INNOVATIVE APPROACHES TO SOCIAL AND ENVIRONMENTAL CHALLENGES: AN ANALYSIS OF INDIAN SOCIAL ENTERPRISES

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Abstract: This study delves into the dynamic landscape of social entrepreneurship in India, exploring how mission-driven innovators are tackling some of the country's most pressing social and environmental challenges. Through a qualitative, multi-case study approach, the paper examines four trailblazing social enterprises—Phool.co, Bollant Industries, ReCircle, and Bakey's Edible Cutlery—that are reimagining business as a force for good. These ventures demonstrate how purpose-led innovation, inclusive employment, and environmentally responsible practices can generate meaningful, scalable impact in areas ranging from waste management to sustainable manufacturing.

Drawing on established frameworks such as the Triple Bottom Line, Social Capital Theory, and Systems Thinking, the research builds a conceptual model that captures the common threads running through these enterprises—innovation rooted in local problems, empowerment of marginalized communities, and collaborative, ecosystem-based solutions. It also brings to light the real-world challenges social entrepreneurs face, including limited funding, infrastructure gaps, and policy hurdles.

The paper further examines key government initiatives that support the sector, such as Startup India, CSR mandates, and the Social Stock Exchange. Ultimately, the findings highlight the immense potential of social entrepreneurship to drive inclusive growth and sustainable change—provided it receives the institutional and societal support it truly needs to thrive.

Keywords - **Social Entrepreneurship, Sustainable Development, Social Inclusion, Circular Economy.**

I. INTRODUCTION

The concept of entrepreneurship has emerged long ago, and the term 'entrepreneur' was coined by 18th-century Irish economist Richard Cantillon to refer to small business owners who exhibited risk-taking ability and a spark for change and innovation (Cantillon, 1755). From a business context, entrepreneurship is often defined as the process of starting new businesses or organizations, involving the identification and exploitation of opportunities in the marketplace (Drucker, 1985; Shane & Venkataraman, 2000). In recent times, following the introduction of the Sustainable Development Goals (SDGs) in 2016 by the United Nations, global attention has increasingly focused on addressing challenges like climate change, poverty, inequality, and economic growth (UNDP, 2016). The concept of Corporate Social Responsibility (CSR) has also gained prominence among corporate firms as a response to growing societal expectations and global development goals (Carroll & Shabana, 2010). Alongside CSR, the SDGs have encouraged entrepreneurs to develop innovative solutions tailored to social and environmental problems.

Although in recent years considerable progress has been observed across various industrial sectors and in the national economy, there remains a strong need for effective and sustainable solutions to persistent societal and ecological challenges (Reddy, 2024; Verma & Singh, 2024).

The concept of social entrepreneurship emerged as a response to unmet social needs and the limitations of both traditional charity and market-driven solutions, gaining prominence in the late 20th and early 21st centuries (Dees, 1998; Bornstein & Davis, 2010). Its roots can be traced to two main traditions: the non-governmental organization (NGO) and voluntary sector, and the rise of business ethics and CSR within the business world (Zahra et al., 2009). Over time, social entrepreneurship evolved into a distinct field that blends the creation of social and economic value and emphasizes sustainable solutions to neglected problems, particularly where both markets and governments have failed (Mair & Martí, 2006). The concept gained traction as societies sought innovative strategies to address complex social issues, with social entrepreneurs positioned as agents of change who mobilize resources and networks to drive social innovation (Nicholls, 2006; Dacin et al., 2010).

The field has been shaped by multidisciplinary influences, including commercial entrepreneurship, sustainable development, and social innovation, and is characterized by ongoing debates about its definition and scope (Smith et al., 2013). Today, social entrepreneurship is widely recognized as a catalyst for social change and sustainable development, with academic and practitioner research highlighting its role in generating social impact and fostering new organizational forms that bridge the gap between profit and purpose (Bacq & Janssen, 2011; Tripathy et al., 2024).

India faces a range of interconnected environmental and social challenges that significantly impact its sustainable development. Environmentally, the country is grappling with large-scale land degradation, with 96 million hectares affected, alongside unprecedented biodiversity loss and frequent extreme climatic events (MoEFCC, 2021). These issues are compounded by air and water pollution, deforestation, and the overuse of pesticides and fertilizers, particularly in sectors like cotton cultivation, which not only pollute but also pose health hazards (CPCB, 2020; Organic India, 2021). Climate change further intensifies these problems, leading to irregular rainfall, rising temperatures, and increased natural disasters, all of which threaten agriculture, water resources, and infrastructure (IPCC, 2022). Additionally, ineffective waste management and the stress on natural resources due to overpopulation exacerbate environmental degradation, while the implementation of environmental laws is often hindered by corruption, lack of education, and poor enforcement (TERI, 2020; UNDP, 2016).

On the social front, India continues to struggle with poverty, hunger, gender inequality, and inadequate access to healthcare and education, especially in rural areas (NITI Aayog, 2023). The COVID-19 pandemic has highlighted and worsened these issues, causing mass migration and job losses, and exposing the vulnerability of millions who depend on informal or agricultural livelihoods (ILO, 2021; World Bank, 2021). Sectors such as cotton plantations are marked by child labour, women labour, and unviable livelihoods due to small landholdings (UNICEF, 2020; FAO, 2019). Despite some progress in areas like rural sanitation and electricity, significant deprivation remains in basic services (Census of India, 2011; Ministry of Power, 2020). Social challenges are further complicated by the need for inclusive governance and participatory decision-making, particularly to empower women and marginalized groups, whose roles in sustainable development are often overlooked (UN Women, 2020; Sen, 2000).

Social entrepreneurship is increasingly recognized as essential in India due to the country's vast and complex social challenges. There is a strong need for social entrepreneurship to address issues such as poverty, inequality, lack of access to healthcare and education, environmental degradation, and the needs of marginalized communities (Verma & Singh, 2024). Unlike traditional business models focused solely on profit, social entrepreneurship combines business acumen with a mission to create positive social impact, making it a powerful tool for sustainable development (Bornstein & Davis, 2010).vSocial entrepreneurs in India play a crucial role in developing innovative solutions to persistent problems, such as providing affordable healthcare, improving education, empowering women, and supporting rural development. Their work often targets the root causes of social issues, using creative and sustainable approaches that can be scaled and replicated across communities (Bhatt-Datta et al., 2012; Tripathy et al., 2022). This is particularly important in a country with over 1.3 billion people, where government and traditional charity efforts alone are insufficient to meet the scale of need (Agarwal et al., 2022).

