Sustainable Growth Strategies for Startups: A Global Perspective

A Case Study of Pathao

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Abstract

Startups are a core component of modern economies, but their journey towards sustainable growth is incessantly disrupted by limited resources and dynamic environments. The objective of this study was to analyze startup sustainable growth mechanisms from a global perspective with Pathao, a leading digital platform in Bangladesh, as a case firm.

The study drew on startup growth and sustainability literature and applied the Uppsala Model, Porter's Diamond Model, and the Born Global Theory as conceptual frameworks to explore the growth and internationalization strategies of startups.

A qualitative method was applied. Data were collected using semi-structured interviews with five significant stakeholders of Pathao and were analyzed through theory-assisted thematic analysis to reveal patterns and findings on growth and sustainability.

The study illustrated that Pathao's sustainable growth was the outcome of innovation in service delivery, extensive market knowledge, and strategic use of digital platforms. The company addressed challenges like regulatory limitations, scarce funds, and competition through the adoption of agile business models and the use of digital technologies. Internationalization was influenced by both internal sources of strength and by the forces of the external market. Additionally, Pathao practiced green methods and inclusive hiring policies, maintaining international standards of sustainability. These results help understand how frontier market startups can grow sustainably to compete on the global stage.

Keywords/tags (subjects)

Sustainable Growth, Startups, Pathao, Internationalization, Innovation, Qualitative Research, Digital Platforms, Emerging Markets, Strategic Management, Entrepreneurship

Miscellaneous (Confidential information)

For example, the confidentiality marking of the thesis appendix, see Project Reporting Instructions, section 4.1.2

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1 Introduction

1.1 Background

The sudden mushrooming of startups is characteristic of the modern economy. The potential contributions of startups to the economic sphere include their innovative ability, disruptiveness, and employment creation. However, their tendency to scale quickly plays down environmental, social, and ethical considerations (Blank & Dorf, 2020). In this regard, there is a possibility that such a narrow, short-term focus might reinforce resource depletion, damage reputations, and ultimately lead to the destruction of businesses (Schaltegger et al., 2016). Therefore, sustainability has become a key concern for both academia and industry.

The sustainable field of business practice has grown to incorporate a phenomenon where organizations seek to align their profits with the environmental and social aspects that are also considered fundamental to a company (Bocken et al., 2014). Hemant Kumar Goel, co-founder at Growth Griots, notes that startup ventures have limited budgets, face competitive pressure, and often lack a clear understanding of sustainability as a challenge to address, including emissions and waste. Young firms usually face challenges in integrating sustainability into their business models and thus miss out on long-term opportunities (Evans et al., 2017).

The startup ecosystem is characterized by uncertainty, high failure rates, and intense competition (Ries, 2011). Although some of these firms achieve hypergrowth, they often fail to develop mechanisms that ensure their sustainability. Traditional business strategies may not be effective in striking a balance between rapid scaling and sustainability; therefore, new frameworks are necessary to align growth objectives with environmental, social, and economic goals (Stubbs, 2017). This research aims to fill these gaps by exploring practical approaches to sustainable growth for startups.

1.2 Motivation for Research

Start-ups are one of the most vital drivers of economic development. They introduce disruptive business models, create jobs, and drive innovation. In their rush to scale up as quickly as possible, most startups often compromise their long-term viability by depleting resources, harming the environment, and exacerbating social inequalities. The World Economic Forum (2021) states that

most startups heavily rely on non-renewable resources, which accelerates environmental degradation in the pursuit of short-term profitability.

In the wake of growing concerns about climate change and social responsibility, governments, investors, and consumers alike have pressed businesses to adopt sustainable practices. Large corporations can afford to implement sustainability frameworks, but startups often struggle to balance growth with environmental and social responsibility due to limited capital and intense competition. This research contributes to the broader discourse on responsible entrepreneurship by examining sustainable growth strategies for scaling up successfully while being environmentally and socially responsible.

By identifying this gap, the thesis aims to provide practical contributions toward the development of growth strategies by entrepreneurs, investors, and policymakers that align with long-term sustainability goals, ensuring that economic development is not at the expense of the environment or society.

Being keenly interested in the fields of business management and sustainability, I believe this research will help bridge the gap between my academic and professional interests. This study contributes to the academic realm and provides practical knowledge that could be useful in future entrepreneurial ventures. It will be motivated by the urge to bridge the gap between business growth and sustainability principles.

1.3 Research Problem, Objectives, and Questions

1.3.1 Research Problem

Startups are key drivers of innovation and job creation, shaping the economic landscape through the adoption of technology and disruptive business models (Acs et al., 2018). However, many startups face significant challenges in scaling their operations quickly while maintaining sustainability, which includes environmental responsibility, social equity, and economic stability (Bocken et al., 2014). With increased awareness of sustainability globally, there is an increasing expectation that the growth strategies of startups must be in tandem or congruent with the SDGs of the United Nations (2015). This new turn of events requires businesses to balance rapid expansion with a long-

term focus on minimizing negative environmental impact, ensuring social welfare, and economic viability (Kuckertz & Wagner, 2010).

The challenge results from a fundamental trade-off between speed and sustainability. Most scholars view high growth as the primary metric of success for startups; therefore, entrepreneurs and investors tend to scale up rapidly (Morris et al., 2020). However, accompanying this growth is a rise in resource consumption, environmental degradation, and increasing social inequalities (World Economic Forum, 2021). Conversely, adopting sustainable business models typically requires higher upfront investments, slower initial scaling, and a long-term strategic approach that may not always align with the short-term expectations of venture capitalists, customers, and other stakeholders (Lüdeke-Freund et al., 2018).

Sustainable growth for immediate success has usually created tension for startups. In the context of finding sustainable ways to grow companies, this article attempts to point out the main gaps in effectively scaling a business rapidly while balancing long-term viability from an ecological, social, and economic view.

1.3.2 Research Objective

The focus of the present research is to present ways in which startups can develop quickly while pursuing sustainability. For instance, this study will include new technologies and business models that serve to support sustainability on environmental, social, and economic grounds. To that end, it will be useful for entrepreneurs, investors, and policymakers with practical insights regarding how best growth and sustainability are balanced in the very early stages of a startup's life cycle.

1.3.3 Research Questions

To achieve these objectives, the study will address the following research questions:

Main Research Question:

- How can startups achieve rapid growth while ensuring long-term sustainability in terms of environmental, social, and economic impact?

This is a very important question, for it encapsulates the very challenge startups face: rapid business scaling together with environmental responsibility, social equity, and economic stability. Most startups fail to balance growth strategies with sustainability due to market pressures, investor expectations, and resource constraints. The study, therefore, tries to find practical strategies that will enable startups to grow without compromising on sustainability and thus provide insights for entrepreneurs, policymakers, and investors interested in fostering responsible business practices.

Sub-questions:

1. What strategies can startups implement to ensure both rapid growth and sustainability?

The first research question follows from the above because detailed, practical ways need to be identified to scale up a startup quickly without compromising on sustainability. In answering this question, the research will identify concrete steps that startups can take to align their growth ambitions with sustainable practices.

2. What challenges do startups encounter when adopting sustainable strategies, and how can they overcome these challenges?

This question examines the primary challenges that startups face when incorporating sustainability into their business models and proposes potential solutions. Startups often face resource constraints, competitive pressures, and a lack of expertise in sustainable practices, which makes it difficult for them to balance profitability with environmental and social responsibility. Additionally, regulatory complexities and evolving consumer expectations further challenge their ability to adopt sustainable strategies effectively. By testing the barriers, the research focuses on uncovering practical approaches, such as innovative business models, strategic partnerships, and policy support, that can help startups overcome these challenges and achieve long-term sustainable growth.

The key research question and sub-questions were formulated to consider that while startups need to grow quickly, many of their growth strategies are at odds with the increasing demand for

sustainable development. Limiting this to strategies and innovation will find practical solutions to the problem at hand. It narrows down the inquiry further to identify strategic approaches and technological interventions that startups can implement to achieve both growth and sustainability objectives.

1.4 Significance of the Study

The importance of this study lies in its potential to make significant contributions to both academic research and practical business applications. This research will add to the growing literature of sustainable business practices concerning a startup ecosystem from an academic perspective. This study, from a qualitative perspective, contributes empirical material and theoretical insights to sustainable growth strategies, highlighting how startups can be strategically oriented toward long-term success while maintaining a central focus on sustainability. It will draw on existing frameworks in sustainable entrepreneurship, corporate social responsibility, and business model innovation, providing further insight into the driving factors of sustainable growth in early-stage businesses. It also seeks to map the literature gaps regarding the practical challenges faced by startups and how sustainability can be integrated into their core business models.

This study will also constitute a source of important business intelligence from the perspective of entrepreneurs, investors, and policymakers. Startups will learn how to implement sustainability within their growth plans with actionable recommendations without necessarily affecting their profitability. These recommendations will help entrepreneurs overcome common barriers to implementing sustainable practices, such as limited resources or conflicting stakeholder interests, and will provide practical guidance on how to align their sustainability goals with their business objectives. By making it possible for investors to gauge just how sustainability practices will contribute to increased long-term financial performance, brand reputation, and market competitiveness, investors will develop a finer sense of the value of investing in such startups. Finally, policymakers can use the findings to create favorable environments for sustainable entrepreneurship through the creation of incentives, regulations, or support systems which allow startups to adopt responsible business practices.

The insights from this study will, therefore, be important in helping mold the future of responsible business practices within the ecosystem of startups. It will help in influencing the development of

sustainable business models, enhancing ethical decision-making, and will also guide policies in the future for a thriving and sustainable startup environment. It will therefore bridge the gap that exists between academic research and practical business applications, enabling more sustainable approaches toward growth from the stakeholders involved in the startup ecosystem to more socially responsible and environmentally sensitive entrepreneurship.

1.5 Structure of the Thesis

The first chapter, Introduction, covers the background, motivation, objectives, and research questions of the research topic. It also gives a sneak peek at the methodology, significance, and structure of the thesis. The second chapter, Literature Review, covers existing theories and research on strategies for startup growth, sustainability practices, and relevant business frameworks, which form the theoretical foundation for the study. The third chapter, Research Methodology, explains the research design, methods of data collection, and techniques of analysis clearly and can be replicated. The fourth chapter, Findings, presents the research results and examines their implications for startup growth and sustainability. Finally, the fifth chapter, Conclusion and Discussion, summarizes the key findings, discusses study limitations, and offers recommendations for future research and practical applications. The above-structured approach ensures that the logical development from problem identification to solution development covers all important aspects of the sustainable growth of a startup.

2 Literature Review

The research describes the status of sustainable growth strategies for start-up firms; it will identify key concepts concerning the matter in review by referencing prior literature in categories related to startups in sustainable growth, innovation, and technology toward the issue of sustainability, and proposed frames for paving an optimal balance between the two end-states of sustainability and profitability. An illustrative frame of reference is established by defining and exploring each container marker concept, drawing on academic and practical insights gained in the previous step, to inform the research questions about each key concept in an informative manner.

2.1 Key concepts

2.1.1 The Triple Bottom Line (TBL)

The Triple Bottom Line (TBL) theory, first introduced by John Elkington in 1994, provides a framework for businesses to measure their success not only by profit but also by their social and environmental impacts. This model includes three pillars:

- People: Social responsibility towards employees, customers, and the community.
- Planet: Environmental sustainability in operations.
- Profit: Economic performance that ensures long-term viability.

For startups, adopting the TBL approach can provide a structured way to integrate sustainability into their business models from the very beginning. Unlike large corporations that often struggle with restructuring existing business models to incorporate sustainability, startups have the advantage of agility and flexibility. This allows them to integrate sustainable principles in their operations, product development, and company culture from the outset. However, despite this advantage, the majority of startups also face enormous challenges in reconciling financial growth with sustainability. Limited financial resources, pressure from investors to develop the business quickly, and little awareness or know-how regarding sustainability can make it difficult for startups to implement the TBL model effectively.

One of the biggest challenges startups have is figuring out how to prioritize sustainability without compromising profitability. Most early-stage businesses have tight financial constraints and must prioritize quick market penetration to stay alive. As a result, sustainability is framed as an afterthought or an added expense rather than a core strategy. This study aims to debunk these myths by investigating how startups can use the TBL framework to achieve growth and sustainability simultaneously. Through sustainable supply chain management, circular economy strategies, and socially responsible business practices, startups can create long-term value while being financially sustainable.

Moreover, the TBL framework perfectly aligns with shifting customer and investor expectations. Customers are today better informed about ethical and environmental issues, and numerous consumers deliberately strive to help businesses with similar values. Investors also increasingly consider Environmental, Social, and Governance (ESG) factors while investing. Startups that factor in sustainability as part of their growth strategy can enhance their reputation, gain responsible investors, and create long-term customer loyalty.

With analysis of the TBL model as applied to start-ups, the current research aims to establish viable strategies by which start-ups can grow effectively even while sustainability becomes a core business axiom. This will include a case study examination of high-flying start-ups that have implemented TBL tenets, establishing best practice, and making recommendations as to how start-ups can counteract usual problems. Lastly, this study contributes to the growing body of literature on sustainable entrepreneurship by showing that growth and sustainability are not antagonistic but can be mutually enabled when approached strategically.

2.1.2 Sustainable Growth in Startups

Startups must be resource-limited and need strategic planning for sustainable scaling. Sustainable business models are practiced by adopting principles that optimize long-term economic prosperity while maintaining environmental and social sustainability.

For instance, Pathao's move to bring electric vehicles (EVs) and optimize delivery logistics is a strategic move towards green business practices, cutting its carbon footprint, and becoming regulatory compliant through offering services at an affordable price.

That is, sustainability in start-ups is not only about environmental issues but also about eco-nomic and social perspectives. According to Bocken and Geradts (2020), a startup business model is centered on value creation, which is captured through the integration of ESG into sustainability issues. Razzaq et al. highlight the role of digital transformation in achieving sustainability goals, where resource utilization is optimized while operational efficiency is enhanced in a firm's startup.

Table 1. Dimensions of Sustainability and Their Impact on Startups (Bocken et al., 2014; Elkington, 1997; Schaltegger et al., 2016)

Dimension	Definition	Impact on Startups
Economic Sustainability	Maintaining profitability while balancing financial resources and growth.	Essential for survival and long-term growth, especially in competitive environments.
Environmental Sustainability	Implementing eco-friendly practices to minimize negative impacts on the environment.	Provides a competitive edge by attracting eco-conscious customers, aligning with global trends.
Social Sustainability	Promoting equity, diversity, and positive social impact through inclusive practices.	Building long-term loyalty and a strong brand image is critical for business sustainability.

2.1.3 Growth Strategies

Overall, businesses, particularly start-ups, have an increasing need to adopt an environmentally considerate strategy and align with the Sustainable Development Goals (SDGs) as portrayed by the United Nations. In addition, most of the startups are embedding sustainability into the core aspects of their business models to meet both consumer demand and regulatory requirements.

Growth strategies will be crucial for the startup to scale its operations and achieve long-term viability. Parida et al. (2021) identify key growth strategies for startups, including business model innovation, ecosystem orchestration, and leveraging digital tools. These strategies enable a startup to adapt to market trends and sustain a competitive advantage. Joyce and Paquin (2020) introduce the triple-layered business model canvas as a tool for integrating sustainability into growth strategies.

Table 2. Growth Strategies and Their Relevance to Startups (Ansoff, 1957; Affise, n.d.; The Strategy Institute, 2023)

Growth Strategy	Description	Relevance to Startups
Market Penetration	Expanding market share within existing markets by increasing product use or customer base.	Allows startups to multiply and build a loyal customer base without excessive investment.
Product Diversification	Adding new products or services to attract different customer segments.	Critical for minimizing market risks and creating multiple revenue streams.
Strategic Alliances	Partnering with other businesses or stakeholders to leverage their combined strengths and resources.	Facilitates faster market entry, increased resources, and sharing of knowledge and networks.
Innovation and Technological Advancement	Developing cutting-edge products or services or enhancing operational efficiency with new technologies.	Enables startups to stay competitive in rapidly changing markets by effectively addressing customer needs.

2.1.4 Challenges in Developing Economies

In developing economies, startups face an additional set of challenges that hinder growth and sustainability. These challenges stem from the systemic level, including inadequate infrastructure, regulatory complexity, and limited access to financing. These issues must be addressed for startups to achieve sustainable growth, as they operate in environments that lack many of the support mechanisms available in developed markets.

Inadequate Infrastructure: In developing economies, infrastructure constraints often pose significant hurdles for startups. These include:

- **Transportation Issues:** Road conditions are poor, and public transportation is limited. These, in turn, will make logistics and last-mile delivery hard. This factor of unaccounted-for infrastructure can badly hurt a startup like Pathao, which relies heavily on timely delivery services and ridesharing.

- **Energy Shortages:** Frequent power outages disrupt business operations, especially for tech-based startups reliant on uninterrupted internet access and reliable systems. This often requires that startups invest in expensive backup solutions, taking resources away from core growth initiatives.

- **Digital Divide:** This restricts Internet reach and the inability to get many affordable smartphones in rural areas; it limits the circle of customers and digital presence for startups.

Regulatory Barriers: Regulatory frameworks are often fragmented, unpredictable, and not easy to navigate in developing countries. Some of the challenges faced by startups include:

- **Bureaucratic Red Tape:** Long procedures for the issuance of licenses, permits, and approvals reduce the speed of business operations. For startups like Pathao, compliance with several somewhat overlapping regulations in road transport, taxation, and labor laws increases administrative burdens.

- **Policy Instability:** The governmental policy is constantly changing and doesn't hold any stability, which creates uncertainty for the startups. For example, changes in fuel prices or tax structures may render Pathao's financial planning and pricing strategy obsolete.

- **Lack of Startup-Friendly Policies:** Most developing economies lack policies that could facilitate startup incubation, innovation grants, or tax incentives that might spur innovation.

Limited Access to Financing: Access to affordable and adequate finance is one of the significant challenges facing startups in developing economies. The key issues include:

- **Limited Venture Capital:** Investors in developing markets are generally risk-averse and reluctant to invest in early-stage startups. Due to this, startups of the ilk of Pathao often depend on bootstrapping, personal savings, or small-scale local investors and thus have limited ability to scale up.

- **High Interest Rates:** Most conventional banking systems in these economies charge high interest rates for business loans, which puts startups at risk of financial instability while searching for debt financing.

- **Lack of Investor Awareness:** Investors may be unaware of innovative startup models or sustainability-driven initiatives, which also hinders funding opportunities.

Skilled Workforce Shortages: In developing countries, the human resource building system is not properly developed. Developing economies are at a disadvantage because their educational systems struggle to keep pace with the rapidly evolving nature of industries that require talent in new areas, such as technology, management, and sustainability. For Pathao, hiring skilled developers, data analysts, and operational managers has become a constant pain.

- **Brain Drain:** Talented professionals often migrate to developed countries in search of better opportunities, thereby further depleting the local talent pool.

