider environmental objectives. Businesses seeking to find a sweet spot between business profitability and ecological limits of economic activity have conceptual implications from the research.

Keywords: Sustainable Business Models, Profitability, Planetary Responsibility, Circular Economy, ESG, Sustainable Value Creation, Resource Efficiency, Business Model Innovation

1. Introduction

Climate change, resource depletion, environmental degradation, biodiversity loss, and social inequality are no longer just facts of life for the world's business, but have become so pervasive as to have called into question some of the fundamentals of business growth. The key measures for business performance are traditionally financial: revenue, profitability, market share, shareholder returns, etc. But the pressure of environment and social factors has pushed companies to re-think the creation and delivery of value and the capture of it. In this context, sustainable business models have become an important tool to consider the three aspects of sustainability—economic, environmental, and social—in the same model. A sustainable business model does not view sustainability as an activity that is carried out as part of the corporate responsibility, but as a component of the organizational logic of the business and as part of the value creation process.

The sustainable business model is a variation of the traditional business model that takes into account the needs of more stakeholders: customers, employees, suppliers, communities, governments, investors and nature. Geissdoerfer et al. define sustainable business model innovation as a key instrument that can enable organisations to achieve financial and sustainable performance. These models place emphasis on creating value in the long-term, not just in the short-term. This shift is particularly significant in the context of the increasing role environmental considerations

play in organizational competitiveness, efficiency, reputation, risk management, innovation and stakeholder management.

In business, the concept of sustainability is also linked to the triple bottom line, which is concerned with the economic, environmental and social aspects. Profitability remains a key part of organisational sustainability, but is considered in conjunction with impacts on human and planetary populations.

Sustainable business models aim to reconcile the traditional view that there is an inherent trade-off between sustainability and profitability. Instead, organizations can transform products, processes, supply chains, resource use, and customer interactions so that they can generate economic and environmental value. New studies focus on the possibilities of balancing these aspects of the business model innovation in organizations.

The circular economy is one of the main ways towards this integration. Circular business models focus on the efficiency of resources, re-use, repair, refurbishment, remanufacturing, recycling and extension of product-lives, which contrasts with linear business models that mostly focus on extracting, producing, consuming and discarding. The OECD classifies the following business model practices as relevant to the emergence of more resource efficient economic activity: circular supply, resource recovery, extension of products' life, sharing, and product-service systems. Circularity can then offer businesses the opportunities to decrease reliance on materials, limit waste, generate new revenue streams, increase the resilience of resources and mitigate environmental issues.

However, there are some challenges to sustainability in business model integration. A sustainable transformation can involve significant upfront investment, technological capacity, restructuring, new collaborations and production and consumption systems. Cost savings from sustainability investments can also take longer to be realized than from traditional investments. Recent research on the round business shifts shows the challenges of making an initial investment, the uncertainty about returns and having access to suitable financing. Therefore, organizations have to establish business models in which environmental goals are linked to economically sustainable value propositions instead of sustainability being seen as a standalone cost centre.

Stakeholder value creation is another key factor to consider. Sustainable business models appreciate that there is no value creation in the company just for the shareholders or the customers. Suppliers, employees, communities, regulators, investors and ecological systems can all shape and be impacted by business activities. Research on sustainable business models has recently focused on the importance of measuring the value created by these models from the different stakeholders' point of view and not by relying on a single metric of economic, social or environmental value. This macro-level view has the power to reimagine the way organizations interact along the value chain, and to find new ways to work together to achieve sustainability.

Innovation of the business model is then an important strategic tool to respond to planetary responsibility. Some of the ways in which organisations can innovate are by designing sustainable products, consuming renewable energy, using Responsible Sourcing, implementing low carbon operations, sustainable logistics, sharing platforms, through product-as-a-service models, waste-to-value initiatives and through regenerative approaches. Such changes can impact the core value-generating and value-capturing processes of firms. Studies on sustainable business model innovation suggest that implementation results of business model transformation are different depending on the organization and the industry, but that it can also be a powerful tool for enhancing sustainability and financial results.

Corporate Sustainability, with a focus on planetary responsibility, is now playing a bigger part in the debate. But for businesses to continue to operate, they need to have the support of natural resources, ecosystems, energy systems, and environmental stability. Thus, sustainability issues are becoming more and more linked to organizational long-term resilience. In terms of planetary responsibility, businesses are urged to consider not only their profitability, but also their resource use, pollution, and waste generation, as well as their supply chain. The vision requires organizations to look at what they can do beyond incremental environment changes; to consider the fundamental redesign of products and services from design to delivery to use to recovery and re-use.

Technological development is also influencing the evolution of sustainable business models. Digital technologies, data analytics, artificial intelligence, Internet of Things applications, blockchain and advanced manufacturing can be used to help monitor resources, predict demand, increase transparency in supply chains, reduce predictive maintenance, optimise energy use and implement circular resource management. But technology alone is not a key to sustainability. It can be moderated by the adoption of technology in organizational approaches, business models, governance framework and stakeholder management. More recently, in the literature, the notion of sustainable-business-models has expanded to include, besides organisational skills and working in an ecosystem-wide manner, also aspects of technological innovation.

The background of this study is then that sustainable business models are being looked upon by the researchers as a strategic tool to incorporate profitability with planetary responsibility. It is about the interface between value creation and environmental stewardship, and it takes into account the interests of stakeholders, and the resilience of the organization over time. It aims to understand the possibilities of re-designing the value proposition, resource configuration, operational processes and value-capture mechanisms of enterprise to simultaneously meet both financial goals and environmental challenges. The research is part of a larger debate on the need for organisations to

shift from growth-oriented business systems to systems that can create sustainable economic value whilst lowering ecological strain; placing the two together in a common framework.