The rise of social entrepreneurship in India is also driven by the government's push for corporate social responsibility (CSR), as well as support from the private sector, NGOs, and incubation centres (Sharma, 2025; Reddy, 2024). These efforts have created a more supportive ecosystem for social enterprises, enabling them to access resources, funding, and mentorship. Social entrepreneurship is especially impactful at the grassroots

level, where it can directly improve the lives of disadvantaged groups, including women, children, and people with disabilities (Agarwal et al., 2022).

This study evaluates the evolving concept of social entrepreneurship in the Indian context, exploring its emergence as a transformative force for addressing socio-economic and environmental issues. Globally, social entrepreneurship has matured into a field that not only challenges the limitations of traditional charity and business approaches but also creates hybrid models that strive for both social impact and financial sustainability (Zahra et al., 2009; Bornstein & Davis, 2010).

In the Indian setup, the concept has gained significant traction in response to the country's deeply rooted developmental challenges, where conventional interventions have fallen short (Verma & Singh, 2024). The research further analyzes the supporting factors and challenges present in the Indian business environment that influence the growth of social entrepreneurship. Key enablers include the government's mandatory CSR framework, a growing network of impact investors, incubation centres, and increasing youth engagement in social innovation (EY & Aspire Circle, 2020; Startup India, 2023).

Additionally, technological advancement and increased digital connectivity have facilitated the scaling of social enterprises across rural and underserved regions (NITI Aayog, 2023). However, social entrepreneurs also face considerable barriers such as limited access to capital, regulatory hurdles, lack of awareness, and the difficulty of measuring social impact effectively (Villgro, 2020; India Philanthropy Report, 2021). The inconsistent enforcement of laws, infrastructural bottlenecks, and a fragmented support ecosystem continue to challenge the sustainability and scalability of such ventures (Sankalp Forum, 2019; MoEFCC, 2021).

Based on these insights, the study derives practical implications for promoting social entrepreneurship in India. It emphasizes the need for policy reforms that simplify compliance and provide financial incentives, development of social entrepreneurship curricula in academic institutions, and the creation of robust impact measurement frameworks. Strengthening public-private partnerships and enhancing grassroots-level participation can further amplify the outreach and success of social enterprises (Chakraborty, 2018; UNDP, 2016). Ultimately, fostering a more inclusive, supportive, and innovation-driven ecosystem is essential for empowering social entrepreneurs to act as catalysts of sustainable development in India and beyond.

II. SOCIAL ENTREPRENEURSHIP – CONCEPTS AND THEORIES

Social entrepreneurship in India has emerged as a dynamic field focused on addressing pressing social, environmental, and economic challenges through innovative and sustainable solutions (Verma & Singh, 2024). Unlike traditional business models that prioritize profit, social entrepreneurship in India emphasizes holistic societal development, drawing on the country's long history of social reform and community engagement (Agarwal & Khare, 2019; Bajaj, 2022). The sector has gained significant momentum in recent years, supported by government initiatives, private sector involvement, and the rise of corporate social responsibility (CSR) as a genuine business priority (Sharma, 2025; Reddy, 2024).

Indian social entrepreneurs have made notable contributions across sectors such as education, healthcare, environmental protection, women's empowerment, and rural development (Verma & Singh, 2024; Bhatt-Datta et al., 2012). Innovations like microfinance, solar lighting, and women's cooperatives have improved access to essential services and empowered marginalized communities (Agarwal et al., 2020; Tripathy et al., 2022). Theoretical frameworks such as Schumpeter's Theory of Innovation, Institutional Theory, Resource-Based View, Social Capital Theory, and the Triple Bottom Line are commonly used to analyze how social entrepreneurs in India leverage innovation (Verma & Singh, 2024), navigate institutional landscapes, and foster community engagement to achieve their goals.

Social entrepreneurship theory is fundamentally concerned with how individuals and organizations pursue sustainable solutions to neglected problems, especially where both markets and governments have failed (Reddy, 2024; Mair & Martí, 2006). One influential perspective is the value creation versus value capture framework, which posits that social entrepreneurs focus on creating positive externalities and social value, rather than prioritizing personal or shareholder gain as in commercial entrepreneurship (Santos, 2012; Verma & Singh, 2024). This helps explain why social entrepreneurs often target issues that are overlooked by traditional actors and how their central logic of action differs from that of commercial entrepreneurs.

Behavioural theories of social entrepreneurship examine the contextual factors that lead to the creation of social ventures, the organizational dynamics and structures that support them, and the ways in which these organizations measure and sustain social impact. These theories introduce new organizational typologies and emphasize the importance of resource mobilization, motivation, and the unique behaviours of social entrepreneurs in driving sustainable social change (Agarwal & Khare, 2019).Social capital theory is another

key framework, highlighting the role of networks, relationships, and collective action in enabling social entrepreneurship (Bajaj, 2022). Social entrepreneurs leverage social capital to mobilize resources, build trust, and foster collaboration with various stakeholders, which is essential for the success and scalability of social ventures (Gedajlovic et al., 2013).

Additionally, the field draws on several foundational entrepreneurship theories, including opportunity-based entrepreneurship theory (focusing on how entrepreneurs identify and exploit opportunities), Schumpeterian theory of innovation (emphasizing innovation as a driver of change), human capital theory (highlighting the role of skills and knowledge), and the resource-based view (demonstrating how unique resources provide competitive advantage) (Tripathy et al., 2024). The theory of planned behaviour is also widely used to understand the intentions and motivations behind social entrepreneurial actions (Bajaj, 2022; Ajzen, 1991).