- **Training Costs:** Startups must invest significant resources in upskilling employees to meet industry standards, diverting funds from core business functions.

Social and Cultural Challenges: Specific cultural and societal norms in developing economies may also pose special challenges:

- **Acceptance of New Business Models:** Most startups struggle to break through the mold. For example, Pathao's ride-sharing model struggled to attract customers, as drivers were initially unaware of the concept and skeptical about using digital payments.

- **Customer Trust:** Building customer trust is a big challenge in the market where digital literacy and cybersecurity awareness are comparatively low. Most customers may be hesitant to share personal information or use online services.

2.2 Theoretical Approaches to Sustainable Growth

2.2.1 Resource-Based View

The RBV posits that firms achieve a competitive advantage through the strategic management of resources. Resources such as technology, human capital, and organizational knowledge have been crucial to the success of startups. Emphasizing unique resources and capabilities enables startups

to overcome resource constraints, competition, and market fluctuations, ultimately achieving sustainable growth.

Pathao deploys technology and data analytics as strong resources to enhance operational efficiencies. They achieve this through continuous innovation aimed at optimizing their services and building a competitive advantage in this highly competitive marketplace.

2.2.2 Dynamic Capabilities Theory

According to the Dynamic Capabilities Theory by Teece et al. (1997), startups must continually strive to develop dynamic capabilities in order to adapt to changing market conditions. These include the following:

- Sensing opportunities in the market;
- Seizing opportunities by adapting business models;
- Transforming the organization to respond to external challenges.

For Pathao, the adoption of dynamic capabilities, such as AI-driven route optimization for food delivery and scaling up EV integration, are key examples of how startups can leverage dynamic capabilities for sustainable growth.

2.2.3 Business Model Innovation

Business model innovation refers to the development of new or revised business models that address the needs of customers, respond to market trends, and align with sustainability objectives. Innovation in a startup business framework not only enhances an organization's operational efficiency but also meets evolving consumer expectations.

Business model innovation will be proposed for Pathao by switching towards more eco-friendly models, incorporating greener technologies, and improving efficiency in last-mile delivery.

2.3 The Role of Innovation in Sustainable Growth

2.3.1 Technological Innovation

Startups can improve service delivery, reduce operational costs, and even minimize environmental impact due to technological advancements. A firm adopting electric vehicles (EVs) within its transport fleet is of an example of such advancement. The application of EVs aids in routing and decreases fuel consumption while also greatly reducing greenhouse gas emissions. Rivian and Arrival are among the companies leading this revolution by manufacturing EVs for commercial and consumer use and furthering sustainable transportation. In addition, EVs are made easier and more attractive due to further advancements in battery technology and charging infrastructure, with Sila and EnviroSpark leading these developments.

2.3.2 Social Innovation

Social innovation means developing products or services designed to solve the crucial problems of society or the needs that have been neglected for a long time. Startups centered around low-cost transportation and food delivery not only benefit the users but also reach a wider audience and provide jobs and access to basic services to the community.

Easy spare: LL startups working under the domain of low-cost transportation or easy food delivery also expand the capabilities of doing something else in society. However, under the guise of leisure and social responsibility, such startups often create low-paying jobs in conditions as non-standard and somehow illegal.

Some examples are the sharing of individual rides, such as Uber and Lyft, which have reshaped the mobility of the city by offering better access to and efficiency in transportation, thus reducing the need for personal cars and by extension, cutting down carbon emissions. Additionally, food-delivery services have been instrumental in channelling the support to the farmers and the local producers and thus generating economic and environmental benefits that build community connections while reducing transport emissions.

2.3.3 Environmental Innovation

Environmental innovation is when new processes or technologies join forces to give ecological sustainability. The introduction of EVs into a business is one of the examples of such from not only directly saving costs in greenhouse gas emissions but also leading the way to achieve global climate action. AmpUp, with its advanced, scalable charging system, is a firm that facilitates the green transit transformation by eliminating the technical barriers of EV infrastructure and thus allowing cleaner transportation to emerge.

On a related note, a group of companies that are the beneficiaries of a new battery recycling technology is a great example of how they are tackling the most pressing environmental issues related to electric vehicle adoption, thus making the whole battery material lifecycle management process sustainable.

Not only does embracing tech, social, and eco innovations drive startups to give out a better image in the market, but they also stand as active participants towards the well-being of the whole society and the environment. This strategy of fostering the development of long-term sustainability in the context of a contemporary business makes it an essential part of the real truth.

2.4 Sustainable Growth: Digital and Ecosystem Strategies

2.4.1 Sustainability-Oriented Business Models

According to Bocken and Geradts (2020), the relevance of Sustainability-Oriented Business Models (SOBMs) is emphasized as they are the ones that new companies can pursue in order to grow and still abide by social and environmental responsibility. These models are specifically designed to make social, ecological, and economic sustainability an integral part of the business operations of a company, and this very sustainability is the factor that ensures that a start-up can grow by being responsible and still have a positive influence on society and the surroundings of which they are a part. Here are the key features of SOBMs:

Resource Efficiency: This includes making the most out of the resources such as energy, water, and raw materials, by cutting out waste and encumbrance to the environment. By leveraging better resource efficiency, companies are in a position to lower business costs and, at the same time, protect the environment.

Circular Economy Principles: A new idea is that we can change the old straight line linear models of production and consumption to a spiral/cycle flow model where goods are made, used, and then become waste. Instead, the circular economy ideas represent the regeneration, the reuse, and the recycling concepts. Operating in a similar way, startups are not only able to cut down their wastage but also take advantage of better resource utilization.

Stakeholder Co-Creation: In SOBMs, emphasis is placed on involving more than one stakeholder—i.e., suppliers, customers, and local communities—when designing business processes. By involving stakeholders, startups can design more sustainable products and services that respond to the needs of all stakeholders.

For Bangladesh's ride-sharing firm Pathao, SOBM implementation will get the company to align its business operations to be in line with sustainability goals. Of course, there are numerous vital ways of achieving this, including maximizing carbon reduction optimization from its platform in a manner that will keep the services offered low and yet affordable, thus available for customers. Innovation in fleet optimization, route reduction, and electric vehicle promotion may enable all this to an operation that will be more environmentally friendly.

Additionally, Lüdeke-Freund et al. (2021) provide a circular economy business model type typology that can be applied to various industries, including start-ups. The typology offers various practices and strategies that start-ups can adopt in an attempt to integrate circular economy ideologies into their business models and thereby further harmonize their operations with sustainability goals.

Joyce and Paquin (2020) also extend the traditional business model framework by including environmental and social layers along with the economic layer. The multi-layered framework enables startup businesses to understand trade-offs and synergies between elements of sustainability and have a greater understanding of business performance. For new companies like

Pathao, this structure is helpful when it comes to conceptualizing and analyzing the way the business might balance economic advancement with environmental preservation and social justice, especially for a developing country like Bangladesh.

2.4.2 Digital Transformation as a Growth Enabler

The role of digital transformation in helping startups grow in the long term is pivotal. Via their research, Razzaq, Maqbool, and Shafait (2020) ascertain that technological advancements like big data and cloud computing can help startups in growing their businesses. These are the tools that enable a company to produce, manage performance, and make decisions based on data, which allows for efficient team expansion and customer base attraction. The computerization also helps an enterprise by automating, reducing costs, and maximizing resource allocation profitably and efficiently.

Digitization makes it possible for startups to not only adapt their models but also quickly enter new markets, say Schaltegger, Beckmann, and Hansen (2020). Through these tools, startups can create new value propositions, become market-oriented in terms of changes, and communicate differently with customers. Pathao can now use the AI-based route optimization to decrease the fuel consumption, improve the work of the driver, and, as a result, have a smaller carbon footprint. Furthermore, the addition of mobile payment systems can easily conduct customer transactions, hence enhancing the customer experience and bringing more convenience to the customers.

A digital-based process affords Pathao a better way of collecting data about the company's riders, commuting trends, and emissions. This information will be useful in evaluating the environmental performance, measuring the impact of sustainability actions, and detecting the regions of the operation where correction is necessary. For instance, Pathao can conduct digitalization to monitor fuel efficiency, assess the environmental impact of its fleet, and check the regions for electrification or the introduction of cleaner vehicles.

2.4.3 Ecosystem-Oriented Growth Strategies

The definition of sustainable development is empowering of business to establish collaborative networks among various stakeholders, for instance, suppliers, customers, and government officials. A further perspective is presented by Parida et al. (2021) who recognize that ecosystem orchestration is the most essential element in startup development. Ecosystem-based approaches emphasize the value-adding partnership between all parties, which subsequently drive innovation and sustainability. For the startups, these partnerships facilitate access to external resources, professionals, and networks who - in turn - help the companies grow and speed up the incubation to the market.

Pathao's success in Bangladesh as a popular ride-sharing app can be a good example to illustrate the good use of an ecosystem-based strategy to solve the mobility problems in cities. Not only is it allowed to participate in public affairs like infrastructure with the local government and other NGOs for the betterment of sustainability, but it is also feasible to pull in corporate clients and the delivery service sector for the multiple benefits of the ecosystem.

Moreover, the work of Kanda et al. (2020) also emphasized the power that business ideas have in terms of the uptake of green technologies and economic and social sustainability across sectors. These ideas make sure that companies are not only working towards being environmentally sustainable but are also focused on creating shared value, which is a crucial driver of sustainability, and are capable of realizing gains in the social and environmental areas from its business activities. For instance, prompting the adoption of sustainable practices such as fleet management based on electric models or the use of EV (electric vehicles) by the manufacturer in Pathao, will create an intelligent mode of operation, thus resulting in an economical and green transportation way in the future.

2.4.4 Challenges in Developing Economies

Clearly, regulatory frameworks and successful funding access seem to be the issues that startups in high-income economies are facing, while their counterparts in emerging economies also find it harder because of the matters that directly concern them. Goyal, Rahman, and Kazmi (2021) have gathered the viewpoints of experts from a finance provider on the barriers they face in giving

credit. It is important to note that these barriers consist of such factors as lack of access to finance, high-interest rates, and the underdeveloped venture capital market. The authors also point out that the use of the so-called clean technology, e.g., electric vehicles or renewable energy, to power the fleet is another difficulty faced by Pathao beyond those described by the authors.

Lazarevic and Valve (2020) concentrate on the important role that policy frameworks play in pushing startups toward sustainable business models. Governments of developing economies must create an enabling environment that is conducive to startups transitioning to sustainability. This includes providing financial incentives, developing green technology infrastructure, and introducing regulatory reforms that facilitate the adoption of green-friendly practices. For Pathao, these government subsidies in Bangladesh would involve subsidies to use electric vehicles, tax incentives for green-friendly business operations, or developing charging infrastructure to support a greener fleet.

In startup sustainability theory, ecosystem orchestration and shared value creation perspectives are helpful and complementary frameworks to observe how firms can scale sustainably within resource-constrained and institutionally dispersed ecosystems. These frameworks are particularly helpful in emerging economies like Bangladesh where firms like Pathao operate in unstable but infrastructure-starved ecosystems.

Ecosystem orchestration refers to a firm's ability to strategically coordinate and align a complex web of internal and external stakeholders—suppliers, NGOs, regulators, customers, and tech partners—to create value that none of them could create individually (Parida, Wincent, & Kohtamäki, 2021). Unlike the static value chain management, orchestration involves dynamic cross-industry partnerships, sharing of resources, and shared goal alignment. For Pathao, this is seen in its partnerships with electric vehicle vendors, third-party service providers, and city governments. These partnerships have been instrumental in overcoming infrastructure asymmetries, such as a lack of EV charging stations or regulatory backing, as well as facilitating the company to scale up innovative sustainability solutions like electric mobility and AI-powered logistics. Orchestration enables Pathao to leverage external capabilities and overcome crucial resource and knowledge gaps that would otherwise hinder sustainable growth.

Together with the ecosystem involvement strategy, there is something called shared value creation. Consequently, the coauthor of the shared value creation theory, Michael E. Porter, and Mr. Mark R. Kramer, in a famous article in Harvard Business Review, published a typology cutting-edge concept that constitutes "a win-win situation," meaning companies can still be more competitive only if they perform their activities by also doing a social good. Another way of describing the concept given above is the companies' ability to create long-term benefits and maintain their competitive power by creating economic value for society at the same time.

Through such a practice, the companies practically act as citizens that create social value. Shared value is the advantage that a company derives from both qualitative and quantitative value to the social structure, and environmental goals are completely incorporated into the main areas of activity, and strategy of the company For an exemplification of the above, Pathao's case can be a very good example how the company uses its tech competence as a tool to secure maximum efficiency in the last mile delivery—saving the operation cost and minimizing the carbon footprint correspondingly.

Furthermore, the company's partnerships with NGOs in the areas of road safety and digital literacy have the dual effect of addressing the localized issues of the community and significantly improving Pathao's brand equity as well as public recognition. These endeavors thus extend beyond the creation of reputational value and seek to acquire social capital, establish market access, ease the shifting of consumer expectations, and thereby insulate the company against becoming a victim of an ill society.

First, it is common knowledge that system orchestration enables creators to reach out to the entire market and get the power needed to carry out all the necessary operations, even though what was in the past considered only by cross-terminal operators. Pathao appreciates the dual effects of ecosystem orchestration in the delivery business and showed that, because of the major hardware changes of the last mile traffic, the same operator can also win the whole business.

Consequently, Pathao has realized that it can become eco-friendly without needing to increase its expenses by making sure that a logistical revolution and a contemporary culture are revealed to the local drivers and their users in a spirit of cooperation.

From resource orchestration and creation of shared value, the strategic framework has been developed that is used by Pathao not only to thrive but also to respond to the community's needs. During this essential procedure, the company's end goal is high profits, and these will be sustainable only when the company makes the responsible choice for its resources.

Moreover, the companies' innovative strategy has revealed ready options to promote quick growth and cater to the unstable features that the legal sphere possesses, while also enjoying substantial benefits from already existing industries and lawmakers.

Finally, the sustainable development route that start-ups like Pathao in emerging economies need to take is a strategy that can be intentionally initiated due to the implementing of business models, the synchronization of digital platforms, partnerships of ecosystem and the creating of the policy environments that will enable reliable and successful execution of such business and economic models. Of course, numerous challenges are yet to be tackled, however, there are still high hopes for startups to repair the existing level of the ecosystem to a level where sustainability will be attainable once they manage to eliminate the barriers to sustainability and make efficient use of the resources at their disposal.

2.5 Synthesis and Critical Assessment

2.5.1 Global Perspectives on Startup Growth

Startup culture has, in recent years, taken a drastic direction towards the emphasis on sustainability while searching for business growth. Jones et al. (2023) argue that today's startups face the dual challenge of becoming rapidly expanding and yet sustainable. This is particularly acute in the technology sector, where development happens extremely rapidly and there exists a challenging competitive scene. In this case, startups rely on technological innovation as a major component of their business model because they aim to create and expand their market presence. With this comes the need to also sustain such growth.

United Nations' 2020 Sustainable Development Goals (SDGs) once more stated that firms, including start-ups, need to factor environmental sustainability into their business model. Though the SDGs not only constitute a worldwide call for action to counteract issues such as climate

change and poverty, but also are a business guide to coordinating strategy with world agendas of sustainability,. For start-ups, this intersection of place is no longer an ethical choice but a market difference that can propel their brand value, fuel conscious consumers, and underpin long-term profitability. Startups, therefore, have to position themselves in this advanced environment, innovating in a way that results in environmental and social responsibility while making their business model scalable and competitive.

For tech startups, market penetration and innovation are found to be the most critical strategies of success. For instance, startups that invest in green technology or technology that propels sustainability are more competitive. Furthermore, the ability to access new markets but with attention to sustainability opens new revenues and paints the startup in a better light with consumers who increasingly value ethical consumption.

2.5.2 Regional Focus: Sustainable Growth in Bangladesh

For the Bangladesh example, the startup ecosystem has seen tremendous progress in the last decade, particularly owing to the development of tech business ventures. Pathao, the leading rides-haring and delivery startup, is an excellent example of a startup that incorporated sustainable growth into its business model with great success. Rahman and Karim (2022) report that startups in Bangladesh are plagued by a variety of problems, from limited finance availability, regulatory problems, to insufficient advanced infrastructure. Such limitations can lead to the startup failing to upscale and adopt sustainability practices. In spite of this, however, Pathao has demonstrated that one can seek sustainability-driven strategies despite a developing economy.

In comparison to the startups of the rest of Bangladesh, which find it difficult to implement sustainable business models, Pathao has incorporated sustainability as the essence of its operations. Pathao has invested in fuel optimization for its delivery business as a deliberate effort, which is one of the fundamental initiatives to reduce the environmental impact of its operations. Utilizing sophisticated technologies, Pathao is able to reduce fuel consumption and optimize its ride-sharing and delivery operations to help it reduce its carbon footprint.

Other than this, Pathao's sustainability also comes from investing in electric vehicles (EVs), which is a good step towards reducing greenhouse gas emissions in a nation with comparatively high levels of pollution. The organization is also promoting the use of eco-friendly products in its business so that its business model still complies with global sustainability standards.

Its social sustainability is also a typical aspect of the business model. In its offerings of flexible jobs to thousands of riders, some of whom are recruited from marginalized groups, Pathao has introduced social inclusion and economic empowerment. Riders, largely on a gig basis, have the possible advantage through the flexibility of earning a livelihood in the mobile-first employment regime. This strategy for sustainability exhibits Pathao's ability to contribute to economic development and social justice and hence is an ideal example of a startup leveraging sustainability for growth and social good.

2.5.3 Sustainable Innovation in Pathao's Business Model

Innovation is at the center of Pathao's growth and sustainability strategy. Alam et al. (2021) argue that growth-focused startups must be concerned not only with efficiency in operations but also with developing innovative business models that can provide environmental and economic sustainability. In Pathao's situation, the company developed a unique AI-based algorithm that focuses on optimizing route planning for its ridesharing and delivery operations. This technology is adding to the savings of fuel, reducing wait times for customers, and eventually increasing efficiency.

This technologically enabled path optimization is the perfect case for technology as an engine of growth and enabler of sustainability. With digital technology like AI and Pathao, operations can increase with a exceedingly minimal carbon imprint. This builds on the global trend of deploying Tech for Good to drive solution to critical social as well as environmental challenges. This technology-driven focus not only keeps Pathao competitively positioned among the fast tech startup sector, but it also allows the company to contribute towards sustainability goals via emissions reduction as well as inducing the use of resources.

Pathao's emphasis on electric vehicles (EVs) and green infrastructure integration are critical components of its innovative business model. Alam et al. (2021) point out that business model innovation and technological solution innovation are critical for startups to compete in sustainability-

based markets. In South Asia, where startup competition is growing rapidly, having a sustainability-driven, tech-enabled business model is becoming a competitive advantage.

