

Circular value creation through environmental entrepreneurship initiatives: A case-based exploration

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Abstract

The present study builds on the domain of circular economy and its subdomain circular value creation to explore the entrepreneurial process of a small business in India. It aims to find how circular entrepreneurship as a process may unfold and how it may lead to value creation at different levels. The case study method is used to address the research objectives and a case study of a small entrepreneur based in India is selected for the same purpose. The analysis of the case and within case patterns (three subcases) illustrates circular entrepreneurship as a process with motivation, action and value creation as three main stages. The motivation of the entrepreneur leads to several actions related to business processes that are aimed at circular value creation. Subsequently, this leads to value creation at multiple levels such as the economy, business and society. Hence, the findings support the circular economy concept and its role in the creation of value at the small business level. The findings support the theoretical tenets of circular value creation and circular entrepreneurship using an interpretive approach.

KEYWORDS

circular economy, circular entrepreneurship, circular value creation, India, interpretive research

1 | INTRODUCTION

The concept of sustainability has already gained prominence in research (Awana et al., 2023; Costanza, 2023; Hallin et al., 2021; von Kolpinski et al., 2023) and across cultures (Kok et al., 2019). However, the related concept of circular economy (CE) has gained traction only in the past few decades among academics and practitioners (Ellen MacArthur Foundation [EMF] & McKinsey, 2012; Ferasso et al., 2020; Kennedy & Linnenluecke, 2022; Parida et al., 2019; Sahoo et al., 2023). The concept is considered an

operational definition for businesses aiming to operationalize sustainable development (Gelhard & Von Delft, 2016; Murray et al., 2017). There are many definitions of the circular economy. For example, Kirchherr et al. (2017), define CE as “an economic system that replaces the ‘end of life’ concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumptions processes (p. 229).” CE thus, is based on the interface between Business-Society-Nature (Costanza, 2023; Marcus et al., 2010). The nuances of CE have been highlighted by the concepts of innovations to support sustainability and halt climate change in the recently organized COP28, a conference of nations on issues of climate change by the United Nations Climate Change division. CE may operate at the micro-level (such as product, consumer, or firm), the meso-level (such as eco-industrial parks or

Abbreviations: 3R, Reduce, Reuse and Recycle framework; C2C, Cradle to Cradle; CBM, circular business model; CE, circular economy; EMF, Ellen MacArthur Foundation; FMCG, Fast Moving Consumer Goods; PPE, personal protective equipment; ReSOLVE, Regenerate, Share, Optimize, Loop, Virtualize, Exchange framework; SMEs, small and medium enterprises.

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economic zones) and the macro-level (such as a city or a region) (Heeres et al., 2004).

CE operates with the aim of achieving sustainable development (Dey et al., 2019) and sustainable consumption practices (Lim, 2017). Such a process would lead to the creation of better environmental quality, higher economic prosperity and more social equity simultaneously, which would benefit both current and future generations (Di Vaio et al., 2022). CE could be empowered by innovative business models and responsible consumer behavior. According to scholars (e.g., Dey et al., 2019; Geissdoerfer et al., 2017; Schut et al., 2016). Another prominent definition of CE from the industrial perspective is given by EMF & McKinsey (2012, p.7) who defines CE as “an industrial system that is restorative or regenerative by intention and design. It replaces the ‘end-of-life’ concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models.” More recently, Nobre and Tavares (2021, p 10) used literature review and primary data to provide a more comprehensive and inclusive definition of CE as

“... ..an economic system that targets zero waste and pollution throughout materials lifecycles, from environment extraction to industrial transformation, and to final consumers, applying to all involved ecosystems. Upon its lifetime end, materials return to either an industrial process or, in case of a treated organic residual, safely back to the environment as in a natural regenerating cycle. It operates creating value at the macro, meso and micro levels and exploits to the fullest the sustainability nested concept. Used energy sources are clean and renewable. Resources use and consumption are efficient. Government agencies and responsible consumers play an active role ensuring correct system long term operation”