Social entrepreneurship is a multidisciplinary field that integrates insights from economics, sociology, management, and psychology. Theories in this area collectively explain how social entrepreneurs identify opportunities, mobilize resources, innovate, and create lasting social impact, often in challenging and resource-constrained environments (Dacin et al., 2010; Nicholls, 2006).

Regarding women's social entrepreneurship, it is particularly impactful, offering self-employment, economic security, and increased social status for women, especially through collective ventures and cooperatives (Chaudhary, 2020; Kabeer, 1999). Despite its growth, the field faces challenges including limited access to financial and social capital, scalability and sustainability issues, and regulatory barriers (Battilana et al., 2015). However, the supportive ecosystem—bolstered by initiatives like Startup India, Atal Innovation Mission, and various incubation centres—continues to nurture the sector's expansion (Startup India, 2023; NITI Aayog, 2022).

It is evident that in recent times, social entrepreneurship in India is a vital driver of inclusive and sustainable development, blending innovation, community engagement, and cross-sector collaboration to address deep-rooted societal challenges and promote positive change (Verma & Singh, 2024; UNDP, 2016).

III. RESEARCH OBJECTIVES

- To evaluate the concept of social Entrepreneurship in global and Indian setup
- To analyse the supporting factors & challenges in the Indian Business Environment enabling social entrepreneurship in India
- To derive practical implications for promoting social entrepreneurship in India

IV. RESEARCH METHODOLOGY

This study adopts a **qualitative, exploratory case study methodology** to analyze the role and impact of social entrepreneurship in addressing complex social and environmental challenges in India. The approach is grounded in the need to understand not just the outcomes but also the contextual strategies, innovations, and models employed by leading social enterprises across the country.

4.1 Research Design

Given the evolving and context-specific nature of social entrepreneurship, the study employs a multiple case study design to derive in-depth insights into the functioning, challenges, and contributions of selected social enterprises. This design allows for comparative analysis and the identification of recurring themes and theoretical patterns across diverse enterprises operating in different sectors.

4.2 Case Selection Criteria

The case studies included in this research—Phool.co, Bollant Industries, ReCircle, and Bakey's Edible Cutlery—were selected using purposive sampling based on the following criteria:

- Proven social and environmental impact in the Indian context
- Demonstrated innovation and scalability in business models
- Focus on inclusive employment or empowerment of marginalized communities
- Availability of public domain data, including organizational reports, interviews, and secondary literature

Data Sources

The study relies entirely on secondary data, collected from a combination of credible sources including:

- Peer-reviewed journal articles and academic publications
- Company websites, annual reports, and media interviews

- Reports from organizations such as UNDP, NITI Aayog, SEBI, and EY
- Reputed newspapers, business magazines (e.g., *Economic Times, Forbes*), and development platforms (e.g., *GSMA, Acumen*)

These sources were triangulated to ensure accuracy and reliability of information across cases.

4.3 Analytical Framework

The analysis was guided by established theoretical lenses relevant to social entrepreneurship, including:

- **Opportunity-Based Entrepreneurship Theory** (Shane & Venkataraman, 2000)
- **Triple Bottom Line Framework** (Elkington, 1997)
- **Social Capital Theory** (Gedajlovic et al., 2013)
- **Hybrid Organizational Theory** (Battilana & Lee, 2014)
- **Resource-Based View** (Barney, 1991)
- **Circular Economy and Systems Thinking Frameworks** (Meadows, 2008; Ellen MacArthur Foundation, 2013)

Through thematic content analysis, the study examined how these social enterprises conceptualize problems, design solutions, mobilize resources, and measure impact. Patterns and insights were synthesized into a conceptual model representing the core elements of impactful social entrepreneurship in India.

4.4. Scope and Limitations

While the selected case studies provide rich insights, the findings may not be generalizable to all types of social enterprises due to sectoral and regional differences. Moreover, the absence of primary data (e.g., interviews, surveys) limits the scope for firsthand perspectives. Future studies could build on this framework through longitudinal fieldwork or quantitative impact assessments

V. CASE STUDIES

5.1 Phool Co.

Phool.co, also known as Phool India, is a pioneering social enterprise based in Kanpur, Uttar Pradesh, that has successfully turned the problem of temple flower waste into an opportunity for sustainable development and social impact (Phool.co, 2023). The idea was born in 2017 when founder Ankit Agarwal, an engineer and IIT alumnus, observed that massive quantities of flowers offered at temples were being discarded into the Ganges River, contributing to severe water pollution (Agarwal, 2019). Moved by the sight and determined to make a difference, he launched Phool.co with the aim of implementing a sustainable circular economy by collecting and recycling floral waste into eco-friendly products.

Phool's business model revolves around:
- Collecting floral waste from temples in Uttar Pradesh.
- Upcycling waste into value-added products like:
  o Incense sticks (Aromatic Dhoop)
  o Florafoam – a biodegradable alternative to thermocol.
  o Organic compost and cones
- Empowering local women by employing them to process the waste, providing sustainable livelihoods (Phool.co, 2023; Singh & Jha, 2022).

Phool.co has achieved significant social and environmental impact. On a daily basis, it collects over 11,000 kilograms of flowers, which would otherwise pollute rivers (Forbes, 2021). The company's products offer safer, chemical-free alternatives for consumers, promoting healthier and more sustainable living. One of its key innovations, Florafoam, stands out as the world's first fully biodegradable floral-based thermocol substitute. This product has potential applications in multiple industries including packaging and décor, helping to reduce dependence on plastic and petroleum-based materials (UNEP, 2022).

Over the years, Phool India has received national and international recognition. It has been featured in Forbes 30 Under 30 Asia and acknowledged by the United Nations Environment Programme (UNEP, 2022). The company has also received support from the Gates Foundation, Echoing Green, and startup incubators like IIM Ahmedabad's CIIE and Tata Trusts (Economic Times, 2021). Despite its success, the enterprise faces challenges such as managing logistics for waste collection at a larger scale, ensuring consistency in product quality, and overcoming consumer resistance to switching from traditional to

sustainable products (Jain & Srivastava, 2023). Phool has empowered over 100 women, particularly from marginalized Dalit communities, by employing them in the flower processing units, providing them with dignified and stable livelihoods (Chakraborty, 2021).