In general, sustainable business models are a positive shift from adding sustainability to the organization's responsibilities to seeing it as an integral part of business design. The question of whether organisations should be more sustainable, is not the only one to be addressed, but how they can be made more sustainable by integrating sustainability into their systems of creating, delivering and capturing value. There is a need for innovation, collaboration, circular thinking, responsible use of resources, the right technology and viable economic models to overcome this challenge. In recent studies, it has been also pointed out that balancing people, planet and profit is a continuous and context-specific process, not a decision to be made by the organisation once and for all.

2. Background of the study

Environmental degradation, climate change, diminishing resources, biodiversity loss and rising demands for responsible business practices are a growing challenge in the modern business world. Determining the value businesses generate is no longer only about the economic returns they make; environmental and social effects are becoming another aspect of organizational performance and long-term legitimacy. The Sustainable Development Goals (SDG) are not being met globally and more urgent action is needed to tackle climate change, resource scarcity, inequalities and other interlinked issues in order to achieve them, according to the latest UN evaluation of progress towards the SDG. The developments have inspired organizations to challenge their traditional value creation strategies, and to examine business models that have the potential of enabling economic sustainability and environmental stewardship.

Traditionally, business models focus primarily on providing value to customers, revenue generation, cost control and profitability. While these are still key goals for organizations to survive, short-term financial targets can lead to substantial external impacts on the environment and social impacts. As the concept of planetary boundaries has gained more traction, there is a growing need to re-think value, growth, efficiency and success in the business world. Modern studies suggest that sustainable business models do not only focus on the economic value creation but must also take the environment and the society into consideration in the design and operation of business activities.

The idea of a sustainable business model (SBM) has therefore become a relevant field of study in business and management. A sustainable business model involves embedding sustainability aspects into the value proposition, value creation and value delivery of the business, and value capture processes. The sustainability approach does not consider sustainability as an independent corporate social responsibility (CSR) function, but as an integral part of the business model. Stakeholder relationships, collaboration, organizational boundaries, and value-chain arrangements are highlighted as being of specific significance for the development of stakeholders' relations, as highlighted in recent literature.

One of the biggest challenges in this transition is the apparent conflict between profitability and planetary responsibility. There are often choices to be made regarding investments in renewable fuels and resources, sustainable materials, cleaner fuels and technologies, reduction of waste, responsible sourcing, circular production systems and sustainable supply chains. These investments can entail high upfront expenses and changes to the organization and their financial returns can take time to materialize. In the interim, business models that focus on sustainability can create opportunities for business efficiencies, innovation, differentiation, stakeholder engagement, resilience, and new revenue streams. The research done in the last few years about the existing business models has revealed that sustainability, growth, profitability, digital transformation and stakeholder engagement are not mutually exclusive goals, but are interwoven.

The circular economy is one way to put both economic and environmental objectives into action. The strategies for reducing resource use and avoiding waste in circular business models are re-use, repair, re-manufacture, recycle, prolong the life of the product, sharing and resource recovery. Research on circular start-ups indicates that circular economy may provide a competitive edge without being a cost of reduced profitability, but circular economy has its challenges regarding the organizational and market structure. Similarly, sustainable business models can be implemented outside of the organisation's boundaries, for example in the procurement, production, distribution, consumption and end-of-life processes of the value chain.

The idea of planetary responsibility is an elaboration on the concept of sustainability. It invites organisations to recognise that business exists in an ecological context and that there is a finite and limited ecological context to business.

Recent research on regenerative business strategies challenges the notion that companies should only aim to minimize negative environmental effects but should also implement strategies that can help to recover natural and social systems. The view of value creation for customers and shareholders, combined with the impact on ecosystems, communities, future generations and the sustainability of economic systems, challenges organisations to think more broadly about sustainability.

The involvement of stakeholders has also grown in importance in this change. Customers can expect to demand environmentally responsible products, employees can want organisations to share their values, investors can take environmental and social risks into account, regulators can set more environmental and social norms for organisations, and communities can expect organisations to reduce negative environmental impacts. Sustainable business models,

therefore, involve looking at a wider group of stakeholders in the process of creating and measuring value. Studies on sustainable business models emphasize the need for collaboration between stakeholders and the role of various actors within and beyond organizational and value-chain boundaries.

Another important aspect of the turn towards sustainable business models is innovation. Organizations can rethink products and services, adopt cleaner technologies, develop alternate revenue streams, utilize renewable resources, streamline supply chains, and utilize digital technologies to better utilize resources. Digital transformation can contribute to sustainability in a number of ways including better monitoring, data-driven decision making, resource optimisation, traceability and innovative customer solutions. So, more and more, research has been geared to the nexus of Sustainability, Business-model innovation, Technology and organizational competitiveness.

But this transition to a sustainable business model has its own set of challenges. Organizations can encounter obstacles such as financial challenges, technology issues, a lack of sustainability knowledge, organizational inertia, fluctuating consumer demand, supply chain issues, regulatory differences, and difficulty measuring the impacts on the environment. Financial objectives and sustainable investments can also be in tension. Furthermore, organisations need to have effective ways of measuring how effective their sustainability programmes are at bringing about actual environmental and social benefit – more than just for their public relations. Organisations also need to be able to demonstrate the tangible environmental and social impacts of sustainability programmes, not just lip service.