For Pathao, the deployment of end-to-end computer systems covering delivery and ridesharing businesses and huge infrastructural expenditures on electrical vehicles positions the company at the forefront of sustainable innovation within South Asia. Such innovations do not only ensure that operations become more efficient, but they also position Pathao at the pinnacle of the green economy, and it can therefore differentiate itself from its competitors that have not as yet made sustainability a priority.

Pathao's focus on innovation extends to product or service development alone; rather, it focuses on re-fashioning its very business model towards incorporating sustainability as a core value proposition. Such is consistent with global trends demonstrating startups employing technologically enabled solutions to achieve sustainable growth, particularly in the face of emerging markets like Bangladesh. Pathao is thus an attractive case study that other startups wishing to infuse innovation and sustainability into their growth models might learn from.

2.5.4 Analysis of Growth Strategies

Table 3: Growth Strategies: Global Research Findings and Pathao's Implementation

Growth Strategy	Global Research Findings	Pathao's Implementation
Market Penetration	Market penetration strategies are key to rapid growth in established markets (**Smith et al., 2021**).	Pathao expanded its presence across major cities in Bangladesh.
Market Development	Entry into new geographical markets helps startups diversify revenue streams (**Wang, 2022**).	Pathao extended its services to multiple regions of Bangladesh and neighboring countries.

Product Diversification	Diversification reduces risks and taps into different consumer needs (**Lee & Knight, 2020**).	Pathao diversified from ridesharing to delivery and logistics.
Innovation	Technological innovation is essential to gaining a competitive edge (**Jones, 2023**).	Pathao's AI-driven optimization system and electric vehicle fleet are prime examples.
Strategic Alliances	Collaboration with stakeholders can provide startups with the necessary resources (**Martinez & Tomlinson, 2020**).	Pathao has partnered with various local businesses, including those in the retail and food industries, to provide delivery services.

3 METHODOLOGY

3.1 Research Approach

This study employs a qualitative research approach to explore opportunities for sustainable growth for start-ups, with Pathao being a case in point. Qualitative research is optimally used in the exploration of intricate business phenomena as it allows for an in-depth examination of perspectives, processes, and environmental factors (Creswell, 2014). It aids in examining subjective experience, organizational culture, and strategic decision making, which are at the core of sustainable business growth.

Case study research design was embraced because it will enable close examination of Pathao's sustainable growth strategies in its real business environment (Yin, 2018). Case study is equally highly effective at revealing the business decision-making and adaptation processes amidst a dynamic marketplace. Pathao as a leading startup in Bangladesh offers a real setting to identify the drivers of sustainable entrepreneurship.

The case study methodology enables:

Contextual Understanding: One of the greatest advantages of using the case study method is that it is able to provide a better picture of the environment. According to Yin (2018), case studies offer

a detailed examination of the internal and external variables influencing the operations of an enterprise. By focusing on a single organization or event, the case study method allows for in-depth analysis of the environment that a startup like Pathao exists in, including its market environment, regulatory environment, and socioeconomic context.

As an example, Pathao's business model could be discussed in terms of the Bangladeshi startup environment, which is typified by limited and unique problems such as limited access to capital and infrastructural backlogs. Through its case study, there is a possibility to examine how these externalities dictate the growth trajectory of Pathao, namely its effort to adopt green practices in a developing nation (Rahman & Karim, 2022).

Multiple Data Sources: An additional benefit of case study research is its ability to integrate multiple data sources, thus enhancing the analysis's validity and completeness. According to Stake (1995), case studies become stronger when combining mixed qualitative and quantitative data such as interviews, fiscal statements, and market studies. A multimethod strategy allows researchers to adopt a method for triangulating data that can produce a deeper level of understanding concerning the reasons for a startup's success or failure.

For instance, in studying the expansion and sustainability of Pathao, a case study may point to interviews of stakeholders (i.e., executives, employees, customers), accounting reports (e.g., pattern of revenues, investments for sustainability), and marketing studies (e.g., market competition in Bangladesh's ride-sharing sector). By combining these various sources of information, a more comprehensive picture of the company's operations and strategic direction is obtained, which can be used to identify key drivers of success and potential barriers to growth (Yin, 2018).

Exploratory Analysis: Case study methodology also facilitates exploratory analysis and is thus best suited to examining nascent trends and themes in industries like sustainable business practice. Eisenhardt (1989) argues that the case study approach is most useful in exploring new or poorly researched phenomena because case studies allow researchers to see the object of their study in a natural environment, to identify patterns, and formulate theories about shaping the industry.

For the case of Pathao, the utilization of a case study can assist in understanding how sustainability business models (SOBM) are being adopted in emerging markets, particularly in the South Asian setting of the tech startup ecosystem. Exploratory investigation enables researchers to identify the changing sustainability patterns and innovative approaches being utilized by startups like

Pathao to address challenges in terms of resource efficiency, social inclusion, and environmental impact (Alam et al., 2021).

Why Qualitative Research is Suitable for This Study

Qualitative research is the appropriate and optimal way to analyze this study's research questions, given that it provides a systematic approach to understanding the complexity regarding how Pathao implements sustainability-strategic thinking. Compared to quantitative approaches, where the primary emphasis is on mere numbers, qualitative research presents the opportunity for long and detailed explanations and descriptions concerning the "why" and "how" in Pathao's strategy towards pursuing sustainability as an integral part of its business framework. Sustainability is a multi-dimensional, multi-faceted concept encompassing environmental, social, and financial aspects. Identifying how a startup like Pathao aligns its operations within these dimensions entails something more than statistical analysis; it requires a finer, more intimate scrutiny of the choices and plans that drive sustainable action. Qualitative research permits the examination of underlying motives, obstacles, and achievements that enable Pathao to drive its sustainable expansion, which could be challenging to detect with quantitative measures.

The reason that qualitative research can gather multiple perspectives makes it even more relevant to this study. This research is not limited to a single data source but instead integrates insights from various stakeholders involved in or affected by Pathao’s business model. By conducting interviews with executives, managers, employees, and industry stakeholders, the study provides a rich and diverse set of viewpoints on Pathao’s sustainability efforts. These different perspectives are vital because they reveal how different levels of the organization understand and implement sustainability. Executives and managers may have high-level strategic insights, while employees or riders on the platform can offer practical, on-the-ground experience. Players in the industry—such as policymakers, investors, and customers—can also illuminate the overall external drivers of Pathao's sustainability decisions. This multi-layered approach allows the study to capture the full spectrum of insights and form a more holistic understanding of Pathao’s sustainable business practices.

A second advantage of qualitative research is the convenience with which it can perform thematic analysis, which turns out to be of high importance to identify patterns, trends, and correlations in highly intricate business phenomena, e.g., sustainability. Thematic analysis will uncover repeating

patterns relating to practices of sustainability efforts in the present study. For example, Pathao optimizes fuel consumption, has invested in electric vehicles, and promotes social equity through varied job opportunities. These patterns can be hard to find with the application of quantitative data but can be revealed through diligent qualitative analysis. Thematic analysis also enables the research to venture into emerging trends yet to be fully understood or documented in past literature, for instance, the effect of AI route optimization on environmental issues or the specific way Pathao's sustainability efforts influence consumer behavior.

In order to maintain the methodological rigor of the research, the research design, data collection, and analysis procedures strictly follow the best practices. The research works within the paradigm of interpretivism, where emphasis is placed on comprehending the subjectivist meanings assigned to one's experiences and activities. Interpretivism as a methodology is extremely suitable in examining business strategies since it is well known that individual thought, social situation, and the prevailing culture are factors that contribute to the decision-making processes. As Denzin and Lincoln (2011) confirm, qualitative re-search allows one to delve deep into data, and hence the researcher can form a better pro-funder understanding of business strategies' actual-world implications and impacts. Through such interaction with stakeholders, the research attains the richness of capturing Pathao's strategy towards sustainability and business growth, providing insights that are rich as well as grounded in the lived experiences of stakeholders.

Concerning reliability and validity, the research utilizes a number of measures to make sure the findings from the research are reliable and a true reflection of the phenomenon of interest. To start with, the research adopts triangulation of data sources, where findings from various techniques and sources are cross verified. This entails data from interviews, secondary re-search, as well as company reports. Triangulation minimizes bias and maximizes study validity through ensuring that findings derived are consistent in different ways of information and sources. Additionally, the study is carried out systematically in order to gather data, using a structured but flexible interview guide. This ensures that the interviews are kept focused on the research objectives while offering enough flexibility to explore new discoveries emerging during dialogue. Qualitative interview sensitivity is also significant since it allows for the probing of emergent themes and points of view, which typically offer the most insights in complex business phenomena research.

In addition, the research is transparent in its methods by documenting its data collection and analysis procedures explicitly. This way, other researchers can trace the study's procedure, determine

the study's level of rigor, and reproduce the research if necessary. Direct documentation of each phase of the research process—from the choice of interviewees to data coding—guarantees that conclusions from the study are based on sound, reproducible procedures and can be tested for reliability and consistency. Such transparency also makes it easier to discuss in-depth potential limitations or research biases included in the research process, thereby providing a well-rounded perspective of findings.

Qualitative research is especially well-suited to examine the complex, multilateral nature of Pathao's sustainability approaches. It enables one to attain a deep understanding of the strategic decisions and operating behaviors that sustain long-term growth and capture the perspectives of various stakeholders. By adhering firmly to methodological requirements, the study ensures that its findings will contribute positively towards knowledge about how startups in emerging economies, such as Bangladesh, can embrace sustainable business models that will be harmonious with global sustainability goals.

3.2 Interviewee Selection

Participants for the interview were drawn from the contacts of the author through a purposive sampling technique, with the guarantee that they were directly engaged with Pathao's business strategy and operations. Cozby (2009, p. 141) describes purposive sampling as the selection of interviewees based on specific criteria. Tuomi and Sarajärvi (2018) highlight that purposive sampling is particularly useful in qualitative studies to ensure that interview participants have relevant expertise on the research topic.

Criteria for Selecting Interviewees:

1. **Experience**: Minimum three years in a strategic or managerial role.
2. **Involvement**: Direct participation in business expansion, sustainability, or financial planning.
3. **Diversity**: Representation from multiple departments (e.g., operations, finance, CSR, technology).

Additionally, a snowball sampling technique was tested, where one interviewee was asked to recommend another from their network for an interview (Mason, 2002). However, this led to only

one successful interview, with two invitees canceled at the last moment. Knowing that the interviewees seemed to encourage active participation and contributed to a trusting and open discussion environment.

To uphold ethical integrity, the author selected only individuals with whom she had no close professional ties. This decision supported objectivity and ensured participant anonymity. Before conducting the interviews, participants were provided with detailed information about the study's purpose, confidentiality agreements, and the right to withdraw at any time, in line with Cozby's (2009, 42) recommendations.

Each participant received a Microsoft Teams invitation that included:

- A brief on the study's objectives.
- Assurance of anonymity.
- Consent for the anonymous use of interview material.
- Notification of recording and secure data deletion within two years, per Jamk's research data policy.

Demographics of the Interviewees:

Table 4. Profile of Interview Participants

Participant	**Position**	**Experience**	**Area of Expertise**
Interviewee 1	Senior Executive	6+ years	Business Development
Interviewee 2	Operations Manager	5+ years	Logistics and Expansion
Interviewee 3	Marketing Lead	5+ years	Branding and Customer Engagement
Interviewee 4	Financial Analyst	4+ years	Financial Sustainability
Interviewee 5	CSR Manager	5+ years	Corporate Social Responsibility

The total number of interviews conducted was **five**, with an average work experience of **5+ years**. The diverse backgrounds of the interviewees provided a broad spectrum of insights into Pathao's sustainable growth strategies.

3.3 Interview Process

The interview process for this study was designed to gather rich, qualitative data on Pathao's sustainable growth strategies. The process was organized to extract the depth and width of participants' knowledge while at the same time making the interviewees comfortable and free in their discussion.

Pilot Interview and Refinement of Interview Framework

Before the execution of the main round of interviews, piloting was performed. The pilot acted to simplify the interview structure by rendering questions unambiguous, relevant, and capable of eliciting elaborate replies. Bryman and Bell (2015) explain that piloting is meant to uncover any ambiguities or gaps in the questions for the interview and provide room for the adjustment of the interview process. In response to pilot interview feedback, some questions were reworded, and additional questions were introduced to pursue emerging themes. The interview format was changed to create a logical and thematic sequence, so that the process was organized but flexible.

Interview Structure

The interviews were semi-structured, with flexibility within questions posed without compromising consistency around the central themes. This ensured that, in effect, the same base areas were covered in each interview, yet still allowed the participants to more discursively discuss their experiences and opinions. Each interview also had a consistent format, including the following elements which are:

1. **Introduction and Demographic Information:** The interviews were initiated with a brief introduction, in which the purpose of the study and the steps taken to ensure confidentiality were explained, and permission to record the interview was requested from the interviewee. Basic demographic information, such as years of experience and role within Pathao, was collected at this stage to provide context for the responses.

2. **Building an Understanding of Sustainable Growth Strategies:** Before delving into the core questions, it is essential to establish a mutual understanding of the concept of sustainable growth. Instead of using technical terms like “sustainable growth,” the interviewer framed the concept in more straightforward language to ensure clarity, referring to it as long-term business growth emphasizing responsibility and impact. This helped avoid confusion and ensured participants were on the same page when discussing strategies.

3. **Interview Questions:** The core of the interview focused on gathering detailed insights into Pathao’s sustainable growth strategies. In designing the interview questions for this study, a semi-structured qualitative approach was adopted to gain in-depth insights into Pathao’s sustainability strategies. The questions were crafted to align closely with the central research objectives—specifically, to explore how startups implement sustainable growth strategies, the challenges they encounter, and how these challenges are navigated within a real-world business context.To achieve this, the interview guide was designed around several thematic areas derived from the **literature review and theoretical frameworks**, such as the Dynamic Capabilities Theory, Resource-Based View (RBV), and sustainability-oriented innovation models. Each thematic area aimed to elicit insights into specific dimensions of sustainable business practices.

   Initial questions were designed to uncover how Pathao defines and integrates sustainability within its business model. These aimed to explore the company's long-term vision, operational philosophy, and strategic decisions that reflect its commitment to sustainable growth. The goal was to determine whether sustainability was embedded as a core value or treated as a secondary concern.

To gain a concrete understanding of how sustainability is applied on the ground, follow-up questions focused on specific strategies and initiatives Pathao had implemented in recent years. This included inquiries into the use of technology (e.g., AI and EVs), corporate social responsibility (CSR), eco-efficiency, and internal process innovations.

Understanding challenges and barriers was critical for answering the research question. Therefore, questions were designed to probe the financial, technological, and regulatory difficulties Pathao faced. Just as importantly, they aimed to reveal how the company responded through internal adaptation, external partnerships, or phased implementation approaches.

Another set of questions targeted the role of various departments (operations, marketing, CSR, etc.) to understand how sustainability was operationalized across functional boundaries. These helped assess whether sustainability was siloed or integrated into the company culture and decision-making structure.

To evaluate the influence of ecosystem factors, such as investor expectations, customer behavior, and policy environments—questions were designed to encourage interviewees to reflect on the external pressures and internal dynamics that shape sustainability decisions. This offered insight into how strategic choices are made in an evolving business and regulatory landscape.

Lastly, some questions were aimed at gathering personal experiences and contributions of each interviewee regarding sustainability. These were considerations that supplemented the data with context-specific examples, giving it a deeper appreciation of organizational behavior and personal initiative.

By setting the guide for the interview around these topics, the study ensured that not only would the answers be in a descriptive context but also related to the grand thesis goal: examining and studying sustainable growth practices in startups in the context of a case study—Pathao.

4. **Eliciting Contextual Examples:** To confirm that actual-life instances of use of sustainable development approaches were illustrated, the interviewees were asked to give direct examples from practice. By asking for direct circumstances, the hope was to find out about the "how" and "why" of the decisions made, not the theoretical points. This helped to ensure that the data were rich in context and detail (Bryman & Bell, 2015).

Example question:

   - Could you provide an example of a time when Pathao had to adapt its business strategy in response to market changes or new sustainability initiatives?

5. **Closing the Interview:** At the end of the interview, the participants were offered an opportunity to provide any last comments or additional information that they believed was relevant to the study. This provided interviewees with an opportunity to explain any information that they had not previously stated. All participants were thanked for their time and assured that their responses would be treated confidentially.

Interview Environment and Data Collection

All interviews were conducted using WhatsApp, Microsoft Teams, or Zoom to accommodate the remote nature of the research. These platforms enabled recording, fostering a more personal connection, and allowing for the observation of non-verbal cues, which helped capture emotional nuances and enhance the quality of the data (Myers, 2013). Video conferencing also allowed flexibility, ensuring that the interview process was convenient for participants.

To preserve anonymity, I only began recording after collecting basic demographic information and ensuring that informed consent was given. Interviews were conducted in both English and Bengali**,** the participants' native language, to ensure comfort and clarity. The recordings were securely stored on the Microsoft Teams platform in line with Jamk's research data policy, which stipulated that the recordings must be retained for two years and not deleted during that period.

Challenges in the Interview Process

Some challenges were encountered during the interview process, mainly due to network connectivity issues. On two occasions, the internet connection was poor, which slightly affected the flow of the interview. Despite this, the video interviews were otherwise uninterrupted, and participants were accommodated when rescheduling or experiencing technical difficulties.

3.4 Data Analysis

The data analysis in this study employed qualitative content analysis (QCA), a method particularly suited for the systematic interpretation of non-standardized textual data, such as interview transcripts, reports, and other qualitative materials (Schreier, 2012). This approach enabled a structured process of identifying, coding, and categorizing key themes and patterns within the data, which were then interpreted about the study goals and existing academic studies. Below, I will explain how the QCA approach was applied throughout the analysis process and highlight how the data-driven and theory-assisted approaches were utilized to refine the insights and conclusions.

Data Analysis Process

It was ensured that the interview recordings were transcribed promptly after each interview. A transcription was done by playing and pausing the recordings to capture the responses verbatim, except for thinking pauses and non-meaningful phrases (such as "um" or "uh"). Typing the responses ensured the avoidance of accidental data manipulation.

After transcription, a thematic analysis approach was employed to analyze the data. This involved coding the responses and identifying recurring patterns, themes, and significant insights related to the sustainable growth strategies employed by Pathao. The interview data were cross-verified with secondary sources, such as company reports and industry analyses, to ensure the reliability and validity of the findings (Yin, 2018). The practical process was performed using Microsoft Excel.

3.4.1 Transcribing and Organizing Data

Transcribing the interview recordings was the first step of the data analysis process. At the end of each interview, the interviews were transcribed verbatim in order to represent participants' responses in as faithful a way as possible, without omitting non-meaningful words (e.g., "um" or "uh") or thinking pauses. This helped maintain authenticity in responses and avoided accidental data manipulation. Every response of each participant was thoroughly noted and put together in a well-structured manner to make sure that all relevant observations concerning sustainable growth strategies used by Pathao were included.

Transcription was a critical part of the process since it provided the groundwork for analysis to come by presenting a coherent and clear text that could be analyzed systematically for recurring patterns and themes.