Looking ahead, Phool.co plans to expand its operations to other cities across India and explore international markets for its eco-friendly offerings. It is also investing in research to develop more biodegradable alternatives using floral and organic waste (Phool.co, 2023). Phool India stands as a powerful example of how environmental sustainability, social inclusion, and entrepreneurship can come together to create a transformative impact. By turning "waste into wealth," Phool not only cleans the rivers but also uplifts lives—truly embodying the spirit of sustainable innovation in modern India.

5.2   Bollant Industries

Bollant Industries, established in 2012 by visually impaired entrepreneur Srikanth Bolla, is a unique Indian enterprise that blends sustainability with social inclusion (Bolla, 2018; Bollant Industries, 2023). Headquartered in Hyderabad, the company manufactures eco-friendly disposable products and packaging materials using natural, biodegradable resources like areca leaves, bagasse (sugarcane waste), and recycled paper (Economic Times, 2021). What makes Bollant Industries stand out is not just its environmental mission but its deep commitment to social impact—over 60% of its workforce comprises differently-abled individuals, many of whom are visually or hearing impaired (Mitra & Roy, 2022). This inclusive employment model provides livelihood, training, and dignity to individuals who are often marginalized in mainstream labour markets.

Srikanth Bolla's journey itself is inspirational. Born blind in a small village in Andhra Pradesh, he overcame significant barriers in education and societal acceptance. After becoming the first international blind student at the Massachusetts Institute of Technology (MIT), Srikanth chose to return to India with a vision to empower others like him (Bolla, 2018). His entrepreneurial venture, Bollant Industries, became a manifestation of that vision—creating products that serve environmental goals while building a company culture centred around inclusivity and respect (Sharma & Patel, 2023).

Bollant Industries operates on a dual-bottom-line model:

1. Environmental Sustainability: The company manufactures products such as disposable plates, cups, packaging materials, and adhesives from natural leaf, recycled paper, and bagasse (sugarcane waste), reducing plastic waste (Bollant Industries, 2023).
2. Social Inclusion: A significant portion of the workforce consists of differently abled individuals, especially visually and hearing-impaired people (Mitra & Roy, 2022).

The company's product range includes disposable plates and cups, adhesive materials, packaging solutions, and paper boards, all developed from sustainable inputs. These products not only help reduce non-biodegradable waste but also provide a viable alternative to plastic and Styrofoam-based items, thereby supporting eco-conscious consumption in India (Singh & Jain, 2022). Through semi-automated manufacturing units across South India, Bollant ensures that its differently abled employees can work efficiently and with dignity.

Despite facing early challenges such as limited funding, scepticism from traditional investors, and market resistance to eco-products, Bollant Industries has grown steadily. It eventually attracted support from high-profile investors like Ratan Tata, who saw both the social and economic potential of the venture (Forbes India, 2021). Today, Bollant is widely regarded as a successful example of how a business can align profit with purpose. The enterprise has earned national and international recognition, and Srikanth Bolla has received numerous awards for his leadership and impact (Times of India, 2022).

Bollant Industries exemplifies how innovation, when guided by empathy and sustainability, can drive systemic change. By transforming environmental waste into valuable products and empowering marginalized individuals through employment, the company serves as a powerful case study in social entrepreneurship. It highlights the potential for inclusive business models to create meaningful impact in both economic and human terms.

5.3 ReCircle

ReCircle is a Mumbai-based clean-tech startup that has emerged as a pioneer in India's circular economy space. Founded in 2016 by Rahul Nainani and Gurashish Singh Sahni, ReCircle began its journey as "RaddiConnect," a hyperlocal doorstep pickup service for recyclable waste (Nainani & Sahni, 2021). The idea was sparked when the founders witnessed the devastating effects of a landfill fire at Deonar, Mumbai, which highlighted the dangers of unregulated waste disposal and its impact on public health and the environment (Economic Times, 2022). Over time, the company evolved into ReCircle, shifting its focus from a B2C model to a B2B service that offers plastic recovery, traceability, and compliance solutions for large corporations under India's Extended Producer Responsibility (EPR) framework (WhatPackaging?, 2023; GSMA, 2023).

Business Model & Services

1. B2B Plastic Credits: Corporates (e.g., HUL, Nestlé, Coca-Cola, Mondelez) buy credits via ClimaOne to comply with India's EPR regulations (WhatPackaging?, 2023; GSMA, 2023).
2. Safai Saathi Empowerment: With digital onboarding and incentives, ReCircle returns ~75% of credit revenue to waste workers—monthly incomes have doubled (from ₹5,000–10,000 to ₹10,000–25,000), improving quality of life for 80% of those surveyed (Acumen, 2023; WhatPackaging?, 2023).
3. Vertical Expansion: Beyond plastics—ReCircle has launched initiatives in textiles (e.g., Project Extra Life), paper, glass, footwear, zero-waste events, and corporate sustainability consulting (GSMA, 2023).

At the heart of ReCircle's innovation is its proprietary digital platform, ClimaOne, launched in 2023 with support from GSMA and UK Aid. This platform enables real-time tracking of plastic waste from collection to destination, ensuring transparency, traceability, and data-driven decision-making for waste generators, recyclers, and regulators (GSMA, 2023). ReCircle's plastic credits, offered through ClimaOne, help major FMCG companies meet their EPR mandates by verifying waste diversion with GPS tracking and audit trails (WhatPackaging?, 2023).

A critical part of ReCircle's mission is the empowerment of "Safai Saathis"—informal waste workers who form the backbone of India's recycling economy. By integrating them into its digital network and sharing 75% of revenue from plastic credits with them, ReCircle has significantly improved their income and access to social protections (Acumen, 2023). Many of these workers, previously earning ₹5,000–10,000 per month, now earn up to ₹25,000, reflecting improved livelihoods, dignity in labour, and workplace safety (GSMA, 2023).