The academic and practical value of studying sustainable business models to link business and planetary responsibility is high in this context. This is a discussion of not only the sustainability of business, but embedding sustainability into the core of the business model that it is built upon. In recent times, scholarship has focused on the need for business models that have economic, environmental and social goals, and can also accommodate the fact of implementation and of being competitive.

The present study aims at exploring the connection between business profitability and planetary responsibility and how sustainability can be integrated to the very DNA of the business models without losing the economic sustainability of the business organization. The study lays the groundwork for learning about sustainable value creation, sustainable business practices, resource efficiency, stakeholder engagement and sustainable innovation and long-term organizational resilience. This is quite relevant in this context where businesses are increasingly expected to take an active role in sustainable development, while simultaneously being profitable and competitive.

3. Justification

Reflecting on traditional business models has gradually been gaining traction in recent years with economic growth and the pressure to tackle environmental challenges, in terms of value creation and business performance. Environmental issues have been seen as peripheral issues with conventional business models emphasising revenues, costs, market expansion and return to shareholders. However, environmental scarcity, climate change, wastefulness, biodiversity loss, and ecological degradation are forcing organisations to rethink the value creation, delivery and capture. Incorporating environmental and social parameters, and economic goals, sustainable business models are one of the key tools to help overcome this challenge. As far as research goes, there are opportunities to create sustainable and circular business models that are not only cost and compliance oriented but also profit and competitiveness oriented and efficient in resources and long term value creation.

The rationale to study sustainable business models stems in particular from the question of whether sustainability and profitability can go together. As companies aim to keep their financial wellbeing in check, sustainability – and the reduction of environmental impacts – is a challenge that is now facing them. Investments in renewable energy, cleaner technologies, sustainable materials, circular production processes, waste reduction, and responsible supply chains and operations may have high start-up costs. This investment can also provide opportunities for reduced resource costs, new revenue streams, increased operational efficiency, deeper relationships with stakeholders and increased resilience. The research literature on the circular business transition has recently highlighted that enterprises often find themselves in a conundrum, with a conflict between the environmental goals and the current financial demands, thus highlighting the need to also include financial feasibility in their sustainability approach.

Another valid reason is the greater importance of circular economy principles in today's business models. Circular business models aim to minimize the use of resources and waste by reusing, repairing, refurbishing, remanufacturing, recycling, extending the product life and providing services instead of products. The arrangement of business models and supply chains is believed to be a key determinant in the implementation of the principles of circular economy in organizations. But the use of circular methods is not necessarily synonymous with sustainability. The way that environmental value propositions are embedded in the overall business architecture, revenue mechanisms, customer relationships, supply chains and operational processes of an organization needs to be taken into account. A study of sustainable business models can therefore be a tool to gain a more comprehensive view of how companies can embed environmental responsibility into their underlying economic rationale.

Moreover, the study is supported by the changing expectations of the stakeholders. Environmental responsibility is a growing factor in customer, employee, investor, regulatory, community, and other stakeholder assessment of

organizations. Companies are thus compelled to transcend the action of adopting individual environmental measures and embed sustainability in their decision-making processes. Business models that are sustainable offer a way of integrating environmental goals into business value propositions, resource plans, business processes, collaborations, and revenue streams. Sustainable consumption research has shown that designing a sustainable business model can have an impact on both the organization's practices and the behavior of consumers, for instance by stimulating resource-efficient consumption and minimization of environmental impacts.

Moreover, more empirical and conceptual insights are needed into the link between sustainability and business performance. Although the number of publications on sustainable and circular business models has grown over the last few years, there are still a number of gaps identified concerning performance measurement, implementation, organizational capabilities, the financial outcomes, stakeholder involvement, and contextual factors. A recent analysis of circular economy business-model research revealed that the research is multidimensional with themes on value creation, supply chains, resources, waste, re-use, managerial issues, performance and contextual conditions. Similarly, recent research has emphasized the importance of understanding the mechanisms by which sustainable business models have an impact on economic, environmental and social outcomes.

This topic is relevant since sustainability demands a long-term outlook and not just short term financial performance. Sustainable business models can enhance organisational resilience in a number of ways, including decreasing reliance on limited resources, fostering innovation, multiple revenue streams, and adapting to regulatory and market shifts. However, the commitments, investment, involvement of stakeholders, technological assistance and managerial decision-making are all important to the successful implementation. But the link between sustainability and profitability is not always seamless and requires how sustainability concepts are applied when designing and implementing the business model.

This study is also of managerial significance. Managers need practical solutions to identify sustainability efforts that can create value both for the environment and for the entity's survival. To make better informed decisions on more sustainable value creation, resource efficiency, innovation, customer value, operational performance and profitability, knowledge of the relationship between these elements can help organisations to create more resilient strategies. It can also enable decision-makers to assess sustainability investments that have costs beyond those in the short-term, based on longer-term economic and environmental impacts.

Last but not least, the study is motivated by the desire to shift the fragmented approach to understanding sustainability to an integrated approach for business. The concepts of sustainable development, circular economy, responsible consumption, green innovation and corporate environmental responsibility are studied individually. Sustainable business models offer a chance to link these aspects in a coherent organizational structure. Publications begin to focus more and more on the value of sustainability and affordability – not as separate but as integrated.

Thus, the research topic “Sustainable Business Models: Integrating Profitability with Planetary Responsibility” is relevant as it deals with an important current business problem: How companies can generate and generate economic value without exceeding planetary boundaries. The study can help to advance knowledge on the strategies, mechanisms, and organizational conditions that can facilitate combining the financial sustainability of enterprises with responsible stewardship of natural resources and ecological systems.