3.4.2 Initial Coding

Once the data were transcribed, the next stage was initial coding, where I systematically read through the transcripts in order to identify common themes, ideas, and keywords throughout sustainability and growth strategies. This involved the selection of specific comments and grouping them into categories based on resultant themes.

- The codes were developed through direct quotation or significant statements made by participants. For example.
- Data analytics and green fleet were put under the sustainability practices theme.
- Financial struggles and investments fell under the theme of sustainable growth barriers.

This primary coding enabled key concepts that were relevant to the study's underlying research questions to be identified. The data-driven approach was utilized at this stage, wherein the

themes emerged naturally from data itself, whereby no preconceptions were permitted to affect the process.

3.4.3 Hierarchical Classification

The data was classified into hierarchical levels to properly arrange it. The process started with broad subjects (main classes), which were further divided into narrower categories (first-class and subclass categories). The hierarchical arrangement gave a better, more precise understanding of the information and how it ties in with sustainable growth.

- **Main Class**: Sustainability Practices
    - **First-Class**: Eco-friendly fleet, Technological innovations
    - **Subclass**: Use of data analytics, Green technology investments
- **Main Class**: Barriers to Sustainability
    - **First-class**: Financial challenges, Technological limitations
    - **Subclass**: Securing funding, Adoption of new technologies

3.4.4 Theme Development

The next step was the development of central themes from analyzing positive and negative forces on Pathao's sustainable growth initiatives. The key themes were derived using a process that involved combining coding with thematic analysis, that is, processes like discovering patterns and relations between the data.

The most significant themes that were derived from the data were:

1. Sustainability-Driven Innovation: Pathao's focus on adopting sustainable practices by virtue of technological advancements, such as green vehicles and data-driven initiatives. This thread highlighted how Pathao has merged sustainability into its operational and technology-driven processes.

2. Financial and Technological Challenges: This theme highlighted the key barriers to implementing sustainable practices, including securing funding for green projects and overcoming technological hurdles. The interviewees identified these challenges as critical factors that hindered the company's full adoption of sustainability strategies.

3. Cross-Departmental Collaboration for Sustainability: The final core theme emerged around the importance of interdepartmental collaboration. It highlighted how operations, CSR, and marketing departments need to work together to promote sustainable growth within Pathao effectively. This theme emphasized the need for a holistic approach, where various departments collaborate to develop and execute sustainability initiatives.

3.4.5 Refinement of Insights Using a Theory-Assisted Approach

After the initial thematic analysis, the next step involved using a theory-assisted approach to refine and deepen the analysis. This stage was crucial for interpreting the emerging themes in light of existing literature. The theories of ecosystem orchestration and shared value creation were employed to understand how Pathao's collaborative efforts with suppliers, customers, and policymakers aligned with broader sustainability goals (Kanda et al., 2020; Parida et al., 2021). Overall, the theory of digitization for sustainable innovation (Schaltegger et al., 2020) helped. In. Addition. To. With. The. Examination. Of. Pathao's. Cloud. And. AI-based. Route. Optimization. And. Formulated. An. Additional. Link. Between. Empirical. Evidence. And. Theoretical. Frameworks.

Through the integration of theoretical models, the results of the analysis were placed, helping to explain why certain strategies succeeded in sustainable growth and ensuring that the outcomes were not only data-driven but also connected to previous research.

3.5 Validation

The structure of coding experienced a rigorous validity process aimed to protect against both the integrity of the accuracy as well as the integrity of the consistency of themes discovered and collected data from conducting interviews. The step was an essential one meant to ensure that the qualitative analysis was valid in that it was able to draw a close equivalence between the conceived themes from data and real feedback given by participants. By re-reading the transcripts carefully, I ensured that each theme accurately represented the opinions and experiences of the

participants. This avoided any potential bias or misinterpretation of data, as the emerging themes had to be based on the participants' own words and not affected by preconceived assumptions or theoretical preconceptions (Schreier, 2012). The process of validation also involved cross-referencing the emerging themes' findings with literature on sustainable growth strategies and business models. This was to ensure that the findings were consistent with the general body of academic literature on the topic and could be suitably contextualized within the current body of literature. This cross-referencing between empirical evidence and existing literature helped to enhance and strengthen the findings of the insights obtained from the interviews. It ensured that the themes that were identified were not only grounded in the real-life experiences of the participants but also consistent with the already established theoretical frameworks and concepts in the field of sustainable business practice (Yin, 2018).

A sample of this process of validation appears in the form of the "Financial and Technological Challenges" theme. This theme emerged very clearly through the interviews, as many participants talked about how Pathao finds it difficult to arrange suitable funding for its sustainability initiatives and how technological hurdles limit it from implementing greener methods successfully. To validate this theme, I compared it with what is already established about tech firms' sustainability barriers, namely Yin's (2018) article on how finances and technical competence are always cited as stringent barriers to implementing sustainable practices. Through comparison, this theme was validated as existing as well as being consistent with general study findings in the field.

By confirming the coding structure in this way, the analysis guaranteed that the results not only represented the interview data but also were underpinned by existing research, thus increasing the robustness and credibility of the findings of the study. This rigorous validation process also added to the overall research rigor, guaranteeing that the conclusions reached were sound and trustworthy (Denzin & Lincoln, 2011).

3.6 Verification of findings

For verifying the findings, a strict, multi-step process was adopted for the purpose of ascertaining that the findings of the study were not just accurate but also consistent, satisfying the condition of consistency of findings and correctness of interpretations. Consistency, in this context, refers to

the manner in which frequently the research results can be replicated. Simultaneously, validity pertains to the way authentic and truthful are the interpretations drawn out of the data are (Yin, 2018). In order to tackle these facets, a number of strategies were utilized to limit bias, maximize transparency, and guarantee the stability of the outcomes. The strategies wear:

Triangulation of Data Sources: One of the key strategies used to verify the findings was triangulation, which involves comparing data across multiple sources to confirm the consistency of the results. Triangulation enhances qualitative research quality and trustworthiness as it ensures the findings are not derived from a single point of data but rather express a larger and more comprehensive picture (Yin, 2018). Triangulation was achieved within this research through inter-blending interview details with secondary materials, such as company reports, business magazines, and scholarly studies of sustainable growth methods. This cross-validation of multiple data points enabled greater insight into Pathao's sustainable growth efforts without any specific source unfairly biasing the findings.

Member checking: This was another crucial method used. After the conduct of the interviews, a preliminary analysis of the findings and themes was presented to the selected interviewees to ensure that their answers had indeed been precisely recorded and understood. This enabled participants to confirm, rectify, or supplement their initial statements, and their opinions were portrayed genuinely (Lincoln & Guba, 1985). Member checking is crucial to increasing the credibility of the study since it makes sure that the researcher's interpretations are consistent with the original intentions of the participants.

Peer Debriefing: Peer debriefing was also a crucial component of the validation process. It involved participating in discussions with other colleagues or researchers who knew about the research topic but were not conducting the study themselves. These third-party reviewers were also constructive critics of the analysis, the coding scheme, and the provisional themes. Their responses provided the opportunity to catch on to blind spots, bias, or overlooked considerations in the research process and thus enhance the study's rigor (Mor-row, 2005). Peer debriefing diminishes the likelihood of researcher bias and improves the overall credibility of the findings.

Constant Comparison Method: Constant comparison methodology was applied in the entire process of data analysis, whereby there is ongoing comparison of new with existing data in regards to consistency regarding emerging themes. The cycle continued to assist in determining whether new themes were representative in particular in terms of accurately depicting participants' experience and were not abstracted from random or extraneous cases (Glaser & Strauss, 1967). The process of constant comparison allowed for a detailed analysis of the emergent themes to ensure they were comprehensive and applied uniformly across all interview data, thereby ensuring maximum validity of findings.

Clarification of Researcher Bias: To be responsible for guaranteeing the quality of the research, I made a deliberate effort to reflect on and consider any preconceptions or possible biases that may have played a role in the process of interpreting the data. The reflexivity was essential in ensuring that findings were derived from the data and not altered by the researcher's own beliefs or theoretical orientations (Finlay, 2002). By directly addressing any probable sources of bias, I ensured that the analysis was receptive and open to the data and not inappropriately tinted by preconceptions.

Verification with Literature: In addition to the aforementioned methods, the emerging themes were also compared with the available scholarly literature to further confirm findings. This involved checking the emerging themes developed against conventional theories and research on sustainability in business, e.g., when the "Financial and Technological Challenges" theme emerged, it was compared with the available literature on the sustainability hindrances in tech companies, including Yin's (2018) research. This verification process had the function of guaranteeing that results not only reflected participants' experiences, but also well-established theoretical frameworks used in sustainability research.

Clear Documentation of Data Collection and Analysis Procedures: Finally, to complement the research study, the transparency and replicability, all data gathering and analysis methods were well-documented. This clear and detailed chronicle presented a record of methodology that enabled other scholars to reproduce or replicate the study. Providing an open and comprehensive ac-

count of the research process is crucial for establishing a foundation from which credible and dependable results originate with a basis in rigor and reproducibility of qualitative research (Denzin & Lincoln, 2011).

By the use of these methodologies, the research offered guarantees of validity and reliability in the results by grounding them on empirical measures' evidence and solidly established theoretical frameworks. The multi-phased verification method ensured the research was credible. This enhanced its methodology and offered guarantees in the quality of the result as well as the transferability to the outside world of sustainable business models.

3.7 Ethical Considerations

Ethical Considerations in the Interview Process

Ethical considerations are a part of any research with human participants. In the present research, utmost care was taken throughout the interview process at each step to ensure the findings were valid and reliable. These ethical standards were used in all steps of the research process, right from the recruitment of participants to the collection of data and were particularly relevant to ensuring the rights and anonymity of the participants. This is an in-depth account of ethical implications carried out in the process of conducting the interview process within the research setting:

Informed Consent: Informed consent was of paramount importance, such that the participants ought to have a clear understanding of the aim, extent, and possible risks of the study before they could agree to participate. Informed consent is part of good ethical research since it safeguards the autonomy of the participants and ensures that participants volunteer for participation. In the current study, all participants were provided with a clear explanation of the research objectives, his/her role, and the kind of data to be collected via the interview. Participants were also informed that their involvement was entirely voluntary, and they could discontinue at any point without any negative consequence. This openness was important because it ensured that participants were free to make their own decision of whether to be included or not, according to a general comprehension of the character of the study and its effects. The participants were also promised that withdrawal would neither affect their relationship with the researcher nor with the organization.

By getting informed consent, the research maintains the research ethics for human subjects studies to guarantee that the rights of all the participants are assured and that they have control over participation. This also adds validity to the research by ensuring that the data collected are true examples of voluntary and informed contributions from participants.

Confidentiality: The other paramount ethical consideration was confidentiality, which was at the heart of winning the participants' trust and maintaining the integrity of the research process. Participants' anonymity was maintained rigorously throughout the research. That is, none of the participants' names, titles, or any other personally identifying information was divulged in the reports or results of the research. The other steps to ensure participants' identities were protected were that all the data was anonymized before analysis, and pseudonyms were used for the interviewees when presenting the results. Confidentiality of the interview data was of the highest order in ensuring the participants' comfort in providing honest and open responses without fear of any consequences. Apart from that, all recordings and transcripts of interviews were stored in secure storage with restricted access to the research team alone to avoid unauthorized usage or leakage of sensitive information. The confidentiality maintenance extends beyond protecting personal identifiers; it even covers the sensitive information that has been shared by the participants during the interview sessions. All of the views, organizational strategies, or internal information that could be sensitive were treated with confidentiality so that all responses were maintained privately throughout the research. This is in line with research ethical guidelines to ensure the rights of privacy and confidentiality of participants are upheld.

Recording Consent: Before the interviews were conducted, explicit consent was obtained from all participants to have their participation captured. Under the ethical process, participants were informed in advance that their interviews would be recorded to ensure data validity and to allow for a close analysis. Re-recording the interviews is also done in qualitative research, as it concerns recording responses as accurately as possible and allowing greater probing of the data. But participants must be informed of this practice and consent explicitly before anything is recorded. In the course of this research, the recording process was disclosed to the participants beforehand, including the purpose for which they were being undertaken, and measures for protecting their privacy. Participants were assured that they would use only the recordings for research and would neither pass them to anybody outside the research team nor hand them over to other bodies. Besides oral consent given while conducting the interview, written consent was also elicited during

the entire informed consent process. This dual layer of consent—both verbal and written—ensures that participants were fully aware of the recording and agreed to it freely, without any coercion or pressure. By adhering to this ethical standard, the study respected the rights of its participants and ensured that the data collection process was transparent and ethically sound.

4 Results

This chapter presents the study's findings based on five in-depth interviews with key stakeholders at Pathao. Each theme is directly linked to the research question: "How can startups achieve rapid growth while ensuring long-term sustainability in terms of environmental, social, and economic impact?" The themes have been derived based on the structure and flow of the interviews. Each section includes relevant interview questions to provide context, followed by the participants' responses, supported by thematic interpretation.

4.1 Strategic Integration of Innovation for Sustainable Growth at Pathao

Sustainability has become integral to Pathao's business model, particularly its innovation strategies. Across the interviews, it was evident that technological and operational innovation was not just a response to external pressures but a deliberate strategy to embed sustainability into core business functions. The participants consistently emphasized that sustainability and innovation were intertwined, with technology as both an enabler and a driver of long-term ecological and economic balance.

Interviewee 1, a senior executive in business development, highlighted the strategic intent behind technology adoption at Pathao:

> *"Our growth strategy is built on two things—diversification and innovation. Moreover, for us, innovation always has a sustainability angle. We are using AI to scale and optimize fuel use, reduce congestion, and improve service delivery."*

This quote reveals how Pathao perceives innovation not merely as a tool for expansion, but as a way to ensure efficiency and reduce negative environmental impact. Route optimization powered by AI was cited in interviews as a significant advancement that has significantly lowered

operational costs and carbon emissions. Pathao reduces idle time, improves delivery speed, and lowers fuel consumption by mapping optimal delivery and ride-sharing routes.

Interviewee 2, the operations manager, reinforced this by stating:

> *"One of our biggest innovations is the routing engine. It saved us fuel, time, and helped with environmental goals. We initially did it for cost reasons, but the environmental impact was huge. Later, it became a part of our sustainability plan."*

The unintended positive environmental outcome, which later became a planned strategy, exemplifies how startups like Pathao evolve towards sustainability through iterative learning. The company was able to sense the value of sustainable innovation, seize it, and transform it into an integrated business practice.

Another important innovation discussed was the integration of electric vehicles (EVs) into the Pathao delivery fleet. Interviewee 3, the marketing lead, explained:

> *"When we piloted electric bikes, the goal was to test new technologies. But once we saw the benefits—zero emissions, fewer breakdowns, and cost efficiency- we started thinking bigger. Now it's a key part of our long-term strategy."*

This proactive shift toward EVs highlights a dual benefit: environmental responsibility and operational efficiency. The adoption of EVs directly supports environmental innovation.

Interviewee 5, the CSR manager, also pointed out that Pathao's commitment to sustainability is a differentiator in the competitive Bangladeshi market:

> *"It is not just about technology. We position ourselves as a green brand. We talk about sustainability in our campaigns because our younger users care. Our innovations are a message—we are not just a ride-sharing company, we are a responsible business."*

This assertion proves that Pathao employs innovation for not only operating improvement but also for developing an image of being sustainable. Results reveal that the sustainability-driven innovation of Pathao operates at three levels: operation (e.g., optimizing routes), technology (e.g., embracing EVs), and symbol (e.g., being a green tech company). These innovations address short-run issues of efficiency and decide long-run directions of development.

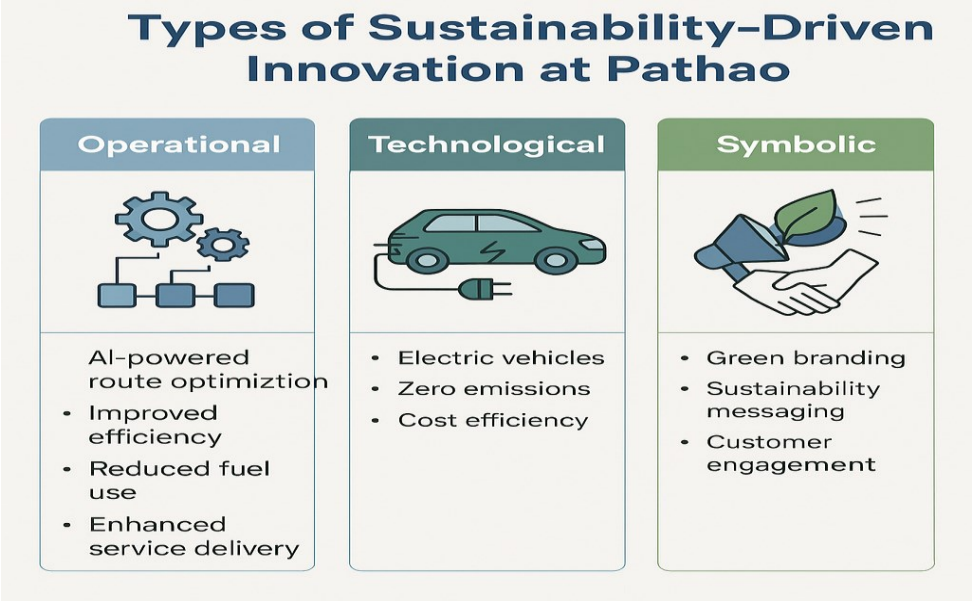

Figure 1. Types of sustainability-driven innovation at Pathao. OpenAI (2025).

This figure outlines how Pathao embeds sustainability in its core innovation framework, covering not only operational upgrades but also customer-facing services and business strategy transformations. It visually reinforces the multidimensional nature of sustainability-driven innovation at the company.

In summary, Pathao exemplifies how strategic innovation can bridge rapid growth and sustainable development. Where cost and efficiency were initially drivers, AI-based logistics and EVs have now emerged as strategies for long-term sustainability. Further, the symbolic value of sustainability-driven innovation, i.e., branding efforts, adds a social and reputational element to Pathao's impact. And that's how it shows that emerging economy startups can integrate sustainability in growth plans through employing innovation not just as a means of responding to constraint but to create responsible business strategies beforehand. Innovation driven by sustainability isn't an add-on at Pathao—it's a key facilitator of both environmental sustainability and economic success.

4.2 Financial and Technological Barriers

Although Pathao has gone a great distance in leading the way in sustainability in its operations, the path has not been smooth, with very critical challenges. The most striking among the challenges identified by the interviewees were finance and technology constraints—two of the usual hindrances that keep the company from expanding sustainable innovations. All these barriers resonate with the broader issues found in the literature for startups in emerging

economies, in which access to capital and infrastructure remains the biggest bottleneck for sustainable business models. Of all the important ones, the most significant was the expense involved in switching to electric vehicles (EVs). While interviewees appreciated the long-term savings of EVs, the initial procurement and maintenance costs were quoted as a significant barrier.