ReCircle's impact has been substantial. As of 2024, the company has diverted over 169,000 metric tonnes of waste from landfills across 310+ cities, collaborating with over 400 collection partners and 45+ processing centres (ReCircle, 2024). In FY 2023–24 alone, it recovered 57,000 MT of waste—a 200% year-on-year growth (WhatPackaging?, 2024). This expansion was supported by successful fundraising from Acumen, Flipkart Ventures, and 3i Partners, and ReCircle became cash-flow positive in FY23 with ₹26.3 crore in revenue. Projections suggest it will cross ₹100 crore in FY25 (Economic Times, 2024).

In addition to plastics, ReCircle is diversifying into textile recovery through projects like Project Extra Life, and expanding into zero-waste event planning and circularity consulting (ReCircle, 2024). The company has received several awards including the ET MSME Award and recognition in Fortune India's 40 Under 40 (Fortune India, 2023).

ReCircle stands out as a model of sustainable innovation, combining environmental impact, social inclusion, and financial viability. Its journey reflects how a tech-enabled, inclusive approach to waste management can drive systemic change in one of the most challenging sectors of urban governance in India (GSMA, 2023; Acumen, 2023).

5.4 Bakey's Edible Cutlery

Bakey's Edible Cutlery is a pioneering Indian startup that has transformed the way we think about disposable utensils. Founded in 2010 by Narayana Peesapaty, a researcher with a background in environmental and agricultural sciences, the company emerged in response to the growing problem of plastic waste, particularly from single-use items like spoons and forks (Bakeys, 2023; Peesapaty, 2017). While working on water and food security issues, Peesapaty observed the environmental harm caused by plastic cutlery, which takes hundreds of years to decompose, and realized the urgent need for a sustainable alternative (TEDx Talks, 2016). Drawing inspiration from India's traditional grains, especially sorghum (jowar), he developed a line of edible spoons, forks, and chopsticks that are not only biodegradable but also nutritious and flavourful.

The product innovation lies in its simplicity and effectiveness—cutlery made from a blend of sorghum, rice, and wheat flour that can be eaten after use or composted naturally within days (The Better India, 2022). These utensils are vegan, preservative-free, and available in multiple flavours, appealing to both health-

conscious and environmentally-aware consumers. Bakey's value proposition extends beyond sustainability; it supports the cultivation of drought-resistant crops and generates employment in rural areas (Ghosh, 2021). The company started small but gained international attention after a viral video and a successful Kickstarter campaign in 2016, which raised over $270,000 (Kickstarter, 2016). This funding allowed Bakey's to scale production and expand into export markets, especially in countries enforcing plastic bans (GreenBiz, 2020). Bakey's business model includes both B2C and B2B components, selling directly to consumers via e-commerce platforms and supplying bulk orders to businesses such as caterers, airlines, and eco-conscious event organizers (Bakeys, 2023). Their key partnerships with organic retailers, logistics providers, and agricultural cooperatives have strengthened their supply chain and market reach (Singh & Rao, 2022). However, the company faces ongoing challenges such as high production costs, limited shelf life, and consumer habits still favouring cheap plastic alternatives (Ghosh, 2021).

Despite these hurdles, Bakey's remains a shining example of frugal innovation, showing how a small idea rooted in local knowledge can address global environmental problems. By combining sustainability, health, and functionality, Bakey's edible cutlery represents a forward-thinking solution to one of the world's most pressing pollution issues (Peesapaty, 2017; TEDx Talks, 2016).

VI. CONCEPTUAL MODEL ON SOCIAL ENTREPRENEURSHIP BASED ON CASE STUDY EVALUATION

The conceptual model of social entrepreneurship derived from case studies of Phool.co, Bollant Industries, ReCircle, and Bakey's Edible Cutlery reveals a unified framework built around innovation, inclusion, sustainability, and systemic impact. At its foundation is problem-driven innovation, where each enterprise identifies a specific, unmet social or environmental need. Phool.co addresses religious flower waste polluting the Ganges; Bollant Industries creates dignified employment for differently abled individuals while reducing plastic waste; ReCircle transforms informal waste collection into a traceable, circular economy solution; and Bakey's develops edible cutlery as an answer to the global crisis of single-use plastics. This approach is aligned with Opportunity-Based Entrepreneurship Theory (Shane & Venkataraman, 2000) and Social Problem-Solving Theory (Dees, 1998), both of which emphasize the entrepreneur's ability to recognize system failures and convert them into impact opportunities.

These enterprises demonstrate a commitment to a triple bottom line—people, planet, and profit—offering financially viable models while maintaining strong social missions. Their efforts exemplify the Hybrid Organizational Theory (Battilana & Lee, 2014), blending nonprofit values with for-profit structures to deliver sustainable impact. They also follow the Triple Bottom Line Framework (Elkington, 1997), integrating environmental stewardship, economic resilience, and social justice into their business operations.

Inclusion and empowerment are at the heart of their strategies. Phool employs Dalit women, Bollant integrates differently abled workers, and ReCircle formalizes the role of informal waste pickers. This inclusive approach is supported by Social Capital Theory (Gedajlovic et al., 2013), which underscores the importance of networks and trust in building resilient communities, and Empowerment Theory (Kabeer, 1999), which emphasizes expanding the capabilities of marginalized groups.

Innovation in these enterprises is also shaped by resource efficiency and frugality. Phool's floral leather (Fleather), Bakey's edible spoons, and ReCircle's tech platform ClimaOne all exemplify Frugal Innovation (Bound & Thornton, 2012) and Schumpeterian Innovation Theory (Schumpeter, 1934), introducing novel, cost-effective solutions that disrupt conventional industry practices.

A defining trait of the model is systems thinking. These enterprises are not offering one-off products; they are influencing entire ecosystems. For instance, ReCircle's plastic credit system links waste generators, recyclers, and regulators in a circular loop. This aligns with Systems Theory (Meadows, 2008) and the Circular Economy Framework (Ellen MacArthur Foundation, 2013), where waste is minimized and value is continuously regenerated.

Scalability and replicability are built into their models, aided by unique resources and partnerships. Phool and ReCircle are expanding into new markets and geographies, Bollant has drawn investor interest from Ratan Tata, and Bakey's gained global visibility through Kickstarter. This demonstrates the relevance of the Resource-Based View (RBV) (Barney, 1991), where organizations leverage unique, inimitable capabilities for growth, and Institutional Theory (Mair & Martí, 2006), which explains how social ventures gain legitimacy and adapt within diverse regulatory and cultural environments.