4. Objectives of the Study

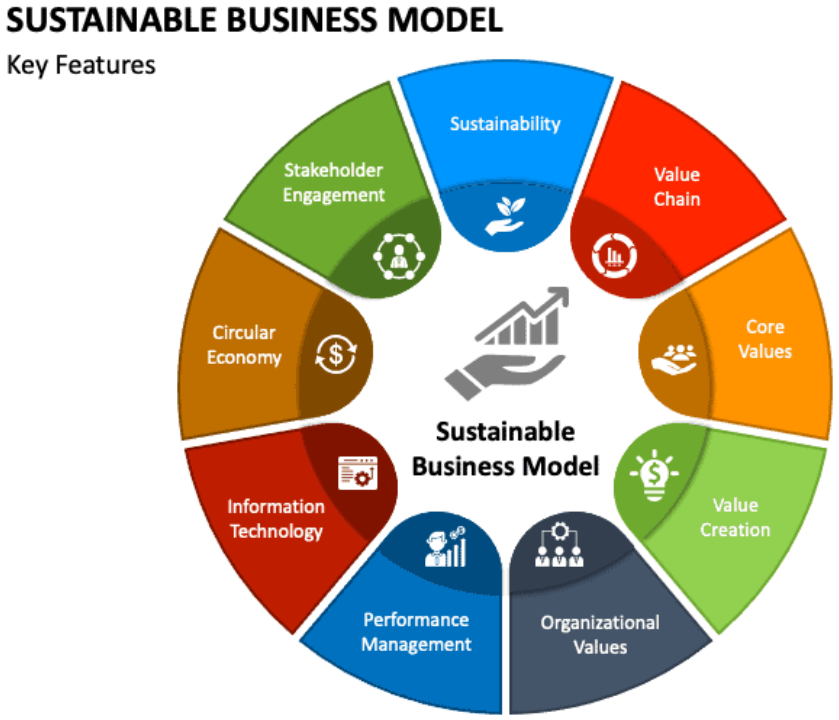
1. To examine the concept and key dimensions of sustainable business models and their relevance to contemporary business organizations.
2. To analyse how environmental sustainability practices can be integrated into core business strategies without compromising long-term profitability.
3. To assess the relationship between sustainable business practices and organizational financial performance.
4. To identify the major factors that influence the adoption of environmentally responsible and economically viable business models.
5. To evaluate the role of innovation, resource efficiency, circular economy practices, and responsible value creation in promoting sustainable business performance.

5. Literature Review

In the wake of increasingly costly environmental and social issues, the notion of sustainable business models has developed from the understanding that traditional business models, which focus mainly on profit and shareholder value, may not sufficiently deal with these problems. According to Stubbs and Cocklin (2008), sustainability should draw on the very logic of the business model, not be used as a “corporate project”. Their work helped to establish environmental and social issues as integral parts of organisational decision making. The view laid a foundation for looking at sustainability not as a “corporate responsibility” pursuit, but as an integral part of good business.

Boons and Lüdeke-Freund (2013) extended the concept of business models and sustainable value creation, and highlighted that sustainable business models need to change value propositions, value creation and delivery

mechanisms, and value capture. They pointed out the need for integrating environmental and social considerations with economic goals. It forces organisations to re-think the definition of value and how it can be captured, especially in situations where current revenue streams are able to deliver financial returns but environmental and/or social costs are being incurred.



Source: *https://imveloltd.co.uk/the-x-factor-of-sustainable-business-innovation/*

Bocken et al. (2014) created a collection of sustainable business model archetypes that offer tangible options to organizations for sustainability challenges. Their concepts encompassed material and energy efficiency, value of waste, substitute with renewables and natural processes, functionality instead of ownership and sufficiency. The authors noted that isolated eco-efficiency programs do not ensure systemic change needed for sustainability.

There has also been a great deal of attention paid to the linkages between sustainability and competitive advantage. Schaltegger et al. (2016) put forward that sustainability-oriented business models can support corporate sustainability and economic success if environmental and social value added is integrated in the business models' value creation logic. They have found that sustainability does not need to be a business obstacle, but rather one of the business opportunities to address social and environmental issues.

Evans et al. (2017) created a unified approach to the study of business model innovation for sustainability that combines the notions of business model innovation, sustainability innovation, stakeholder theory, networks, and product-service systems. They considered sustainable business models to be systems in which economic, environmental, and social value is generated, distributed, and harvested in a larger value chain. This is especially important for the current study as it moves beyond considerations of profitability of the organization to multiple values created simultaneously.

Geissdoerfer et al. (2018) conducted a literature review of sustainable business model innovation and found that business model innovation is one of the mechanisms that can enhance sustainability performance and competitive advantage. Their review also identified that many innovations in the way businesses operate are not successful, pointing to numerous hurdles in implementing sustainability in business models. The authors pointed out that further research is needed on the conditions for the successful implementation of sustainable business model innovations.

This has further reinforced the sustainable business model approach, which is known as the “circular economy”. According to Geissdoerfer et al. (2017), the circular economy approaches attempt to implement a closed loop production and consumption system, where linear models should be replaced with a system based on resource efficiency, reuse, repair, remanufacturing and recycling. Business-models can be circular, bringing new income streams and cutting resource use and impacts. This implies there is a potential to address profitability and environmental responsibility through integrated value-creation mechanisms.

Lüdeke-Freund et al. (2019) investigated the linkage between sustainable entrepreneurship, innovation and business models and suggested that business models can serve as mediators between sustainability-oriented innovation and the

creation of viable business cases. Their view highlights the need for the appropriate commercialization mechanisms for sustainability innovations to have a lasting organizational value.