Interviewee 4, the analyst, stated:

> *"It's costly to commit to at the start. EVs need specialized maintenance, charging systems, and trained personnel. We can't use it at scale since the investment would have a materially negative impact on our near-term profitability."*

This financial concern echoes the tensions discussed in the Resource-Based View **(RBV)**, where firms struggle to transform valuable resources into competitive advantages due to budgetary limitations. For Pathao, the resource (green fleet) is strategically aligned with sustainable growth, but its full deployment remains constrained by capital availability.

Interviewee 2 elaborated further, pointing out the technological infrastructure gap:

> *"Even if we want to go full EV, the infrastructure isn't there. Charging stations are rare; power outages are common. We would have to build the system ourselves in some areas. That's not easy for a startup—even a big one like us."*

This challenge aligns with the literature term infrastructure asymmetry—a condition in which developing economies lack the foundational services needed to support sustainable technology deployment. It limits the company's current capacity and future planning, as innovation becomes reliant on external, slow-moving systemic improvements.

Beyond technology**,** securing financial backing for sustainability projects is also a problem. Interviewee 5, the CSR manager, noted:

> *"Investors usually ask how a project impacts revenue in the next quarter. They don't get excited when we say it's a green investment with long-term benefits. Getting internal or external buy-in is difficult unless we frame it as a cost-saving tool first."*

This sentiment reflects the short-termism many startups face, especially those backed by venture capital or operating under high growth pressure.

In addition to funding gaps, technical skill limitations also hinder sustainability implementation. According to Interviewee 1, *"You need data scientists, system engineers, EV specialists—and they are difficult to find. We sometimes must outsource, which is expensive and slows us down."* This quote underscores another layer of the challenge: human resource scarcity, especially in sustainability-related fields. As identified in the Dynamic Capabilities Theory, the ability to sense and seize new opportunities partly depends on the firm's internal knowledge and adaptability. Without local expertise in emerging green technologies, startups like Pathao face delays and inefficiencies in implementation.

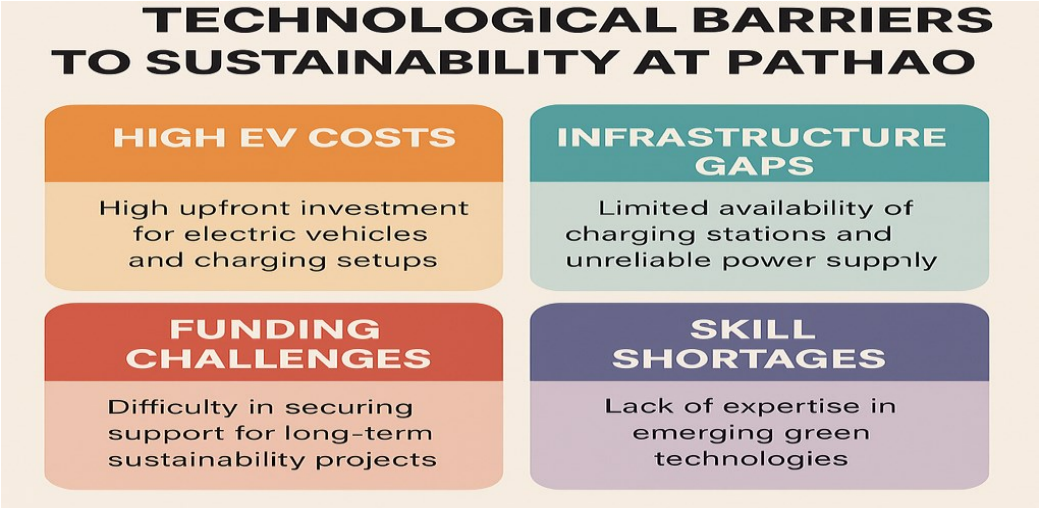

Figure 2. Financial and technological barriers to sustainability at Pathao. OpenAI (2025).

This infographic presents a dual-axis layout contrasting financial and technological barriers that hinder sustainability implementation at Pathao. On the left, it lists financial challenges such as high upfront costs, lack of green funding, and limited ROI visibility. To the right, it identifies technology constraints like obsolescence of infrastructure, lack of R&D resources, and platform interoperability challenges.

The diagram includes icons for every challenge, connected to a middle "Sustainability Ambition" node by dashed lines to represent partial fulfillment due to such challenges.

In addition, regulatory uncertainty brings an extra level of complexity. Interviewee 3 explained: *"We had an EV fuel subsidy project lined up with a municipal partner, but after several months, the policy switched. We had to drop it altogether. That kind of uncertainty stifles momentum."*

This parallels the broader concerns within the literature on policy instability in emerging economies, where startups exist against the backdrop of volatile policies that frustrate efforts at sustainability, even if they are viable and potentially transformative.

Technological and financial barriers are intimately interconnected in Pathao's pursuit of sustainability. Green technology's prohibitive upfront cost, lack of infrastructure, talent scarcity, and policy uncertainty constrain the company from embracing sustainable innovation wholeheartedly. The findings constitute a classic sustainability-growth quandary for startups: the mechanisms that facilitate long-term success are difficult to justify and realize in the short term. And yet Pathao's efforts to circumvent these hurdles—through cautious pilot programs, incremental rollout, and tactical rebranding—are a testament to perseverance and forward thinking.

4.3 Cross-Departmental Collaboration for Sustainability

Pathao's integration of sustainability goes beyond a single function or department and is instead an organization-wide, cross-cutting priority requiring proactive coordination between internal units. All the interviews strongly conveyed this theme and formed a pillar of the firm's sustainability narrative. Rather than being left entirely in the CSR team's hands, sustainability becomes a "shared responsibility" needing to be instilled in operations, technology, finance, marketing, and top management. This interdepartmental collaboration ensures that sustainability goals are not isolated ambitions but embedded in the company's decision-making processes.

Interviewee 5, the CSR Manager, summarized this dynamic:

> “Sustainability is not just our department’s job. Operations need to change how they dispatch, finance needs to budget for green projects, and marketing needs to communicate impact. If one part does not cooperate, it does not work.”

This quote underscores the importance of integrated thinking. It reflects what the literature terms internal ecosystem orchestration, where departments must align around common strategic goals to realize the benefits of sustainability. Without this alignment, sustainability efforts can remain fragmented or symbolic rather than transformational. Cross-functional integration is essential for complex initiatives like sustainability, which cut across traditional silos.

Interviewee 2 (Operations Manager) offered a practical example of this collaborative model in action:

> *"When we started optimizing routes to save fuel, we worked with the tech team to redesign the algorithm, with CSR to measure emissions reduction, and with finance to track cost savings. It wasn't just an ops project—it became an org-wide initiative."*

This instance demonstrates how sustainability-related innovation, here, AI-based route optimization, required multi-departmental input to succeed. It also highlights how collaboration amplifies value creation by ensuring that environmental benefits (fuel efficiency), technological innovation (AI development), and financial outcomes (cost savings) are all measured and aligned. This process reflects the Dynamic Capabilities Theory, particularly the ability of a firm to reconfigure its internal resources to adapt to changing strategic priorities like sustainability.

Interviewee 3 (Marketing Lead) further emphasized the communication implications of internal collaboration:

> *"The more we learn from other teams, the more effectively we can message our sustainability initiatives. If we do not understand the backend changes, we cannot meaningfully communicate the impact to customers."*

This insight illustrates that sustainability is not just about operational changes but also brand narrative and stakeholder communication. The marketing department at Pathao relies on real-time collaboration with other teams to accurately and authentically communicate the company's environmental and social initiatives. It supports brand-driven sustainability, which shows that customer trust and loyalty are often built through consistent, transparent, and informed messaging.

Despite these collaborative efforts, the lack of a formal sustainability governance structure was identified as a gap. Interviewee 1 (Senior Executive) commented:

"We're working toward a sustainability roadmap. However, it is still a bit fragmented—different teams are doing great things, but sometimes there is no alignment. We need a central vision to guide all departments."

This reflects a common challenge in high-*growth* startups. While active sustainability champions in various departments are a strength, the absence of a centralized roadmap or sustainability office may hinder coherence and scalability. Without formal coordination, efforts are liable to be duplicated, synergies lost, or collapse because there are no shared metrics. Pathao's relaxed, adaptable culture, however, has been the primary facilitator of cooperation. Interviewee 4 (Financial Analyst) stated:

"We are not a typical hierarchy. I directly ping the CSR or ops if I require something from them. Speed and transparency there make it easier to collaborate, especially for projects related to sustainability, where timing is everything."

This is also highlighted by the following quote, which highlights one of the most critical characteristics of startups: organizational agility. Pathao's decentralized culture and open communication have enabled rapid problem-solving, rapid implementation of new ideas, and loose cross-departmental collaboration strategy. These loose structures are not standardized but offer speed and flexibility—two attributes that are valuable in environments where growth and survival are strategic necessities.

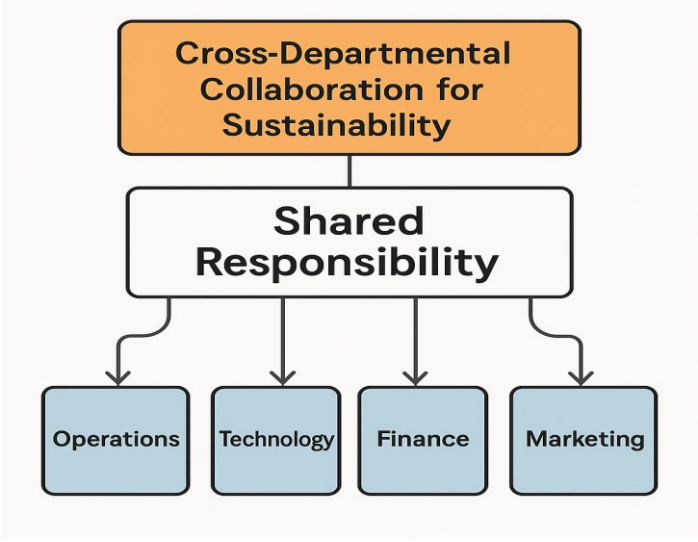

Figure 3. Cross-departmental collaboration model for sustainability at Pathao. OpenAI. (2025).

This flowchart infographic is centered with the concept of "Sustainability as Shared Responsibility" being at the center. Other departments like CSR, Operations, Finance, Technology, Marketing, and Senior Management are all connected to this node, reflecting their shared responsibility. It recognizes that although it is possible to have limits of formal arrangements, culture founded on speed, openness, and shared accountability assists in creating innovations and trending towards sustainability.

In conclusion, cross-functional cooperation has proven to be a backstop driver of Pathao's sustainability strategies. The convergence of various teams—operations, finance, CSR, tech, and marketing—has allowed the company to imagine, implement, and share its sustainability strategy well. While traditional arrangements such as a separate sustainability office or strategic plan are still yet to be established, the transparency in the company's culture, peer-to-peer accountability, and quick communication have allowed high levels of operational cooperation.

These findings suggest that open communication, internal alignment, and agile collaboration are as important as external collaborations or capital investments for startups adopting sustainability. The example of Pathao indicates how shared culture and deep informal relationships can replace lacking formal structures during the early phases of sustainable transformation.

4.4 Digital Transformation as a Growth Lever

Digital innovation has come forward as a backbone of Pathao's strategy toward ensuring scalability alongside sustainability. This dual-purpose strategy—leveraging technology to grow the business while minimizing environmental impact—resonates with contemporary research on digital entrepreneurship and sustainability in emerging markets. The interview data confirmed that Pathao’s digital tools, platforms, and processes have played a significant role in reshaping its operational model, enhancing customer engagement, reducing emissions, and informing data-driven decision-making across departments.

Interviewee 1 (Senior Executive, Business Development) emphasized the foundational role of data analytics, *“Everything we do is based on data—rider behavior, delivery times, fuel use. We track it, analyze it, and then optimize based on that. It’s how we move fast and sustainably.”* This digital-first mindset has enabled the company to build dynamic, feedback-driven systems that improve

decision-making in real time. The ability to monitor, evaluate, and improve internal operations through analytics provides a strong backbone for continuous improvement and sustainable innovation.

A standout innovation frequently mentioned in the interviews was Pathao's AI-powered route optimization system. Interviewee 2 (Operations Manager) explained, *"AI suggests to our riders the most efficient, quickest route. Not only is that good for the business—it cuts fuel consumption, emissions, and keeps our expenses minimal."*

This system exemplifies dual-value creation, a concept found in the literature on Business Model Innovation. It enhances the quality of customer satisfaction and services through quicker delivery times and is beneficial for sustainability with less emission of carbon, operational waste. The implementation of AI-based logistics solutions showcases how Pathao is using advanced technology not merely for efficiency but also as a driver of environmental impact reduction.

Beyond backend logistics, Pathao's customer-facing platforms—especially its mobile app—serve as a critical channel for sustainability engagement. Interviewee 3 (Marketing Lead) noted, *"Our primary channel of influence is the app. It enables us to communicate green initiatives, promote green behavior, and obtain instant feedback for new sustainability features."*

This observation illustrates how online instruments are being leveraged for interactive sustainability communication. The customers are not passively receiving but are actively engaged in the sustainability system. Green ride alternatives, eco-badges, and reward points in the event of frequent usage of electric vehicle rides facilitate behavior change and encourage customers to support Pathao's greater cause.

Pathao also automated its financial processes to enable sustainability efforts' ROI tracking and accountability. Interviewee 4 (Financial Analyst) added, *"Where we invest in a product such as electric cars or server efficiency, we are able to digitally observe savings in the long run. This helps us to support further investment in sustainability."*

This is an emerging practice of evidence-based justification of sustainability management. This is through electronic infrastructure that companies are able to quantify green projects and report performance to internal as well as external stakeholders like investors, consumers, and regulators.

It is notable in startups, where allocation of resources is highly justifiable and investments are long-term and scrutinized.

Secondly, Pathao's digital marketing has played a key role in solidifying the brand image of Pathao as a sustainable and cutting-edge tech business. Interviewee 3 explained further,

> *"We use SEO, social media, and mobile-based marketing to inform and attract our audience. Our sustainability message is now fully integrated into our brand identity—and especially with our younger customers."*

This branding strategy is consistent with digital sustainability branding literature, whereby companies apply digital sources to advertise openness, instruct users, and create cultures around common values. Pathao's use of interactive digital content, customer testimonials, and impact reports enables the company to forge deeper relationships with eco-conscious consumers and differentiate itself from competitors.

However, while digital transformation has enabled substantial progress, the interviews also revealed important limitations. Interviewee 5 (CSR Manager) pointed out:

> *"Digital tools are only as good as the data and the people using them. In Bangladesh, tech literacy varies a lot. Sometimes our riders or users do not fully benefit because they are not comfortable with all the features."*

This cautionary note highlights the persistent digital divide in emerging markets. While Pathao has made significant strides in digital innovation, its impact is partially limited by digital literacy and access disparities. Riders, drivers, and customers in rural or underserved areas may struggle to adopt or fully utilize the platform's advanced features. This reinforces the need for inclusive design and capacity-building initiatives, such as digital user training and simplified interfaces for low-tech environments.

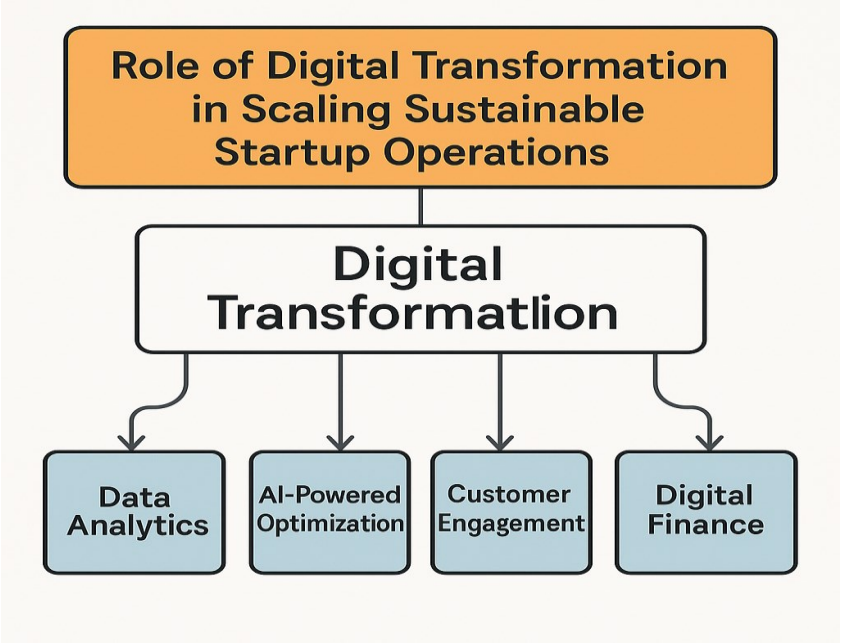

Figure 4. Role of digital transformation in scaling sustainable startup operations. OpenAI. (2025).

Figure 4 shows how technology helps startups like Pathao balance growth with sustainability. This infographic displays a core hub symbolizing 'sustainable operations', surrounded by the key enabling components: AI, data analytics, cloud computing, and digital platforms. These tools appear in the form of enhancing operational efficiency (e.g., route optimization, resource management), data-driven decision making, improving internal teamwork, and customer participative relationship management through transparency and sustainability tracking features. The diagram emphasizes that digital transformation is not only an enabler of innovation, but it also drives agility and integrated collaboration, which strengthens burn rate management and flexible multi-silo collaboration needed for startups in constantly evolving markets.

The ethical sacrifice of data was an underlying issue which did not receive much attention from the interviewees. With the ongoing advancement of their digital systems, companies like Pathao will have to develop strong data governance policies to prevent user data abuse and privacy violations, particularly concerning sensitive behavioral and location information, for data governance policies may lead to data misuse frameworks.

Pathao transforming digitally has achieved great strides in both growth and self-sustained operational effectiveness. The firm has integrated sustainability within its digital infrastructure, enabled by AI-powered logistics, interactive mobile participation, digitalized finance surveillance,

and strategic digital branding. These initiatives bolstered the overarching argument of the thesis that, through purposeful integration, technologies in their essence, digitally, operationally, and strategically, should not only function as tools but rather be used to nurture a sustainable business model.

At the same time, in order to realize the expected benefits, startups are advised to work on gaps in inclusion, the ethics of data usage, and the development of capabilities offered by emerging technologies. Pathao's case illustrates both the possibilities and limitations of digital sustainability in an emerging market context, providing valuable lessons for startups seeking to scale sustainably in similar environments.

4.5 Ecosystem Strategies and External Partnerships

While internal innovation and collaboration form the foundation of Pathao's sustainability efforts, the company's ability to sustain and scale these efforts also depends heavily on its interactions with the broader ecosystem. This includes collaborations with suppliers, technology partners, government agencies, NGOs, local businesses, and even its customer base. In the context of a developing economy like Bangladesh, where infrastructural deficits and policy instability are common, these partnerships are not simply beneficial but essential.