Finally, these ventures engage with a wide range of stakeholders, including community members, corporations, governments, and global donors. Their collaborative orientation is consistent with Stakeholder Theory (Freeman, 1984), which posits that businesses thrive when they generate shared value for all parties involved, not just shareholders.

The conceptual model developed from these case studies presents a holistic and theory-based framework for addressing India's intricate social and environmental issues. It integrates elements such as mission-led innovation, equitable employment practices, eco-conscious product development, systems-oriented strategies, and active stakeholder engagement—demonstrating how social enterprises can drive meaningful, scalable, and lasting transformation.
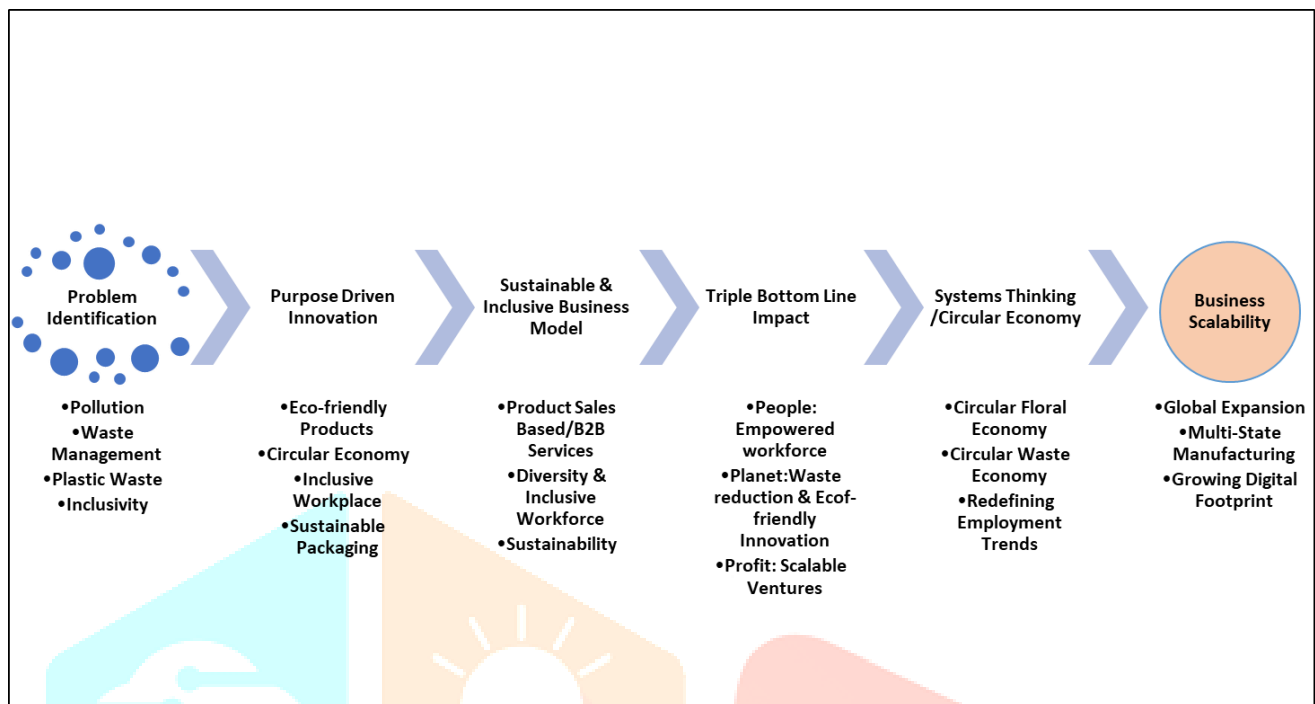

Figure 1: Conceptual Model on Social Entrepreneurship based on case study evaluation, [Source: Author's Compilation]

As Social entrepreneurship combines the passion of a social mission with the efficiency, innovation, and determination of a business. Social enterprises aim to address societal and environmental issues through sustainable models rather than relying on philanthropy or government support. Table 1 exhibits the comparative analysis of four social enterprises under study.

Aspect	Phool Co.	ReCircle	Bollant Industries	Bakey's Edible Cutlery
Problem Addressed	Temple flower waste & river pollution	Urban waste mismanagement	Unemployment among differently abled & plastic waste	Plastic cutlery pollution & food wastage
Social Innovation	Converts floral waste into incense & vegan leather	Circular economy through waste collection and recycling	Inclusive employment with sustainable packaging	Edible, biodegradable spoons made of sorghum flour
Target Beneficiaries	River ecosystems, temple workers, Dalit women	Waste pickers, urban poor, environment	Differently-abled individuals, environment	Environment, health-conscious consumers
Environmental Impact	Reduces water pollution, waste upcycling	Landfill reduction, plastic recovery, CO_2 savings	Biodegradable product manufacturing	Replaces plastic with compostable options
Social Impact	Employs marginalized women	Formalizes informal sector, improves livelihoods	Empowers differently-abled, inclusive industry	Promotes sustainable consumption
Business Model	For-profit with eco-products	Tech-enabled waste supply chain	Manufacturing unit with inclusive hiring	Direct-to-consumer and B2B sales

Sustainability	Strong – upcycled materials, eco-products	Strong – closed-loop systems, partnerships	Strong – scalable, profitable, inclusive	Moderate – niche market, manufacturing costs
Impact Metrics	Tons of flower waste diverted, women employed	Waste diverted, lives impacted, CO_2 saved	No. of differently-abled employed, eco-products produced	Single-use plastic avoided, awareness raised
Challenges	Competition, product diversification	Informal sector resistance, logistics	Cost, industrial competition	Cost, consumer behaviour shift

Table 1: Comparative analysis of four social enterprises under study [Source: Author's Compilation]