Likewise, sustainable value creation is not just the financial value generated for the focal organization, but the sustainable value creation within multiple groups of stakeholders (Lüdeke-Freund et al., 2020). Hence, sustainable business models should be designed with the question of who benefits from the creation of value, what sort of value is created and how it is distributed. This stakeholder-oriented view reinforces the case for considering sustainable profitability as well as environmental and social outcomes.

Especially the role of stakeholders is significant as sustainability outcomes may transcend organisational boundaries. In a stakeholder theory perspective (Freeman et al., 2010), organizations create and maintain value based on relationships with various different groups of stakeholders, such as employees, customers, suppliers, communities and investors. This view on sustainable business models entails that profits need to be taken into account in addition to the interests and long-term health of the stakeholders that business activities impact.

Dyllick and Muff (2016) presented a new concept of moving away from the old business model of corporate sustainability to a new business model that generates value for both business and society. They said that positive actions are to be taken to take part in sustainable development rather than just reducing negative effects on it. In this context the distinction is important for the present study, as it requires businesses to not only mitigate the environmental impacts of their activities, but to adopt a broader perspective on their impact on sustainability, through their products, services and operations.

The framework of planetary responsibility has been supported by the planetary boundaries framework by Rockström et al. (2009). The framework highlighted key Earth-system processes which characterize a safe operating space for human society. The implication that economic activity is dependent on ecological systems makes it relevant to business research. As a result, sustainable business models must be based on limits to ecological systems, not on infinite inputs of natural resources and environmental capacity. Today, the PB approach is being adopted by business researchers, albeit with considerable theoretical and empirical shortcomings.

Whiteman et al. (2013) took the planetary boundaries framework into organisational research, suggesting that sustainability management should take the biophysical underpinnings of economic activity into account. Their research demonstrates that even if companies can improve their own efficiency, there are systemic and interdependent environmental issues that cannot be solved by the efforts of individual companies. This offers a theoretical framework to analyze sustainable business models as tools for achieving ecological sustainability

There has also been a large amount of research carried out on the link between corporate sustainability and financial performance. In their study, Eccles et al. (2014) showed that companies with strong sustainability practices often had different characteristics from companies with weaker sustainability practices when it came to governance and stakeholder engagement and long-term orientation. Their findings helped make the case that sustainability measures are not just compliance measures, but can be a part of an organization's strategy.

Friede et al. (2015) compiled a vast collection of empirical studies on environmental, social and governance factors and financial performance. Their review found that most research had indicated that there was a non-negative link between the ESG and financial performance. The results are not definitive proof that sustainability improves profitability, but do suggest that the notion that environmental and social considerations negatively impact upon financial results is incorrect.

The business of sustainability's strategic implications has also been explored with the notion of shared value. Porter and Kramer (2011) suggested that the economic value can be generated by businesses by responding to societal needs through products, services, value chains and local business ecosystems. The commonality of their common value perspective provides a conceptual bridge between profits and social responsibility, albeit the scope and difficulties of this view have been a subject of debate in later research.

Hahn et al. (2015) explored competing issues and compromises in corporate sustainability, and noted that choices about sustainability often include competing economic, environmental and social goals. Their work is relevant because it helps to raise awareness about the fact that sustainable integration is not always a straightforward “win-win” scenario. However, sustainable business models can instead involve balancing short-term profit and long-term environmental considerations.

Business model design is an emerging topic in the literature that is increasingly seen as a way of managing them. In their systematic review, which included 390 journal articles, Lüdeke-Freund et al. (2024) isolated 26 activity groups and 12 design themes related to business models for sustainability. Their results show the increasing sophistication in the field and reaffirm the notion that sustainability can be part of the very real activities of an organization, business-model configurations.

Moreover, Aagaard et al. (2021) conducted an umbrella review, which further confirms the fast growth of sustainable business model innovation research. The study looked through 57 systematic literature reviews and identified the main streams in the field of sustainability, circular economy, sharing economy, social business and other approaches.

In addition, the review suggests that there is not a single standard model of sustainable business models, but rather a wide variety of business models.

More recent studies have focussed on the necessity of considering sustainable business models from multiple aspects of value. In their study, Lüdeke-Freund et al. (2021) highlighted the need to rethink "normal" value creation and to find the 'actor, mechanism, and outcome' of sustainable value creation. It is especially important for organizations that want to balance financial returns and environmental and social responsibilities.

As a whole, the literature reflects that the focus has shifted from 'profit versus sustainability' to 'profit through sustainable value creation'. The current literature shows that sustainable business models can embed environmental and social goals into value propositions, systems of operation and stakeholder relationships and revenue streams. There are also significant barriers and trade-offs to implementation, as well as organizational challenges and measurement constraints in the literature. Geissdoerfer et al. (2018) explicitly pointed out a need to better understand why sustainable business model innovations fail or are successful.