Interviewee 1 (Senior Executive, Business Development) expressed this need clearly, *"We can't build sustainable growth in isolation. From EV vendors to city transport authorities, we must work with others who influence our system."*

This perspective aligns closely with the concept of ecosystem orchestration (Parida et al., 2021), which holds that sustainable startups must cultivate and coordinate value across a network of interdependent actors. For Pathao, these external stakeholders are not peripheral—they are central to the execution of its sustainability strategy.

One of the most frequently cited examples of ecosystem engagement was Pathao's collaboration with electric vehicle (EV) suppliers. Interviewee 2 (Operations Manager) shared, *"We're not manufacturing EVs—we rely on external vendors. Our job is to make sure we are collaborating with suppliers who can offer quality, affordable, and sustainable solutions."*

This reflects a form of supply-side sustainability integration, where Pathao actively selects partners whose values and practices align with its sustainability goals. These collaborations not only help reduce emissions and fuel costs but also distribute the burden and benefits of sustainability investments—an embodiment of shared value creation. Suppliers gain new business opportunities while Pathao improves its environmental performance.

Interviewees also discussed government partnerships, though often with a degree of frustration. Regulatory support is critical for implementing larger sustainability infrastructure, but engagement with the public sector has been inconsistent. Interviewee 4 (Financial Analyst) included:

> *"We've attempted to get local governments on board for EV infrastructure or regulation of ride-sharing. At times, we're making headway, but the policy landscape is volatile. It's difficult to construct anything in the long term."*

This brings attention to the critical obstacle in emerging markets - institutional uncertainty. Even in the case that startups are cosiderate, policy changes, inconsistent implementation, and bureaucratic sluggishness can undermine foresighted planning. This problem is also discussed in the context of the regulatory voids within developing economies (Goyal et al., 2021). The authors describe how entrepreneurs often have to fill gaps created by inadequately designed regulation asjeeitsivate action.

With all these hurdles, Pathao has managed to strengthen partnerships with NGOs and other local organizations, especifically considering the CSR and the community impact initiatives. Interviewee 5 (CSR Manager) described:

> *"When we partner with green brands or NGOs, our reputation is boosted. We are seen by users as not just a company but as part of the solution. It creates loyalty."*

> *"Our CSR team works very closely with our NGOs on road safety initiatives, computer literacy, and even on environmental clean-up drives. These partnerships enhance our credibility and take our social influence beyond profit."*

These efforts help achieve social sustainability, which falls under the "people" and "planet" components of the Triple Bottom Line (TBL) framework. In addition, they offer reputational

advantages, constructing Pathao's legitimacy and social capital, prized resources in developing economies with scant trust in private businesses.

Ecosystem partnerships also have strategic value for brand equity. Interviewee 3 (Marketing Lead) shared the branding advantages:

This insight is consistent with the research on sustainability branding and stakeholder reputation, which posits that consumers tend to support companies with such a proven ethical record as undertaking socially responsible activities. Those are Pathao's marketed goals, and along with these partnerships, the narrative the marketing team seeks to build is a distinguishing one.

What I found surprising is that the ecosystem goes beyond institutional partners to also include customers, whom the company's sustainability policy increasingly relies on. As noted by Interviewee 2, "Users now expect companies to be responsible*. If we're not showing progress on sustainability, they will call us out. We get feedback on our carbon impact almost weekly."*

This reflects a broader trend of consumer co-creation in sustainability, where customers actively influence the direction of corporate behavior. The feedback loop created by app ratings, reviews, and direct messaging fosters a level of transparency and accountability that reinforces Pathao's commitment to improvement.

Moreover, Pathao's interactions with customers are not merely reactive. Interviewee 3 explained how digital tools are used to involve users proactively, *"We include sustainability metrics in the app. Users can see the impact of choosing electric rides or making eco-friendly decisions. It is not just data—it's empowerment."*

By integrating these metrics into the customer interface, Pathao enables its users to become co-participants in sustainability. This supports the literature on interactive sustainability platforms, which promote awareness, education, and behavioral change through user engagement.

In addition to customers and NGOs, Pathao collaborates with technology providers to pilot and scale digital innovations related to sustainability. These include data analytics platforms, fintech partners, and mobility tech firms. Although not all partnerships were mentioned by name, several interviewees confirmed that third-party collaborations are instrumental in upgrading the company's tech stack while remaining resource-efficient.

Despite the promise of these ecosystem strategies, there remain critical limitations. Several interviewees pointed to the lack of alignment between internal goals and external capabilities. Interviewee 1 mentioned, *"Sometimes we move faster than our partners. We have to go slow because not everyone's on the same page—especially government or older institutions."*

Dissimilarities along these lines have the potential to limit scalability from otherwise competent pilots. As measures to neutralize such risks, Pathao is exploring long-term memorandums of understanding and more formal arrangements to define responsibility and continuity along partner networks.

Pathao's external partnerships are not on the fringe of business—they are at the forefront of its long-term sustainable growth. From sustainable material sourcing and policy influencing to value co-creation with NGOs and engagement with customers, these partnerships go further, are more robust, and act more responsibly. The study discovers that collaboration in ecosystems enables startups to scale up sustainability measures that cannot be done alone.

But this strategy is not without its difficulties. Regulation volatility, capacity mismatches, and shifting stakeholder expectations are ongoing challenges and must be negotiated and reconciled. And yet, Pathao's experience demonstrates that active, inclusive, and strategic engagement with ecosystems can be a high-leverage facilitator of sustainable development in low-resource environments.

4.6 Operationalizing Sustainable Growth: Pathao's Strategic Response to Startup Challenges

This research, based on five indepth interviews of Pathao's significant stakeholders, paints the image of an extensively integrated and dynamic strategy of sustainable growth. These insights collectively respond to the central research question:

How can startups achieve rapid growth while ensuring long-term sustainability regarding environmental, social, and economic impact?

To answer this, the study identifies five interdependent themes that together form Pathao's Integrated Sustainable Growth Framework. Each theme reflects a core capability or strategic response observed in the company's operations and innovation processes.

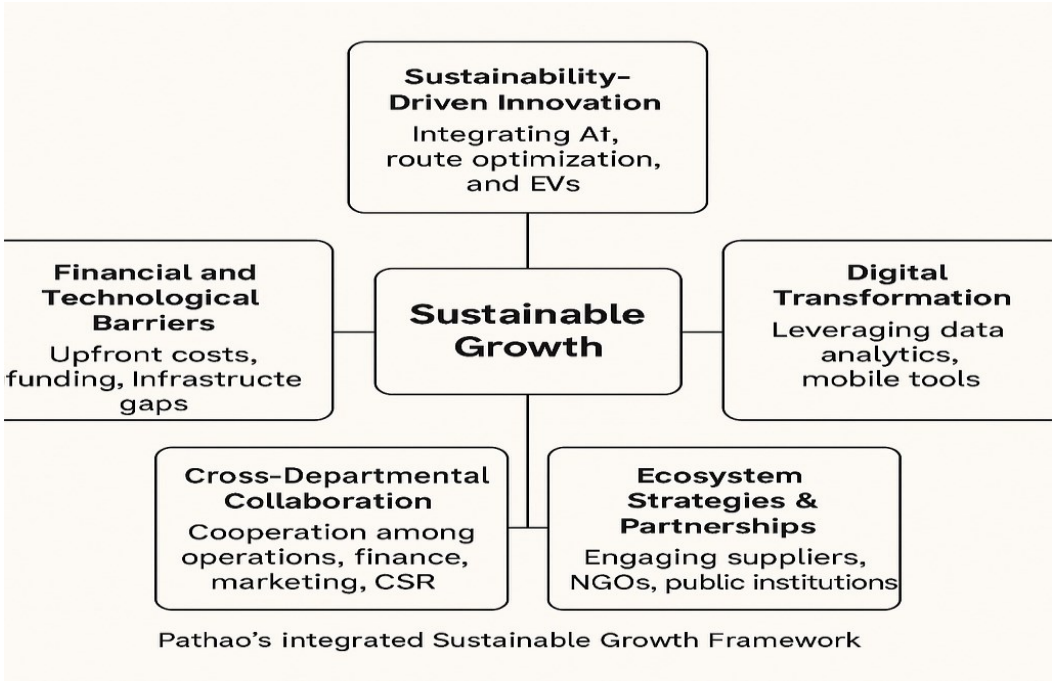

Figure 5. Pathao's Integrated Sustainable Growth Framework. OpenAI. 2025.

This diagram visualizes the five interconnected pillars through which Pathao drives sustainable growth: innovation, digital transformation, cross-department collaboration, ecosystem partnerships, and responses to financial and technological barriers.

Key Themes and Contributions

To deepen understanding of how sustainability is operationalized at Pathao, the following table synthesizes key themes identified through stakeholder interviews and maps them directly to strategic business contributions. This thematic mapping illustrates how sustainability is not treated as a peripheral initiative but as an integrated component of the startup's value creation process. Each topic reflects a clear link between ecological or social activity and measurable strategic result, presenting actionable insights to other startups who are experiencing identical growth-sustainability challenges.

Table 5. Mapping Pathao's Sustainable Innovation Strategies to Business Outcomes.

Theme	Core Insight	Strategic Contribution
Sustainability-Driven Innovation	Pathao integrates AI, route optimization, and EVs into its business to reduce costs and environmental impact.	Enables eco-efficiency, technological competitiveness, and brand differentiation.
Financial and Technological Barriers	High upfront costs, limited funding, and infrastructure gaps constrain the pace of green innovation.	Reveals the importance of phased innovation, lean investment models, and adaptive financing.
Cross-Departmental Collaboration	Sustainability initiatives require active cooperation among operations, finance, marketing, and CSR.	Promotes internal alignment and shared ownership of goals across departments.
Digital Transformation	AI, data analytics, and mobile tools are used to drive growth while monitoring and optimizing environmental performance.	Enhances performance tracking, operational efficiency, and user engagement around sustainability.
Ecosystem Strategies & Partnerships	Pathao leverages partnerships with suppliers, NGOs, and public institutions to expand its sustainability efforts.	Strengthens resource access, co-creation of solutions, and community impact.

This table answers the thesis question—What sustainable growth strategies are effective for startups globally?"—by mapping Pathao's sustainability efforts directly with some of its important business outcomes. It vindicates the fact that the sustainable growth of startups, with the example of Pathao, is based on embracing technology, collaborative strategic work, and ecosystem engagement. Each of the topics in the table, e.e, AI-enabling innovation, internal collaboration, and partnerships, demonstrates how sustainability is being worked out both in terms of its environmental impact as well as company performance. Such findings indicate that startups can sustainably scale up by incorporating sustainability into their core strategy, acquiring departments' unity of purpose by getting them onto the same goal, overcoming limitations of resources via phased innovation,

and leveraging electronic tools to measure and amplify progress. Lastly, the table verifies that sustainable strategies are both feasible and advantageous for startups with constraints in resources and high growth rates, thus fulfilling the thesis question through empirical knowledge.

5 Conclusion and Discussion

5.1 Pathways to Sustainable Growth for Startups

This study aimed to answer the research question: How can startups grow rapidly while ensuring long-term viability with respect to environmental, social, and economic impact? By using data gathered through interviews with Pathao's stakeholders, three operational enablers became evident. The first is sustainability-focused innovation. Pathao uses electric vehicles (EVs) and artificial intelligence (AI) for route optimization and eco-efficient logistics technologies to reduce emissions and costs, while adhering to the Triple Bottom Line (TBL) principle of profit, planet, and people products model (Elkington, 1997). The second is digital transformation and the digital capabilities of the firm that raise the ability to scale sustainably. Pathao uses digital tools like mobile apps, real-time data analysis, and ubiquitous cloud services to improve engagement with users, monitor emissions, and optimize emissions and operations, thus aligning with Bharadwaj et al. (2013), who confirmed the role of digital infrastructure in enhancing strategic agility. The third is sustainability through incremental implementation and learning. Pathao often runs green initiatives in controlled pilot mode prior to larger market rollout, essentially implementing a lean innovation strategy modeled in terms of the Dynamic Capabilities Theory (Teece, 2007), which emphasized adaptability in dynamic situations.

The findings not only identified new knowledge on technology and innovation but also the organizational and ecosystem level dynamics that underpin the ability of startups to manage the dual objectives of speed and sustainability. First, cross-departmental collaboration emerged as a key success factor. Sustainability is embedded across finance, operations, marketing, and CSR units, fostering shared ownership, goal alignment, and integrated execution. This collaborative model aligns with systems thinking and strengthens resilience. Second, strategic partnerships and ecosystem engagement were found to be indispensable. Pathao actively collaborates with NGOs, suppliers, and public institutions to share resources, co-develop solutions, and scale sustainable practices—illustrating the Resource-Based View (RBV) (Barney, 1991), where networks and

relationships are critical assets. Third, managing the tension between growth and sustainability is a recurring theme. Pathao adopts a “smart scaling” approach by embedding environmental and social considerations into its core business decisions, reflecting a strategic balance between long-term vision and short-term performance. This suggests that startups can grow responsibly by integrating sustainability into their DNA—not as a trade-off, but as a competitive advantage.

5.2 Managerial Implications for Startups Pursuing Sustainable Growth

The case study of Pathao offers valuable managerial insights into how startups can successfully integrate sustainability into their core business strategies and operations. Pathao has exemplified how embedding sustainability into its decision-making processes and across its operations can lead to not just environmental performance, but operational efficiency, customer loyalty, and ultimately long-term growth. Pathao debunks the idea that sustainability is something companies need to wait until they are large and established to pursue, or that it is an added burden for start-ups working within resource-constrained contexts. Pathao shows that start-ups can transact sustainability and use it as a differentiator in a competitive marketplace, even in resource-constrained contexts. This section outlines a bigger picture view applicable to every manager aspiring to develop sustainable practices and long-term value while navigating the challenges of growth and innovation. We will discuss three important managerial implications from the Pathao case that build upon initial research questions: integrating sustainability into business strategy, implementing lean and piloting innovation towards sustainability, and realizing that collaboration internally and ecosystem partnerships can provide sustainability scaling. Each implication offers a series of actionable recommendations for managers to follow through on creating long-term value and sustainable practices.

5.2.1 Integrating Sustainability into Core Business Strategy

The Pathao case study shows how incorporating sustainability into the fabric of the business model can yield real dividends in efficiency, customer trust, and longer-term viability. Rather than applying environmental responsibility as a secondary CSR intervention, Pathao embedded sustainability within its operational decision-making, particularly through route efficiency and pilot-scale testing of EVs. These efforts led to both a measurable reduction in fuel consumption and an improvement in delivery efficiency, directly supporting profitability. This approach aligns with Elking-

ton's (1997) triple bottom line framework, which advocates for balancing economic, environmental, and social outcomes to drive sustainable success. For managers, this suggests that embedding sustainability into core strategic thinking is not only ethically responsible but also economically rational.

Startups typically operate under high uncertainty and resource constraints, making it tempting to postpone sustainability considerations until after initial growth stages. However, the evidence from Pathao contradicts this tendency, demonstrating that early adoption of sustainable practices can lead to enhanced operational performance and differentiation in competitive markets. Moreover, environmentally-conscious strategies, such as eco-routing, support cost reduction while simultaneously improving the customer experience—an essential aspect in logistics and mobility services.

Another strategic implication concerns brand reputation. As revealed in the results chapter, Pathao's sustainability efforts contributed to a positive public image and increased trust among urban consumers, especially younger users who are more environmentally aware. This reinforces findings from past studies indicating that sustainability practices can serve as a form of reputational capital (Porter & Kramer, 2011). Managers should take note: adopting environmentally and socially responsible models early in a startup's life cycle can contribute significantly to brand building and stakeholder engagement. When sustainability is woven into the value proposition and not treated as an afterthought, it becomes a key driver of long-term growth and resilience.

5.2.2 Applying Lean, Pilot-Based Innovation to Sustainable Practices

One of the key managerial insights from Pathao's experience is the success of lean startup tactics in providing sustainability. Pathao's choice of rolling out sustainability-oriented innovations such as electric vehicles and intelligent route optimization through pilot stages before expanding it is a cost-effective and learning-based strategy. As discussed in the chapter on results, pilot projects enabled the company to extract operational data, conduct feasibility tests, and incorporate vital tweaks without committing vast quantities of financial capital upfront. This process aligns with Blank's (2013) lean startup mentality, which is centered on iterative experimentation, validated learning, and quick adaptation as fundamental to startup growth strategies.

For start-up managers, this approach provides a realistic framework for incorporating sustainability that balances innovation with financial prudence. Rather than launching complete-scale green initiatives that can strain available resources or encounter unforeseen problems, pilot-based implementation makes it possible to experiment in real-world operating settings. For Pathao's example, testing EVs within high-density areas where there existed long-standing logistical issues allowed the firm to gain insight into infrastructure limitations, availability of charging points, and consumer feedback before expanding.

Besides, these pilots created a culture of experimentation, intra-organizational learning, and ongoing improvement, drivers which are critical to rapidly evolving markets. Lean also reduced risks to new technologies and allowed Pathao to make evidence-based decisions. For example, emission monitoring software and user feedback data collected in the pilot were utilized to calibrate the company's broader sustainability strategy.

This experience demonstrates that pilot-based innovation is not only an expense-saving initiative but a strategy enabler for sustainable expansion. It can create agility and responsiveness while ensuring that investment in sustainability is connected to real needs and readiness in the market. Managers can implement this model to create capacity incrementally, de-risk the innovation pipeline, and guarantee that sustainability initiatives are yielding impact and performance.

5.2.3 Fostering Internal Collaboration and External Ecosystem Partnerships

A second major managerial lesson of the case study is the importance of organizational alignment and collaboration within an ecosystem in driving sustainability goals. Pathao's ability to mobilize cross-functional teams that cut across the spectrum from logistics to finance and marketing enabled a more integrated and embedded sustainability strategy. As brought out in the results chapter, these in-house partnerships enabled quicker decision-making, smoother project execution, and a more passionate cultural commitment towards environmental goals. This concurs with the reports of Epstein and Buhovac (2014), which argue that organizational integration is the main determinant of sustainability implementation.

Managers must encourage shared cross-departmental ownership of sustainability objectives through shared key performance indicators (KPIs) as well as open channels of communication.

Pathao's experience is that if sustainability is not departmental but shared, it gets ingrained in everyday activities better. In startups, where flexibility and coordination are essential, collaboration and silo-busting are required to sustain green innovations in the long term.

Externally, Pathao's strategic partnerships also helped overcome infrastructure limitations and knowledge gaps. Technical competence, access, sources of funding, and regulatory support came through partnerships with NGOs, universities, and government organizations. This illustrates Adner's (2017) ecosystem approach, where organizational success relies on the ability to effectively partner with actors in the broader innovation ecosystem. In practice, these partnerships allowed Pathao to accelerate pilot implementation, reduce project costs, and increase credibility with consumers and regulators.