VII. THEMATIC DISCUSSION

1. Innovation with Purpose

Each of these social enterprises showcases remarkable innovation driven by a clear social or environmental purpose. Phool.co creatively addresses the issue of temple flower waste by converting it into premium eco-friendly products like incense sticks and *Fleather*—a plant-based alternative to leather—thereby innovating not just in product design but also in the process of sustainable manufacturing (Phool.co, 2023; Chakraborty, 2021). ReCircle applies digital innovation through its *Safai Saathi* platform and *ClimaOne*, enabling a traceable, transparent, and tech-enabled supply chain for recyclable waste. This approach bridges the gap between waste generators and recyclers while formalizing the role of informal waste workers (GSMA, 2023; Acumen, 2023). Bollant Industries redefines traditional manufacturing by placing social inclusion at its core—employing differently-abled individuals to produce biodegradable packaging and disposable products—thus transforming employment for marginalized communities into a strength rather than a constraint (Bollant Industries, 2023; Mitra & Roy, 2022). Meanwhile, Bakey's Edible Cutlery introduces a revolutionary concept by reimagining disposable cutlery as edible, food-grade, biodegradable utensils, offering a sustainable and zero-waste solution to the growing menace of single-use plastics (Bakeys, 2023; Peesapaty, 2017). Together, these ventures illustrate how purposeful innovation can generate scalable, meaningful change across environmental and social dimensions.

2. Social Inclusion and Empowerment

A key hallmark of these social enterprises is their commitment to social inclusion and empowerment, especially for marginalized and underserved communities. Bollant Industries stands out by actively employing differently abled individuals, integrating them into mainstream manufacturing processes, and challenging deep-seated societal and workplace biases (Mitra & Roy, 2022; Bollant Industries, 2023). This model not only offers them a stable livelihood but also restores dignity and purpose through meaningful work (Sharma & Patel, 2023).

Phool Co. similarly focuses on empowering marginalized Dalit women, many of whom previously lacked access to formal employment. By offering them safe, stable jobs in eco-friendly production units, Phool fosters financial independence and social upliftment (Chakraborty, 2021; Phool.co, 2023).

ReCircle targets another often overlooked group—informal waste workers—by providing them with structured roles, safety equipment, fair compensation, and formal recognition through its tech-enabled recycling ecosystem (GSMA, 2023; Acumen, 2023). This integration helps transform their precarious, stigmatized labor into respected, impactful work.

While Bakey's Edible Cutlery does not engage directly with marginalized communities in its operations, it contributes to indirect social empowerment by tackling the widespread issue of plastic pollution—particularly in developing countries where waste management infrastructure is weak and environmental degradation affects vulnerable populations the most (Ghosh, 2021; Bakeys, 2023).

Collectively, these enterprises exemplify how social entrepreneurship can be a powerful tool for inclusion, equity, and systemic change.

VIII. CHALLENGES FACED BY SOCIAL ENTREPRENEURSHIP VENTURES IN INDIAN BUSINESS ENVIRONMENT

Social entrepreneurship ventures in India face a range of significant challenges within the business environment. One of the most pressing issues is limited access to funding, as social enterprises often have lower post-money valuations and less negotiation power compared to traditional startups, making it difficult to secure adequate capital—especially beyond the early stages of growth (Sankalp Forum, 2019; EY & Aspire Circle, 2020). Infrastructure gaps, particularly in rural areas, and a shortage of skilled labor further hinder the scalability and effectiveness of these ventures (NITI Aayog, 2023; UNDP, 2016). Regulatory and policy barriers, such as complex bureaucratic processes and a lack of supportive frameworks, create additional operational difficulties for social entrepreneurs (Villgro, 2020).

Market perception also poses a challenge, as social ventures frequently struggle with poor value perceptions of their offerings, which negatively impacts financial sustainability. This is often compounded by a negative view of marketing within the sector, requiring a shift in attitudes to improve market acceptance and viability (Villgro, 2020; Chakraborty, 2018). Resource constraints force many social entrepreneurs to rely on frugal innovation—especially during crises like the COVID-19 pandemic—where adaptability and creative use of limited resources become essential for survival and impact (Desai, 2020).

Social and cultural barriers, including resistance to change and entrenched social norms, can limit the reach and effectiveness of social ventures, particularly those working with disadvantaged groups (Sen, 2000; UN Women, 2020). Women social entrepreneurs face additional obstacles such as gender bias and the challenge of balancing social missions with business sustainability, often employing inclusive and adaptive strategies to overcome these barriers (Kabeer, 1999; Battilana et al., 2015). Sector-specific challenges also exist—for example, in the organic products sector, where issues related to supply chains, consumer trust, and environmental compliance are prominent (Organic India, 2021).

Overall, these challenges highlight the need for innovative approaches, supportive policies, and greater access to resources to enable social entrepreneurship ventures in India to achieve sustainable impact (Reddy, 2024; Verma & Singh, 2024).

IX. GOVERNMENT OF INDIA INITIATIVES TO SUPPORT SOCIAL ENTREPRENEURSHIP VENTURES

The Indian government has taken a multi-pronged and strategic approach to promote social entrepreneurship, recognizing its critical role in addressing complex socio-economic challenges such as poverty, unemployment, inequality, illiteracy, and environmental degradation (NITI Aayog, 2023; Ministry of Skill Development & Entrepreneurship [MSDE], 2015). Social entrepreneurs blend the mission of social impact with the principles of entrepreneurship, creating sustainable and scalable solutions to grassroots problems. In recent years, the government has increasingly acknowledged the importance of this sector in national development and has implemented a range of initiatives to support, strengthen, and scale social enterprises across the country (Startup India, 2023).

One of the most significant contributions of the government has been the development of a policy and legal framework conducive to social entrepreneurship. The National Policy on Skill Development and Entrepreneurship (2015) was a key milestone that formally recognized the role of social entrepreneurs in transforming communities (MSDE, 2015). It emphasized the need for inclusive entrepreneurship and encouraged the development of entrepreneurial skills across all sectors of society, especially among women, youth, and marginalized communities. The Startup India Initiative (2016) further extended benefits to social startups by offering tax exemptions, easier compliance requirements, and access to government funding and mentorship programs (Startup India, 2023). A landmark development in this regard has been the establishment of the Social Stock Exchange (SSE) under SEBI, a unique platform that allows both non-profit and for-profit social enterprises to raise funds from impact investors and the public, thereby enhancing financial transparency and accountability (SEBI, 2023).