6. Material and Methodology

The study is based on a systematic literature review and qualitative conceptual analysis to analyse the sustainable business models concerning the integration of profit and planetary responsibility. The methodology is suitable since the field of sustainable business model research has become broader and includes economic, environmental and social value creation, as well as the focus on business model innovation, circularity, resource efficiency, stakeholder engagement and digital technologies. Secondary data was gathered from peer-reviewed journal articles, academic books, institutional publications, sustainability reports and credible research databases with a particular focus on research papers on sustainable business models and corporate sustainability, the circular economy, green innovation, sustainable value creation, environmental performance and long-term business performance. The keywords used for the literature search included sustainable business models, business model innovation, corporate sustainability, profitability, planetary responsibility, circular economy, green innovation, sustainable value creation, and environmental performance. The studies were selected based on their conceptual relevance, academic rigor, methodology and their contribution to the understanding of the link between business performance and environment responsibility. This literature was subsequently systematically catalogued into thematic fields with the focus on the value creation of the economy, the environmental responsibility, the resource efficiency, the value for the stakeholders, the circular business model, the sustainable innovation, and the performance of the organization. Other reviews have also followed a structured approach of searching databases, screening, synthesizing qualitative findings and categorizing them thematically to analyse research on sustainable business models. The analysis is based on a comparison of traditional, profit-driven business models and sustainability-oriented business models, with the aim of identifying mechanisms that enable the environmental responsibility and financial value creation. Focusing special attention on sustainable business model archetypes, such as resource and energy efficiency, waste-to-value, renewable resources, functionality-based models, stewardship, sufficiency and solutions that generate value for society and the environment. The results are summarized conceptually to form a holistic view on how profitability and planetary responsibility can be achieved at the same time. We did not have to collect any primary data about humans subjects and the study is based entirely on published secondary sources, so no human subjects were recruited nor personal data was collected.

7. Results and Discussion

It seems that sustainable business models can lead to a worthwhile relationship between profitability and planetary responsibility if environmental issues are part of the business process and not understood as a CSR project. Based on the analysis, it is recommended that companies that embrace resource-efficient production, waste reduction, renewable energy, sustainable sourcing, eco-design and circular economy are more likely to mitigate resource-related costs and enhance operational efficiency. Empirical evidence in recent years confirms this relationship: the longitudinal study of listed companies around the world indicates that circular economy strategies had a positive correlation with profitability, operational efficiency and market valuation; whereas eco-design, take-back systems, recycling and waste reduction had an impact on efficiency.

The findings also show that there need not be a trade-off between environmental and financial performance. Those companies that adopt cleaner technologies, responsible resource use and sustainable product development can derive economic benefits from consuming fewer materials, disposal expenses being lower, improved energy efficiency and robustness to variations in the costs of resources. Manufacturing research evidence indicates that the practice of weeding out waste and pollution in the circular economy has potential to increase environmental, cost-reduction, financial, social and operational performance. Circulating practices that concern products and materials have also been linked to better environmental, financial and operational outcomes. The research also showed that sustainability can be economically significant if it is part of the value-creation and value delivery processes of the firm.

The analysis also shows that environmental performance should be considered as a major factor in achieving long-term profitability. New evidence from listed firms in China reveals that better environmental performance correlated with better profitability, and that green technological innovation, less financing constraint, and higher operating income are significant mechanisms. This suggests the potential for planetary responsibility to create positive indirect financial impacts by enhancing innovation capacity, efficiency, market credibility and resource access. The sustainable business model in this sense should not be limited with interpretive definitions as tools to minimize environmental impact, but as new tools for innovation and positioning.

The results of the study suggest, however, that the link between sustainability and profitability is not one-to-one for all organisations or dimensions of sustainability. A study by 49 companies in India's S&P BSE ESG 100 index between 2015 and 2022 revealed no statistically significant relationship between the overall level of sustainable business practices and profitability performance, while there was a positive association between the social dimension of sustainable business practices and return on assets, and a negative association between the governance dimension and return on assets. Likewise, the Indian manufacturing data for the 2019–2022 revealed that aggregate ESG commitment was related to better financial performance and environmental and social dimensions were found to have positive relationships with earnings. Such variations suggest that the financial impact of sustainability could vary by industry, the quality of implementation, the timing, organizational capacity, and specific sustainability actions taken.

One of the findings is the impact of circularity on balance of environmental goals with business performance. Product re-use, repair, recycling, resource recovery, and extended product life (EPL) can help turn waste streams into economic opportunities through circular business models. An analysis of 13,643 manufacturing companies revealed that the majority of the different circular economy practices had a positive impact on various aspects of corporate performance – with the impact varying depending on the circular principle and the measure of performance. Furthermore, empirical data from an Italian fashion sector case study showed that circular innovations related to resource recovery and reuse brought about significant operating-profitability advantages, highlighting the volume of direct financial benefits that can be achieved by considering the environment. The results then indicate that circularity can be considered as an effective lever for achieving environmental responsibility and value creation in the business world.

The findings also indicate that sustainable business models call for an organisation and strategic change, not single environmental efforts. Sustainability must be taken into account at all stages of product development, procurement, operations, supply-chain management, marketing, investment decisions and performance measurement. Results gathered from manufacturing research suggest sustainable product design, supply-chain management, and end-of-life management are all critical drivers of environmental performance, and that various mixes of capabilities for circular economy can yield varying environmental impacts. Thus, beyond a set of individual green practices, effective sustainability strategies depend on the development of organizational capabilities for coordinating green practices along the value-chain.

The findings confirm that achieving profitability and planetary responsibility is a possible and mutually complementary strategic goal, but it needs to be addressed in the design of the business model and over the long term. The financial benefits of sustainable practices can be different in each sector and they may not be immediately obvious, but cost savings, innovation, operational improvements, market opportunities and reputational benefits are possible. The evidence therefore confirms the need for a balanced approach, including both financial and non-financial measures such as profitability and resource efficiency, as well as emissions, waste reduction, innovations, value for shareholders and environmental impacts. The integrated perspective is taken as a sustainable business model, not just a commitment towards sustainability, but as a strategy to build sustainable economic and ecological value.