The case thus points to the fact that sustainability is a network as opposed to an isolated effort. Managers should actively seek out stakeholders—whether public, private, or civic—who can co-create value and expand the firm's impact capacity. In emerging markets where institutional support is growing, leveraging external collaborations is not only beneficial but increasingly necessary for scalable and effective sustainability initiatives.

5.3 Theoretical Reflections on Pathao's Sustainable Growth Path

The findings from the Pathao case study align with and expand upon several key themes in the literature on sustainable growth strategies for startups. First, the integration of sustainability into core operations supports Elkington's (1997) triple bottom line framework, which argues that successful businesses balance economic, environmental, and social objectives. Pathao's strategic focus on eco-efficiency—demonstrated by route optimization and early-stage adoption of electric vehicles (EVs)—illustrates how sustainability can be positioned not merely as an ethical responsibility but as a source of competitive advantage. This is consistent with findings from Porter and Kramer (2011), who emphasize that creating shared value can simultaneously improve business performance and generate societal benefits.

Additionally, Pathao's early adoption of eco-friendly practices and their alignment within the company reflect the increasingly abundant literature promoting "sustainability-by-design" philosophies in start-up formation (Bocken et al., 2014). Instead of retrofits to go green following expansion,

Pathao actually integrated these early on in the business model. This differs from more conventional notions that place sustainability as a distal goal available only upon eventual financial security (Hall et al., 2010). Results point to the possibility that in emergent markets like Bangladesh, adopting sustainability from an early stage may produce a form of market differentiation and legitimacy all its own and support claims made by Cohen and Winn (2007) about resource constraints and environmental conditions fueling innovation and new venture possibility.

A further area of alignment with ongoing research is Pathao's pilot-based innovation strategy in implementing sustainability practices. The method is analogous to Blank's (2013) lean startup principle, whereby frequent testing and experimentation reduce risk and allow continuous learning. Pathao's step-by-step introduction of environmentally friendly logistics practices confirms the reality that startups can start to go out there and innovate as long as they prioritize experimentation and data-driven decision-making. This is in line with Ries' (2011) perspective that pilot implementation learning is essential for survival and growth in uncertain startup contexts. It also affirms recent empirical research (Fichter & Tiemann, 2020) that green startups are likely to leverage lean experimenting to further refine sustainability-driven value propositions before scaling.

Pathao's sustainability cross-function integration also demonstrates more recent research on internal organizational alignment. Epstein and Buhovac (2014) have also noted that successful sustainability programs require departmental alignment and leadership endorsement. Pathao's ability to involve finance, operations, marketing, and CSR in collective sustainability efforts gives weight to the argument that silo-based strategies are ineffective. The alignment within the company appeared to have facilitated faster adoption of green practices and improved monitoring of outcomes. This finding provides additional empirical evidence for the thesis that sustainable innovation must be ingrained in organizational culture and governance systems, as opposed to being a standalone function.

Externally, Pathao's partnerships with NGOs, government agencies, and universities are consistent with Adner (2017) ecosystem theory in the sense that innovation, particularly sustainability, requires partnerships outside the company. The case shows the extent to which ecosystem engagement could replace shortcomings in in-house capability, legitimize, and accelerate adoption. This is in line with research by Lüdeke-Freund et al. (2018), who argue that startups that have access to broader networks of stakeholders are in a better position to upscale sustainability innovations.

Pathao's case develops this idea further by showing how ecosystem partners also enable startups to overcome infrastructural and regulatory issues, particularly in emerging economies.

However, there are a few inconsistencies with respect to the earlier literature. While much of the literature discusses the long gestation periods and costs for sustainability transitions (Geels, 2011), Pathao's experience demonstrates that transitions can be implemented quickly with the appropriate use of digital platforms and data. This suggests that in the right method, technology-enabled start-ups can accelerate their sustainability adoption timelines if they incorporate analytics and agile practices. While literature generally concentrates on policy as a major facilitator or barrier to sustainability (Kivimaa & Kern, 2016), Pathao's relative level of autonomy suggests that start-ups can take a proactive role in sustainability without corresponding policy instruments and incentives—though Pathao did establish partnerships with public institutions, albeit an ancillary support role.

In summary, the case study findings largely reinforce existing academic perspectives on sustainable startup growth while offering novel insights into how digital mobility platforms in emerging markets can operationalize these principles. Pathao’s trajectory demonstrates that when startups embed sustainability into strategy, apply lean methods, and engage both internal teams and external stakeholders, they can overcome typical resource constraints and institutional gaps. These findings contribute to the ongoing refinement of sustainability theory in the context of rapidly scaling startups, particularly within developing country ecosystems.

5.4 Limitations of the Research

While the research provides significant insights into the sustainable growth strategies of Pathao, several limitations must be acknowledged, which may affect the generalizability and depth of the conclusions. These limitations provide context for interpreting the study’s findings and suggest areas for further research.

1. **Limited Generalizability**

One of the primary limitations of this study is its reliance on a single case study—Pathao, a digital mobility startup operating within the specific context of Bangladesh. While the detailed analysis of Pathao provides valuable insights, the findings may not be universally applicable to all startups,

particularly those in different industries or regions. Each startup operates in a unique socio-economic and cultural context, which influences its sustainability strategies and growth trajectories. The market maturity in Bangladesh, with its evolving infrastructure, regulatory challenges, and social norms, may differ significantly from that of more developed markets. Consequently, the conclusions drawn from this study may not be applicable to startups in more stable economies or industries unrelated to mobility services. For example, a startup in the tech industry may face different challenges and opportunities in integrating sustainability practices compared to a logistics-focused startup like Pathao. Future research could expand this study by exploring multiple case studies across different industries or geographical locations to determine whether the findings are generalizable or specific to Pathao's context (Yin, 2018). This approach would provide more robust insights into how startups globally can implement sustainable growth strategies.

2. **Data Availability and Reliability**

The second shortcoming of the study is that it is based on publicly disclosed data and interviews of Pathao's senior officials. Although such data provided some interesting qualitative observations, the study was plagued by limited availability and disclosure of some important data, namely, financial performance data and more detailed operational data. For instance, although Pathao uncovered valuable information about its sustainability practices, internal financial reports, long-term performance metrics, and confidential data on the impact of such practices on profitability as well as market growth were restricted. This limitation does not enable a stronger investigation of the direct financial impact of sustainability practices, which is a critical field to understand the overall value of such efforts for startups. Financial metrics such as return on investment (ROI) and cost savings due to sustainability programs would provide more information on the economic benefit of embracing sustainability in business models. Absence of these numbers of limits making conclusive conclusions about Pathao's financial sustainability in embracing green practices. Subsequent research can surpass this limitation by adopting a more diverse set of data sources, such as financial reports, customer activity data, or comparative analysis of similar firms, to assess the material impacts of sustainability efforts (Eisenhardt, 1989). This will increase the analysis and deliver a full picture of the economic impact of sustainability.

3. **Subjectivity in Qualitative Data Analysis**

This study relied primarily on Pathao's management team interview, qualitative data, and secondary data in the form of company reports, press releases, and industry publications. While qualitative research provides rich insights into the company's experience and strategy, it has the inherent drawback of subjectivity in interpreting data. Despite efforts to maintain the validity and reliability of the analysis, e.g., through systematic coding and data source triangulation, there remains a possibility that researcher bias influences qualitative data interpretation. The interviewees' perceptions, although insightful, will contain some organizational bias since they were directly involved in Pathao's sustainability efforts. Secondly, qualitative work can be undermined by the subject knowledge of the researcher, having an unconscious bearing on what findings are drawn from it. As a counteract to this pitfall, follow-up research can employ a mixed-methods study with qualitative research and quantitative data in the guise of surveys, financial data, or market analysis. This would help in triangulating the findings and enabling a more balanced and objective study of the efficiency of sustainability initiatives (Creswell & Plano Clark, 2018). Quantitative data analysis would also enable a more robust analysis of the correlation between sustainability activities and business performance.

4. **Limited Exploration of External Factors**

While this research focused on the internal approaches of Pathao in following sustainable growth strategies, it did not scrutinize the external environment that would have influenced these strategies. Government policy, market competition, economic climate, and social trends are some of the major determinants that form the environment for sustainability for startups. For example, policies and incentives offered by the government to promote sustainable transport within the mobility industry may have affected Pathao's decisions regarding the adoption of electric vehicles and route optimization. Similarly, competitive pressure from other mobility firms or the introduction of green technology may have affected the way Pathao approaches sustainability. Whereas the internal strategies of Pathao were analyzed in depth, the possible role of external stakeholders, such as regulators, industry associations, and consumers, was not explored properly. These external factors are often critical in determining the success or failure of sustainability initiatives, as startups typically operate in dynamic and interconnected environments. Future research could address this limitation by incorporating an external analysis of the regulatory, economic, and competitive landscape in which Pathao operates. A broader perspective would provide a more holistic view of the factors influencing sustainability strategies, including how startups navigate external pressures and opportunities (Kivimaa & Kern, 2016). Additionally, understanding how policy incentives or

market shifts impact sustainable innovation would contribute to the development of more effective frameworks for startup sustainability.

5.5 Recommendations for Future Research

Based on the research results and findings, there are some future study directions evident. These recommendations are provided to further develop an understanding of sustainable growth strategies in startups and add to theoretical development and applied knowledge.

1. **Comparative Cross-Industry and Cross-Geographical Case Studies**

Given that this study focused on Pathao, a single case within the digital mobility industry in Bangladesh, future research could explore comparative case studies across different industries and geographical regions. While the results from Pathao offer valuable insights, the sustainability challenges and solutions implemented in other sectors, such as tech, manufacturing, or consumer goods, might differ significantly. A cross-industry comparison would help determine whether the strategies observed at Pathao are unique to the digital mobility sector or applicable to a broader range of startups. Additionally, examining startups in different geographical contexts—particularly in developed economies or emerging markets with differing infrastructure and regulatory environments—would offer insights into the adaptability of sustainable growth practices. Cross-geography research can also indicate the manner in which regional indicators like government policies, market demand, and environmental concerns influence the formation of sustainable strategies. Such a comparative study can facilitate stronger generalizability and identify industry-level or region-level trends for startup sustainability (Yin, 2018).

2. **Longitudinal Studies on the Impact of Sustainability Campaigns**

Although this study provided valuable and important insights into the current sustainability practices of Pathao, it did not examine the longer-term impacts of such practices on business performance and growth. Longitudinal studies following startups over time would allow researchers to understand the extent to which sustainability practices affect company profitability, market share, and overall growth. Longitudinal studies could shed light on whether the original effects or benefits of sustainability (e.g., cost savings or enhanced brand reputation) eventually become longer-lasting competitive advantages. In addition, longitudinal methods could highlight some of the un-

intended consequences of sustainability practices in business that could have added costs or challenges when trying to scale up. By examining long-term implications, future literature could examine trade-offs and benefits regarding sustainable businesses over longer periods (Bocken et al., 2014).

3. **Exploration of External Factors and Ecosystem Dynamics**

Future research should further explore external drivers of sustainable startup growth. While this study focused primarily on Pathao's internal strategy, drivers such as government policy, market forces, consumer attitudes, and sector trends have a huge impact on a startup's strategy towards sustainability. Research can explore how policy incentives, regulatory policies, and public-private partnerships influence sustainable practices among startups. Additionally, the role of ecosystem forces, such as partnerships with research institutions, suppliers, and NGOs, in driving innovation and sustainability must be investigated. Understanding how outside stakeholders promote or undermine the path of a startup toward sustainability would inform the broader sustainability landscape. Rework on the dynamics of ecosystems can also consider the manner in which startups navigate collaborations with large enterprises, governments, and community organizations to achieve scalable and effective sustainability outcomes (Adner, 2017).

4. **Examining the Role of Digital Tools and Data Analytics**

The findings of this study underscore the importance of evidence-based decision-making for the establishment of sustainability practices. Future research could explore digital solutions, analytics, and AI usage to propel sustainability practices within startups. For instance, AI, machine learning, or big data analytics could be utilized by startups in various industries to make processes more efficient, reduce emissions, or maximize the allocation of resources. Research could take into account how startups implement these technologies to make indicators of sustainability more scalable and accurate, and the challenges that they face in utilizing such technologies. A deep dive into the digital transformation of sustainability practices could provide insights into how tech-driven solutions can complement traditional green initiatives and accelerate the path to sustainable growth.

5. Examining Financial Metrics and ROI of Sustainability Initiatives

Finally, future studies could focus on the financial metrics and return on investment (ROI) associated with sustainability initiatives in startups. As demonstrated in this study, while qualitative data on the implementation of sustainability practices was readily available, quantitative data such as financial performance indicators was limited. Exploring the financial returns on sustainability investments—such as cost savings from energy-efficient technologies, increased customer loyalty, and improved brand equity—would provide valuable insights for managers and investors. Understanding the ROI of sustainability initiatives is crucial for convincing stakeholders to commit to long-term investments in green practices. Future research could involve financial modeling or case studies that track the economic outcomes of sustainability practices, thereby filling an important gap in the literature on the financial viability of sustainable growth strategies for startups.

In conclusion, the recommendations for future research outlined above will enhance the academic understanding of how startups can successfully integrate sustainability into their growth strategies. These areas of research will not only provide deeper theoretical insights but also offer practical guidance for managers seeking to create value through sustainability. Future studies that extend the scope of this research and address the identified limitations will contribute to a more comprehensive framework for sustainable startup growth.

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Figures

Tables

Appendices

Appendix 1. **Interview Questions: Sustainable Growth Strategies for Pathao**

Question No.	Question	Response	Notes/Follow-up
1	Can you introduce yourself and your role at Pathao?		
2	How many years has Pathao been operating?	☐ Less than 1 year ☐ 1–3 years ☐ 4–6 years ☐ More than 6 years	
3	What were the key motivations behind launching Pathao?		
4	What are the core services offered by Pathao?	☐ Ride-sharing ☐ Food delivery ☐ E-commerce logistics ☐ Digital payments ☐ Other (please specify)	
5	What has been Pathao's primary strategy for sustainable growth?		
6	How has Pathao adapted its business model to compete with global and local competitors (e.g., Uber, Shohoz)?		
7	What role does innovation play in Pathao's business model?		
8	How did Pathao secure its initial funding, and what funding strategies have helped ensure sustainability?	☐ Bootstrapped ☐ Angel investors ☐ Venture capital ☐ Government grants ☐ Other (please specify)	
9	What challenges has Pathao faced in securing investment or financial sustainability?		
10	How does Pathao manage operational costs while maintaining growth?		
11	What strategies have been effective in acquiring and retaining customers?		
12	Has Pathao expanded to international markets? If yes, what challenges did it face?	☐ Yes ☐ No *(If yes, please specify challenges)*	

13	What has been the most successful marketing and branding strategy for Pathao?		
14	How does Pathao measure the success of its market expansion efforts?		
15	What technological innovations has Pathao implemented to scale its operations?		
16	Has Pathao adopted AI, automation, or data-driven decision-making processes?	☐ Yes ☐ No *(If yes, please elaborate)*	
17	How does Pathao leverage digital tools for operational efficiency?		
18	What are the biggest challenges in hiring and retaining talent for sustainable growth?		
19	How does Pathao maintain a strong company culture to support long-term success?		
20	What external factors (e.g., regulations, economic shifts, global crises) have significantly impacted Pathao's growth?		
21	How has Pathao adapted to economic downturns, fuel price hikes, or regulatory challenges?		
22	Do you think government policies and the startup ecosystem in Bangladesh support sustainable startup growth?	☐ Yes ☐ No *(If no, what improvements would you suggest?)*	
23	What steps has Pathao taken to ensure environmental sustainability in its operations?		
24	Has Pathao implemented any CSR (Corporate Social Responsibility) initiatives? If yes, what impact have they had?	☐ Yes ☐ No *(If yes, please specify)*	

25	What advice would you give to early-stage startups aiming for sustainable growth in a competitive market?		
26	Where do you see Pathao in the next five years?		
27	What key lessons has Pathao learned from its journey in building a sustainable startup?		

Appendix 2. Interview Transcript

Interviewee 1: Senior Executive (Business Development)
Date: [15/04/2025]
Duration: 40 minutes
Role: Senior Executive at Pathao
Topic: Sustainable Growth Strategies, Business Development

Introduction

Interviewer:
Thank you for joining me today. To start, could you introduce yourself and tell us about your role at Pathao?

Interviewee 1:
Sure, thank you for having me. I'm [Name], and I've been with Pathao for over six years now. I currently serve as a Senior Executive in the Business Development team. My role mainly revolves around identifying new business opportunities, forming strategic partnerships, and exploring ways for the company to diversify its revenue streams. I work closely with various teams to drive the company's expansion and sustainable growth strategies.

Interviewer:
That's great! Could you tell me more about how Pathao started and what motivated the launch of the company?

Interviewee 1:
Pathao was launched in 2015 with the idea of solving a very basic problem: inefficient transportation. At that time, Bangladesh lacked a reliable and affordable transportation system, and we wanted to change that. We started as a ride-sharing platform, but over time, we saw potential to expand into other services, like food delivery and logistics. Our motivation has always been to fill

gaps in the local market, providing more convenience to people while also creating business opportunities.

Interviewer:
What were some of the key motivations behind expanding beyond ride-sharing into other services?

Interviewee 1:
Great question. Initially, our focus was purely on the ride-sharing aspect. But as we gained more customers and built brand recognition, we started to realize that diversifying into other areas could mitigate risks and increase our market presence. For instance, food delivery services are a natural extension of ride-sharing. We already had the delivery infrastructure in place, and it made sense to offer food delivery as well. Similarly, expanding into e-commerce logistics was another step toward creating a full-service platform. Diversification has allowed us to build more stable revenue streams, especially when one service faces market fluctuations.

Sustainable Growth Strategy

Interviewer:
What would you say has been Pathao's primary strategy for ensuring sustainable growth?

Interviewee 1:
Pathao's growth strategy is based on two major pillars: diversification and innovation. Diversification has been key to our success, as I mentioned before. We don't want to depend on just one stream of revenue. By introducing services like Pathao Food and Pathao E-commerce, we've been able to capture more market share and expand into sectors with less competition. The second pillar is innovation. We constantly look at new technologies to improve our services and customer experience. For example, we've invested heavily in route optimization algorithms, AI, and machine learning to streamline our logistics and ride-sharing operations. These innovations help us reduce costs, improve efficiency, and scale faster.

Interviewer:
Can you explain a bit more about how technology, specifically AI, plays a role in your business model?

Interviewee 1:
Sure! AI is embedded into our operations at several levels. One major application is in route optimization for our ride-sharing service. We use AI to calculate the most efficient routes for our drivers, which helps reduce fuel consumption and overall operational costs. AI also plays a role in our food delivery service. By analyzing customer preferences and ordering patterns, we can predict demand and optimize delivery schedules. Essentially, technology helps us make data-driven decisions that improve service efficiency and customer satisfaction.