Financial support has been another critical area of focus. Government schemes such as the MUDRA Yojana enable small and micro social enterprises to access collateral-free loans, promoting entrepreneurship in rural and semi-urban areas (Ministry of Finance, 2021). The Atal Innovation Mission under NITI Aayog has launched programs like Atal Incubation Centres (AICs) and ARISE to fund and incubate social innovations (NITI Aayog, 2023). The SIDBI Fund of Funds for Startups also supports impact-focused ventures (SIDBI, 2022). Additionally, mandatory Corporate Social Responsibility (CSR) under the Companies Act, 2013, has unlocked significant private sector capital, channeling it toward innovative social ventures (Ministry of Corporate Affairs, 2020).

Beyond funding, the government has emphasized capacity building and skills development. Programs like Skill India, PMKVY, and DDU-GKY equip young people—especially in rural areas and marginalized

communities—with vocational and entrepreneurial skills (MSDE, 2021). These programs empower women, youth, and underprivileged groups to become local change-makers (NSDC, 2022). Furthermore, incubation hubs such as Technology Business Incubators (TBIs), RuTAGs, and MSME incubation centers offer mentorship, seed funding, and technical guidance to social entrepreneurs (DST, 2021; Ministry of MSME, 2022).

Public-Private Partnerships (PPPs) are also central to the government's strategy. Collaborations with NGOs, corporations, academic institutions, and international bodies like UNDP have enabled the scaling of outreach and impact (UNDP India, 2020). The government has supported platforms like Tata Social Enterprise Challenge, Ashoka India, Villgro, and the Deshpande Foundation, all of which identify and support high-potential social entrepreneurs (Villgro, 2023; Ashoka, 2023).

To further mainstream social entrepreneurship, the government hosts events such as the Smart India Hackathon, India Innovation Summit, and National Entrepreneurship Awards, which not only recognize impactful models but also inspire youth toward mission-driven innovation (MoE, 2022; NIF, 2021). Through digital platforms, it disseminates knowledge, connects entrepreneurs to mentors and investors, and promotes visibility and networking within the ecosystem (Digital India, 2023).

Through the various government -lead initiatives and schemes, it is evident that the Indian government has adopted a holistic and inclusive approach to promote social entrepreneurship by combining regulatory support, financial assistance, skill development, institutional support, and collaborative engagement. These measures have significantly enriched the entrepreneurial ecosystem, enabling social enterprises to contribute effectively to inclusive growth, sustainable development, and social justice (NITI Aayog, 2023; UNDP India, 2020). By continuing to empower changemakers and foster innovation, the government is positioning social entrepreneurship as a central pillar in India's developmental agenda.

Area of Support	Initiatives/Schemes	Description
Policy & Legal Framework	National Policy on Skill Development and Entrepreneurship (2015)	Recognizes the role of social entrepreneurs and promotes inclusive entrepreneurship.
	Startup India Initiative (2016)	Offers tax benefits, compliance support, and funding access to social startups.
	Social Stock Exchange (SSE)	SEBI-regulated platform allowing social enterprises to raise capital from public and institutional investors.
Financial Assistance	MUDRA Yojana	Provides micro-credit to small and micro social enterprises, especially in rural India.
	SIDBI's Fund of Funds	Offers funding to impact-focused startups and social enterprises.
	Atal Innovation Mission (AIM)	Funds and supports innovation through Incubation Centres and challenges.
	CSR Mandate under Companies Act, 2013	Requires companies to spend 2% of profits on CSR, which supports social enterprises.
Skill Development & Capacity Building	Skill India Mission	Trains youth in entrepreneurial and vocational skills.
	PM Kaushal Vikas Yojana (PMKVY)	Provides industry-relevant skill training, empowering future social entrepreneurs.
	Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)	Focuses on rural youth training and self-employment through entrepreneurship.
Incubation & Mentorship	Atal Incubation Centres (AICs)	Incubate early-stage social enterprises with mentorship and funding.
	Technology Business Incubators (TBIs)	Promote grassroots innovation and tech-based social enterprises.
	MSME Incubation Scheme	Offers funding and business support to innovative MSMEs including social ventures.
Public-Private Partnerships (PPP)	Collaborations with Tata Trusts, UNDP, Ashoka, Villgro, etc.	Partnerships to scale impact and offer expertise, mentorship, and funding.
Recognition & Awareness	National Entrepreneurship Awards	Recognizes and promotes impactful social entrepreneurs.

	Smart India Hackathon	Encourages youth to develop innovative solutions to societal challenges.
	India Innovation Summits & Challenges	Platforms to promote visibility, networking, and resource access for social enterprises.

Table 2: Overview of Government of India Initiatives for Social Entrepreneurship, [Source: Author's Compilation]

X. CONCLUSION

Social entrepreneurship in India plays a vital role in tackling complex social and environmental issues while advancing sustainable development. The success stories of ventures such as Phool.co, Bollant Industries, ReCircle, and Bakey's Edible Cutlery highlight the power of innovative thinking combined with a strong social purpose. These enterprises effectively blend innovation, inclusivity, and environmental responsibility within sustainable business models.

A conceptual framework drawn from these cases underscores essential components of impactful social entrepreneurship—recognizing critical challenges, crafting innovative and scalable solutions, adopting a triple bottom line (people, planet, profit) approach, empowering marginalized communities, and building collaborative stakeholder networks. This model illustrates how social enterprises can drive systemic transformation by aligning business strategies with social missions.

Despite their potential, social entrepreneurs in India face significant barriers, including inadequate access to funding, infrastructural constraints, complex regulatory environments, and low public awareness or trust in social products. Addressing these issues requires a combination of innovative strategies, enabling policy frameworks, and improved access to financial and institutional resources.

Recognizing the sector's potential, the Government of India has launched a range of supportive measures, including national policies, funding schemes, skill development initiatives, and public-private partnerships. These efforts aim to strengthen the social entrepreneurship ecosystem and enable sustainable impact at scale.

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