8. Limitations of the study

While interpreting the results of the study ‘Sustainable Business Models: Integrating Profitability with Planetary Responsibility', the following limitations should be taken into consideration. The analysis is dependent on information that is available, accurate, and comparable, as the way that organisations measure and report information on sustainability practices, environmental performance and financial results can vary significantly. The indicators used to measure sustainability are also industry-specific, geographical, size-specific and regulatory specific, which may reduce the generalizability of results. Furthermore, conclusions that are drawn at a specific moment in time may not always be equally valid in the future, due to the changing nature of technologies, consumer expectations, environmental regulations, market conditions, and stakeholder priorities. The study might also encounter challenges in establishing direct causal linkages between sustainability activities and profitability, since the impact on the finances of the companies is influenced by many internal and external factors. Also, inconsistencies in the corporate sustainability disclosure and the potential for selective disclosure may impact the accuracy of data available. Mainly,

the economic and ecological aspects of sustainability are addressed, and additional research on sustainability aspects that need to be explored in greater depth could include social aspects of sustainability, conflicts of stakeholders and long-term ecological consequences. Continuous research, cross-industry comparisons, primary data and standardization of sustainability and financial performance indicators are possible ways of addressing these limitations in future studies.

9. Future Scope

Creating new models that can simultaneously generate financial, environmental and social benefits is where the potential for sustainable business models lies. Future research could involve testing and evaluating the use of emerging technologies like artificial intelligence, blockchain, Internet of Things, and advanced data analytics to further optimize the use of resources, transparency in supply chains, carbon monitoring, waste reduction, and sustainable decision-making processes. More attention could be paid to the circular business models, emphasising the value and length of product life of reuse, repair, remanufacture and recycling. Comparative studies of different industries, countries and business sizes may help to better understand the impact of institutional environments, consumer expectations, regulatory frameworks and access to sustainable finance on the adoption of responsible business practices. Based on these indicators, there is a need to investigate further, ideally with more research, the sustainability investments and profitability relationship in the long-term. The effectiveness of environmental and social impact measurement and communication frameworks, such as the standardisation of sustainability indicators and proper accounting and reporting, could also be explored. Business models for creating economic value over the long-term and while operating within planetary boundaries will be essential in the face of increased climate risks, resource limitations and stakeholder expectations, and will require a multi-disciplinary approach that incorporates business, environmental science, economics, technology and social policy.

10. Conclusion

Business models that generate sustainable value reflect a paradigm shift in the way that organizations think and work towards generating long-term value. Profitability and planetary responsibly are linked, demonstrating the fact that economic efficiency and environmental responsibility go hand-in-hand. The ideas of resource efficiency, renewable energy, circular production, responsible sourcing, sustainable innovation and stakeholder-oriented practices can be incorporated into foundation strategies and can support businesses to improve their future competitiveness. This kind of thinking allows companies to lessen the impact on the environment and also discover new ways to become more cost effective, market unique, innovative, engaged and resilient. However, the effectiveness of sustainable business models is reliant on their integration in strategic decision-making processes, not as a sidecar company business model. Effective leadership commitment, governance, measurable sustainability targets, technological capacity, responsible investment and collaboration throughout the value chain are critical to mobilize sustainability principles to realize tangible business outcomes. In the meantime, companies must realize that the process of sustainable transformation is a challenge that involves a financial, technological, operational and institutional dimension, particularly for smaller companies, which have limited resources. Overall, sustainable business models provide a framework for designing and building a profitable business that benefits both the planet and the people. Adopting environmental considerations into the innovation, operations, marketing, financial and stakeholder management of an organization can help make an economy more resilient and responsible, and the organization maintain its capacity to generate sustainable economic value. Sustainability is therefore an integral component to responsible and sustainable business planning, and future business needs increasingly depend on the ability to be prosperous while not going over ecological boundaries.

References

1. Adams, R., Jeanrenaud, S., Bessant, J., Denyer, D., & Overy, P. (2016). Sustainability-oriented innovation: A systematic review. *International Journal of Management Reviews, 18*(2), 180–205. https://doi.org/10.1111/ijmr.12068
2. Bocken, N. M. P., & Geradts, T. H. J. (2020). Barriers and drivers to sustainable business model innovation: Organization design and dynamic capabilities. *Long Range Planning, 53*(4), 101950. https://doi.org/10.1016/j.lrp.2019.101950
3. Bocken, N. M. P., & Short, S. W. (2016). Towards a sufficiency-driven business model: Experiences and opportunities. *Environmental Innovation and Societal Transitions, 18*, 41–61. https://doi.org/10.1016/j.eist.2015.07.010
4. Bocken, N. M. P., & Short, S. W. (2021). Unsustainable business models—Recognising and resolving institutionalized social and environmental harm. *Journal of Cleaner Production, 312*, 127828. https://doi.org/10.1016/j.jclepro.2021.127828