Interviewer:
That's fascinating! Now, Pathao has seen rapid growth. How have you managed to sustain this growth in a highly competitive market?

Interviewee 1:
It's been a combination of factors. First, we've been able to maintain a strong local presence. Unlike global competitors like Uber, we understand the local market's dynamics, needs, and preferences. We can adjust our services and operations to meet those needs quickly. Additionally, we have a deep connection with our customers, which allows us to improve our offerings based on real-time feedback. Our growth has also been sustained by our ability to innovate and diversify, as I mentioned earlier. We have built a loyal customer base, and we continue to enhance our brand's value through new services, promotional strategies, and loyalty programs.

Challenges and Competition

Interviewer:
What would you say are the biggest challenges Pathao faces in maintaining its growth, especially considering competition from companies like Uber and local startups like Shohoz?

Interviewee 1:
The competition is definitely fierce. Uber is a global player with deep pockets, and Shohoz is a strong local competitor. One of the biggest challenges we face is maintaining differentiation. Many of these competitors offer similar services, so the key for us is to remain agile and responsive to market needs. Another challenge is scaling operations, especially in new cities or international markets. Logistics and customer acquisition can be more difficult in those areas, and you have to ensure that the infrastructure is ready to handle the growth. But as I mentioned earlier, our local knowledge and ability to adapt quickly give us an edge. We keep a close eye on the market and make decisions based on what's best for our customers.

Interviewer:
What steps has Pathao taken to differentiate itself from global competitors and local players?

Interviewee 1:
Our differentiation strategy revolves around understanding our customers better than anyone else. We've invested heavily in data analytics to understand customer behavior and preferences. For instance, we personalize offers and incentives based on user data. We've also focused on developing a strong local brand identity. Pathao is not just a service; it's a part of the local culture. Whether it's through our partnerships with local businesses or our involvement in community initiatives, we try to align ourselves with the values and needs of our customers. We've also made sure that our services remain affordable, and we offer flexible payment options, which appeal to a wide demographic in Bangladesh.

Conclusion of Interview

Interviewer:
It’s clear that Pathao’s growth has been driven by both innovation and a deep understanding of the local market. Before we wrap up, what advice would you give to early-stage startups looking to achieve sustainable growth?

Interviewee 1:
I believe the best advice would be to remain customer focused. If you know your customers' requirements, you can design your services and operations to suit them. Diversification is necessary, but do not lose sight of your core offering. And lastly, invest in technology from the very start. It's natural that you would want to delay investments in technology because they are costly, but if you wish to scale, technology is something that you cannot do without.

Interviewer:
Thank you so much for sharing your insights today. Your experience and thoughts will be invaluable for this research.

Interviewee 1:
You’re welcome! It was a pleasure.

Interview Transcript: Interviewee 2

Interviewee 2: Operations Manager (Logistics and Expansion)
Date: [15/04/2025]
Duration: 40 minutes
Role: Operations Manager at Pathao
Topic: Sustainable Growth Strategies, Logistics, and Expansion

Introduction

Interviewer:
Thank you for joining me today. Could you please introduce yourself and tell us about your role at Pathao?

Interviewee 2:
Absolutely. My name is [Name], and I’ve been with Pathao for over five years. As the Operations Manager, my responsibilities involve overseeing logistics, managing expansion into new territories, and ensuring that we have the necessary infrastructure to support our growth. I’m deeply involved in managing the supply chain, ensuring that all logistics are efficiently aligned, and handling the operational challenges that arise during our expansion phases.

Interviewer:
That sounds like a crucial role! Could you describe the main motivations behind Pathao's decision to expand into new regions?

Interviewee 2:
The decision to expand was driven by a few factors. First, we saw the potential to capture a larger market by extending our service beyond Dhaka. There's an increasing demand for our services across Bangladesh, and we wanted to be the first to tap into these new markets. Expansion was also a way for us to diversify our revenue sources and reduce risks associated with market saturation in our initial regions. The challenge, however, was ensuring that we maintained service quality and operational efficiency in these new areas.

Sustainable Growth Strategy

Interviewer:
Pathao has grown significantly in a short amount of time. What has been your role in ensuring the company's growth is sustainable?

Interviewee 2:
Sustainable growth has been at the heart of our expansion strategy. We've made it a priority to ensure that as we grow, we maintain operational efficiency and high service standards. This involves making sure that our infrastructure can handle the increased demand and that we're scaling our operations in a manageable way. We've also focused on building strong local teams in each new area, which helps us remain adaptable and responsive to the specific challenges each region presents.

Interviewer:
How do you ensure that Pathao's logistical operations are aligned with the company's growth strategy?

Interviewee 2:
Logistics play a crucial role in our growth, especially as we scale our services. We make use of data analytics to optimize routes for delivery and ride-sharing. This helps in reducing operational costs and improving delivery speed. Additionally, as we expand into new regions, we make sure that we've built the infrastructure — such as warehouses and partner networks — before launching our services. This ensures that there are no gaps in service delivery. We also regularly update our supply chain processes to improve efficiency and scale sustainably.

Challenges in Expansion and Competition

Interviewer:
As Pathao continues to expand, what are some of the biggest challenges you face in logistics and regional growth?

Interviewee 2:
One of the biggest challenges is maintaining consistent service quality during rapid expansion. For example, in a new market, there might be initial teething problems such as delays in deliveries or driver shortages. We've had to invest in local teams and training programs to ensure our services are up to standard. Another major challenge is infrastructure. While we have the technology to scale, physical infrastructure like warehouses, transportation, and local partnerships must be set up efficiently to support growth. We also face competition from other local players, so we need to offer value that others aren't providing.

Interviewer:
How does Pathao plan to manage these operational challenges and maintain its competitive edge?

Interviewee 2:
Our plan is to focus on a few key areas: efficiency, technology, and customer satisfaction. By constantly optimizing our logistical operations through data, we ensure we're not just growing in terms of geographical reach, but also improving service quality. We're always testing new ways to make our operations more efficient, from route optimization to automated inventory management. By keeping costs low and service high, we're able to offer better value to customers than many of our competitors. Additionally, our deep understanding of local dynamics gives us a unique advantage that global competitors like Uber don't have.

Conclusion of Interview

Interviewer:
Before we conclude, what advice would you give to early-stage startups looking to scale their operations efficiently?

Interviewee 2:
My advice would be to build a solid foundation first. Focus on creating a robust logistical and operational infrastructure that can handle growth. Make sure that your systems, whether it's technology or human resources, are scalable. Also, don't underestimate the importance of local knowledge — understanding the market and customer needs is crucial. Finally, always prioritize customer satisfaction. If your customers are happy, they will help fuel your growth.

Interviewer:
Thank you for your insights today. This has been incredibly helpful.

Interviewee 2:
You're welcome! I hope the information helps with your research.

Interview Transcript: Interviewee 3

Interviewee 3: Marketing Lead (Branding and Customer Engagement)
Date: [17/04/2025]
Duration: 40 minutes
Role: Marketing Lead at Pathao
Topic: Sustainable Growth Strategies, Branding and Customer Engagement

Introduction

Interviewer:
Thank you for speaking with me today. Could you introduce yourself and tell us about your role at Pathao?

Interviewee 3:
Of course! I'm [Name], and I have been with Pathao for about five years. I lead the marketing department, where my main focus is on branding, customer acquisition, and retention. I manage all our marketing strategies, campaigns, and public relations efforts. Our goal is to build a strong, recognizable brand while ensuring that we're meeting customer expectations and continuously improving our engagement with them.

Interviewer:
How has Pathao's branding evolved over time, and what strategies have been key to building a strong brand?

Interviewee 3:
Our brand has evolved significantly. Initially, we were known simply for offering affordable ride-sharing services, but as we expanded, we wanted to ensure that our brand communicated more than just convenience. We wanted to be seen as a trusted partner for our customers' daily needs. Our key strategies have been focused on customer-centric messaging and community-building efforts. For example, we've hosted local events, partnered with influential figures, and made sure that our communication is always authentic and engaging. We also use data to personalize offers and create targeted marketing campaigns, which helps us connect with customers in a more meaningful way.

Sustainable Growth Strategy

Interviewer:
What role has marketing played in Pathao's sustainable growth strategy?

Interviewee 3:
Marketing has played a huge role in sustaining our growth. We focus on long-term customer retention through loyalty programs and personalized campaigns, which is far more sustainable than

short-term marketing pushes. We also build our marketing strategies around feedback and data analysis, so we're always adapting to changing customer preferences. This helps us stay relevant and ensure our customers remain engaged with the brand, leading to more consistent growth over time.

Interviewer:
Can you explain how Pathao's digital marketing strategies support its expansion and long-term growth?

Interviewee 3:
Digital marketing is a cornerstone of our strategy. We've used social media to build brand recognition, but we've also leaned heavily into search engine optimization (SEO) and app-based marketing to ensure that we're always visible to our target audience. Additionally, we've developed targeted campaigns through digital channels such as Facebook and Instagram, which allow us to directly engage with customers. Through app push notifications and in-app offers, we encourage customers to use our services more frequently, which enhances their loyalty. This constant engagement has been vital in ensuring our services remain top of mind for users, even as we expand into new regions.

Challenges and Opportunities

Interviewer:
What have been some of the biggest challenges Pathao has faced in terms of customer acquisition and retention?

Interviewee 3:
The biggest challenge we face is the high level of competition in the market. As the ride-sharing and food delivery sectors grow, more players enter the market, which increases customer expectations. To overcome this, we've had to continually innovate our marketing strategies and improve customer engagement. We also face challenges in maintaining service quality, which impacts customer retention. Ensuring that we have enough drivers, fast deliveries, and excellent customer service is crucial for keeping our users satisfied.

Conclusion of Interview

Interviewer:
Before we wrap up, what advice would you give to early-stage startups looking to build a strong brand and maintain customer engagement?

Interviewee 3:
I'd say focus on authenticity and customer feedback. Build a brand that resonates with people on an emotional level, not just on a functional level. Engage with your customers frequently, listen to

their concerns, and adapt your strategies based on their needs. Consistency is key — if you can consistently deliver value, customers will stay loyal.

Interviewer:
Thank you so much for sharing your thoughts today!

Interviewee 3:
It was my pleasure! Good luck with your research.

Interview Transcript : Interviewee 4

Interviewee 4: Financial Analyst (Financial Sustainability)
Date: [17/04/2025]
Duration: 40 minutes
Role: Financial Analyst at Pathao
Topic: Sustainable Growth Strategies, Financial Sustainability

Introduction

Interviewer:
Thank you for your time today. Could you start by introducing yourself and your role at Pathao?

Interviewee 4:
Sure, my name is [Name], and I've been working at Pathao for four years. As a Financial Analyst, my role involves managing the financial health of the company, analyzing cash flow, forecasting financial needs, and advising on sustainable financial strategies. I work closely with our management team to ensure we have the resources to scale while also maintaining profitability.

Interviewer:
How has Pathao secured its initial funding, and what strategies have been employed to ensure financial sustainability?

Interviewee 4:
Pathao initially secured funding from a mix of angel investors and venture capital. This allowed us to invest in infrastructure and technology to scale our services. Over time, we've focused on diversifying our revenue streams to reduce dependency on one single service. We also prioritize cost efficiency, especially in logistics and operations, which helps us maintain healthy margins. Financial sustainability is key, and we balance growth with managing our expenses to ensure we're building a business that can thrive long-term.

Sustainable Growth Strategy

Interviewer:
How does Pathao manage its financial risks while pursuing expansion and growth?

Interviewee 4:
Managing financial risks is critical, especially when scaling. We do this by constantly monitoring our cash flow, diversifying our services to reduce reliance on one area, and keeping a close eye on operational costs. We also seek funding in rounds so we're not over-leveraged. Expansion brings a lot of uncertainty, but we try to mitigate this through detailed financial planning and risk assessments.

Challenges and Competition

Interviewer:
What are the major financial challenges Pathao has faced, particularly during its growth phase?

Interviewee 4:
One of the biggest challenges has been managing cash flow during periods of rapid expansion. When you expand quickly, there are high upfront costs, especially related to infrastructure and recruitment. Balancing these with the revenue generated is a constant challenge. We've also faced competition for funding, as many startups are vying for investment. To manage this, we ensure we have a clear financial strategy and continue to show potential investors that we are on a path toward long-term profitability.

Conclusion of Interview

Interviewer:
What advice would you offer to early-stage startups looking to ensure financial sustainability while scaling?

Interviewee 4:
My advice would be to plan your financials meticulously. Don't chase growth for growth's sake — make sure you can sustain that growth over time. Diversify your revenue sources, monitor your cash flow carefully, and always have contingency plans in place for financial risks.

Interviewer:
Thank you so much for your insights today. This has been extremely valuable for my research.

Interviewee 4:
You're welcome! I'm glad I could help.

Interview Transcript : Interviewee 5: CSR Manager (Corporate Social Responsibility)

Date: [20/04/2025]
Duration: 40 minutes
Role: CSR Manager at Pathao
Topic: Sustainable Growth Strategies, Corporate Social Responsibility (CSR)

Introduction

Interviewer:
Thank you for taking the time to speak with me today. Can you start by introducing yourself and explaining your role at Pathao?

Interviewee 5 (CSR Manager):
Absolutely! My name is [Name], and I've been with Pathao for the past five years. As the CSR Manager, I oversee all of our corporate social responsibility initiatives, which are focused on promoting social and environmental sustainability. My role is about ensuring that we're contributing positively to the communities in which we operate, and that our growth aligns with ethical and sustainable practices. I work closely with our sustainability and community outreach teams, ensuring that we are both meeting business objectives and making a positive impact on society.

Interviewer:
What is Pathao's approach to CSR, and how does it tie into the company's sustainable growth strategy?

Interviewee 5:
At Pathao, our approach to CSR is integrated into our overall business strategy. We believe that long-term success isn't just about financial growth, but also about giving back to the community and maintaining ethical business practices. We focus on three main pillars: social responsibility, environmental sustainability, and employee welfare. For instance, we run initiatives to provide mobility solutions for underserved communities, reduce our carbon footprint, and ensure fair labor practices for all employees. All of this is aligned with our mission to grow sustainably and contribute to a better society.

Sustainable Growth Strategy and CSR Impact

Interviewer:
Can you provide some examples of specific CSR initiatives that Pathao has implemented to support sustainable growth?

Interviewee 5:
Yes, of course. One major initiative we've implemented is our electric vehicle (EV) program. As part of our commitment to reducing our carbon footprint, we've started transitioning some of our ride-sharing fleet to electric vehicles. This not only reduces emissions but also sets a positive ex-

ample for other companies in the industry. Another key initiative is our community-based programs, where we partner with local organizations to provide job opportunities to marginalized groups. This helps to support economic development in underserved areas, while also providing our drivers with more opportunities for stable work.

In terms of employee welfare, we have several programs aimed at ensuring a healthy work-life balance and offering professional development opportunities. We're also committed to ensuring gender equality within the workplace, and we've implemented policies that support diversity and inclusion across all levels of the company.

Interviewer:
How does CSR play a role in retaining customers and attracting new users?

Interviewee 5:
CSR is a vital part of building trust with our users. Many consumers today are more socially conscious and prefer to do business with companies that are ethical and environmentally responsible. By demonstrating that we care about the environment and society, we build a stronger connection with our customers. We also believe that our CSR efforts lead to customer loyalty because people are more likely to continue supporting a company they see as contributing positively to society. For example, our electric vehicle program has garnered positive feedback from users who are particularly interested in supporting eco-friendly initiatives. Our community outreach programs also resonate with people who are passionate about social impact.

Additionally, our CSR efforts are often highlighted in marketing campaigns, which helps to attract customers who share our values. The more we align our operations with sustainability and social responsibility, the more we attract like-minded individuals who value these principles.

CSR Challenges and Solutions

Interviewer:
What are some of the biggest challenges that Pathao faces in implementing CSR initiatives, especially as the company scales?

Interviewee 5:
One major challenge is ensuring that our CSR initiatives are sustainable and scalable. As we expand into new markets, it's essential to adapt our programs to the specific needs and challenges of each region. For example, while electric vehicles may be a feasible solution in Dhaka, it may not be as practical in rural areas where charging infrastructure is limited. So, we need to tailor our sustainability initiatives based on regional capabilities.

Another challenge is managing the costs of implementing these programs, especially when we're in a competitive industry where margins can be tight. However, we view CSR as an investment in our long-term success. We believe that by focusing on sustainability and social responsibility, we

are building a more resilient business. These efforts also lead to greater customer loyalty, brand equity, and employee retention, which in turn support our growth.

Interviewer:
How do you measure the impact of your CSR programs?

Interviewee 5:
Our CSR programs are evaluated using a mix of qualitative and quantitative indicators. We measure the reduction in CO2 emissions from our electric vehicle program or an increasing number of electric vehicles with tracking participation deployed through the fleet. We also conduct qualitative surveys to get real feedback from customers on how they perceive us on the environmental scale.

On our community programs, we track the total number of people which own benefited from career prospects and measure social mobility gains among marginalized groups. We measure employee satisfaction by conducting surveys and retention rates to evaluate the success of our internal welfare programs.

We keep stakeholders and the wider public fully apprised of our progress on these measures through regular CSR reporting, which we know will assist in delivering transparent, robust standards for CSR efforts.

Role of CSR in Long-Term Sustainability

Interviewer:
In your view, how does CSR contribute to the long-term sustainability of Pathao?

Interviewee 5:
CSR is essential for Pathao's long-term sustainability because it builds a strong foundation of trust, loyalty, and brand equity. By embedding CSR into our business model, we're not just focusing on short-term profits but on creating value for society and the environment. This helps to protect our reputation and fosters goodwill with both customers and employees.

Additionally, our CSR programs align with the global shift towards sustainability. Consumers and governments are increasingly focusing on sustainability and responsible business practices. By leading in this space, Pathao is positioning itself as a forward-thinking company that is prepared for future regulations and market demands.

Furthermore, CSR contributes to a positive work culture, which is crucial for retaining talent. Employees feel more motivated and aligned with the company's values when they see that the company cares about more than just profits.

Conclusion of Interview

Interviewer:
What advice would you give to startups about integrating CSR into their growth strategy from the beginning?

Interviewee 5:
Startups should think about CSR from the outset, not just as a set of nice-to-have initiatives, but as an integral part of their business strategy. By doing so, they can differentiate themselves from competitors and build a loyal customer base that supports their values. Even if you don't have the resources of larger companies, there are still many ways to contribute to social and environmental causes on a smaller scale. It's important to be authentic and transparent about your efforts — consumers and employees can tell when a company is genuinely committed to making a difference.

Also, keep in mind that CSR doesn't always have to be costly. Simple actions like supporting local communities, promoting employee well-being, or adopting environmentally friendly practices can go a long way. And as the company grows, you can expand and scale these initiatives.

Interviewer:
Thank you so much for your time and valuable insights. Your input will be helpful for my thesis.