5. Bocken, N. M. P., Boons, F., & Baldassarre, B. (2019). Sustainable business model experimentation by understanding ecologies of business models. *Journal of Cleaner Production, 208*, 1498–1512. https://doi.org/10.1016/j.jclepro.2018.10.159
6. Bocken, N. M. P., Schuit, C. S. C., & Kraaijenhagen, C. (2018). Experimenting with a circular business model: Lessons from eight cases. *Environmental Innovation and Societal Transitions, 28*, 79–95. https://doi.org/10.1016/j.eist.2018.02.001
7. Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2013). A value mapping tool for sustainable business modelling. *Corporate Governance, 13*(5), 482–497. https://doi.org/10.1108/CG-06-2013-0078
8. Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production, 65*, 42–56. https://doi.org/10.1016/j.jclepro.2013.11.039
9. Bohnsack, R., Pinkse, J., & Kolk, A. (2014). Business models for sustainable technologies: Exploring business model evolution in the case of electric vehicles. *Research Policy, 43*(2), 284–300. https://doi.org/10.1016/j.respol.2013.10.014
10. Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. *Journal of Cleaner Production, 45*, 9–19. https://doi.org/10.1016/j.jclepro.2012.07.007
11. Boons, F., Montalvo, C., Quist, J., & Wagner, M. (2013). Sustainable innovation, business models and economic performance: An overview. *Journal of Cleaner Production, 45*, 1–8. https://doi.org/10.1016/j.jclepro.2012.08.013
12. Chesbrough, H. (2010). Business model innovation: Opportunities and barriers. *Long Range Planning, 43*(2–3), 354–363. https://doi.org/10.1016/j.lrp.2009.07.010
13. Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment, 11*(2), 130–141. https://doi.org/10.1002/bse.323
14. Elkington, J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Capstone.
15. Evans, S., Vladimirova, D., Holgado, M., Van Fossen, K., Yang, M., Silva, E. A., & Barlow, C. Y. (2017). Business model innovation for sustainability: Towards a unified perspective for creation of sustainable business models. *Business Strategy and the Environment, 26*(5), 597–608. https://doi.org/10.1002/bse.1939
16. Geissdoerfer, M., Bocken, N. M. P., & Hultink, E. J. (2016). Design thinking to enhance the sustainable business modelling process—A workshop based on a value mapping process. *Journal of Cleaner Production, 135*, 1218–1232. https://doi.org/10.1016/j.jclepro.2016.07.020
17. Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The circular economy—A new sustainability paradigm? *Journal of Cleaner Production, 143*, 757–768. https://doi.org/10.1016/j.jclepro.2016.12.048
18. Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of Management Review, 20*(4), 986–1014. https://doi.org/10.5465/amr.1995.9512280033
19. Hart, S. L., & Milstein, M. B. (2003). Creating sustainable value. *Academy of Management Executive, 17*(2), 56–67. https://doi.org/10.5465/ame.2003.10025194
20. Hausdorf, J., & others. (2023). Business research for sustainable development: How does sustainable business model research reflect doughnut economics? *Business Strategy and the Environment*. https://doi.org/10.1002/bse.3307
21. Joyce, A., & Paquin, R. L. (2016). The triple layered business model canvas: A tool to design more sustainable business models. *Journal of Cleaner Production, 135*, 1474–1486. https://doi.org/10.1016/j.jclepro.2016.06.067
22. Lüdeke-Freund, F., Gold, S., & Bocken, N. M. P. (2019). A review and typology of circular economy business model patterns. *Journal of Industrial Ecology, 23*(1), 36–61. https://doi.org/10.1111/jiec.12763
23. Lüdeke-Freund, F., Massa, L., Bocken, N., Brent, A., & Musango, J. (2016). *Business models for shared value: Main concepts and international case studies*. Network for Business Sustainability.
24. Mignon, I., & Bankel, J. (2023). Sustainable business models and innovation strategies to realize them: A review of 87 empirical cases. *Business Strategy and the Environment, 32*(4), 2439–2461. https://doi.org/10.1002/bse.3192
25. Mont, O., Whalen, K., & Plepys, A. (2021). A decade of the circular economy: A systematic review of business models and sustainability transitions. *Journal of Cleaner Production, 292*, 126087.
26. Murray, A., Skene, K., & Haynes, K. (2017). The circular economy: An interdisciplinary exploration of the concept and application in a global context. *Journal of Business Ethics, 140*, 369–380. https://doi.org/10.1007/s10551-015-2693-2
27. Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review, 89*(1–2), 62–77.

28. Richardson, J. (2008). The business model: An integrative framework for strategy execution. *Strategic Change, 17*(5–6), 133–144. https://doi.org/10.1002/jsc.821
29. Schaltegger, S., & Burritt, R. L. (2018). Business cases and corporate engagement with sustainability: Differentiating ethical motivations. *Journal of Business Ethics, 147*, 241–259.
30. Schaltegger, S., Hansen, E. G., & Lüdeke-Freund, F. (2016). Business models for sustainability: Origins, present research, and future avenues. *Organization & Environment, 29*(1), 3–10. https://doi.org/10.1177/1086026615599806
31. Schaltegger, S., Lüdeke-Freund, F., & Hansen, E. G. (2012). Business cases for sustainability: The role of business model innovation for corporate sustainability. *International Journal of Innovation and Sustainable Development, 6*(2), 95–119. https://doi.org/10.1504/IJISD.2012.046944
32. Stubbs, W., & Cocklin, C. (2008). Conceptualizing a "sustainability business model." *Organization & Environment, 21*(2), 103–127. https://doi.org/10.1177/1086026608318042
33. Upward, A., & Jones, P. (2016). An ontology for strongly sustainable business models: Defining an enterprise framework compatible with natural and social science. *Organization & Environment, 29*(1), 97–123. https://doi.org/10.1177/1086026615592933
34. Whiteman, G., Walker, B., & Perego, P. (2013). Planetary boundaries: Ecological foundations for corporate sustainability. *Journal of Management Studies, 50*(2), 307–336. https://doi.org/10.1111/j.1467-6486.2012.01073.x
35. Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management, 37*(4), 1019–1042. https://doi.org/10.1177/0149206311406265