While the research area of CE emerged only in the first few decades of 2000, an even more nascent area within CE, that is gaining traction among scholars and practitioners alike is the role of entrepreneurs and the entrepreneurial process in CE (Kuratko & Morris, 2018; Suchek et al., 2022). Researchers (e.g., Brehmer et al., 2018; Roome & Louche, 2016) in similar domains discuss the role of entrepreneurs and new and innovative business models where the process of value creation is augmented to incorporate value at both environmental and social levels. This has led to the rise of the “circular entrepreneurship” concept in the domain of CE as the “processes of exploration and exploitation of opportunities in the circular economy domain” (Zucchella & Urban, 2019, p. 7). Thus, theoretical and empirical research on how entrepreneurs implement CE principles through novel and innovative business models, thereby leading to sustainable solutions are sparse (Gregori et al., 2019;) and the gap is even more from the viewpoint of small businesses and start-ups (Henry et al., 2020; Suchek et al., 2022).

In addition, there is more emphasis on conceptual studies than empirical studies that may illustrate the actual models of circular

entrepreneurship and their effect on the environment and society (Ferasso et al., 2020; Filser et al., 2019) and those that develop conceptual models of entrepreneurship and circular economy, especially for social ventures (Suchek et al., 2022). However, there has been a call for research that uses novel methods to explore research questions in the interrelationship between business and society (Crane et al., 2018). Third, the empirical studies that exist in the area of circular entrepreneurship focus on large firms rather than small start-ups and macro rather than micro aspects (Barreiro-Gen & Lozano, 2020). In this context, researchers have called for more studies that explore the concept of circular entrepreneurship from the journey of the entrepreneur and how the same leads to the creation of value for multiple stakeholders, or at multiple levels (Cullen & De Angelis, 2020; Saharan et al., 2023; Tapaninaho & Heikkinen, 2022). Finally, a systematic review of literature on the confluence of circular economy and entrepreneurship finds a dominance of research from the global north and calls for more exploration in the global South (Suchek et al., 2022).

Considering all the points discussed, we use a case study method to explore the entrepreneurial journey of a not-for-profit female entrepreneur based in an emerging economy. We study three entrepreneurship ventures by her and through the exploration of the process, we illuminate how the process model of circular entrepreneurship unfolds and how it leads to value creation at different levels for different stakeholders. The major research questions that we try to address in the present study are as follows:

1. What are the motivators of circular entrepreneurship in a developing nation?
2. What are the actions of a circular entrepreneur that lead to the success of a circular entrepreneurship venture?
3. How does circular entrepreneurship lead to value creation at economic, business and societal levels?

The answer to these questions would allow a deeper understanding of circular value creation as a process in a developing nation (that may have quite different motivations compared to a developed nation). In addition, the exploration would enable an understanding of how value is created and whom it impacts at various stages of the value chain. Finally, the exploration would contribute to the theory of circular economy with a conceptual model of circular value creation in entrepreneurship.

We chose to conduct the study in India for three reasons. First, most emerging nations such as India suffer from common challenges such as high population growth, stress of rapid urbanization, shortage of food and water and environmental pollution (Fiksel et al., 2021). This itself necessitates research in CE practices in emerging nations (Fiksel et al., 2021). Second, researchers have noted the need for investigation of CE practices in emerging or developing nations from the producer's side as these nations have been trying to raise awareness of CE among the general people through communication (Ngan et al., 2019). Third, India has a long tradition of sustainable business practices (Pereira et al., 2022) and has been taking long strides in the development of the entrepreneurship ecosystem majorly focusing on small and medium enterprises (Bhagavatula et al., 2019). Considering

all the reasons, India should serve as the right bed for the present study. The rest of the paper is organized as follows: in the next section, we discuss the literature related to the circular economy, circular business models and the role of entrepreneurs in the circular economy that leads to the research objectives. After this, we present the research methodology and details of the analysis. Following this, we present the findings and discuss the relevance of the same concerning literature. Next, we present the practitioner implications and conclude the study.

2 | LITERATURE REVIEW

2.1 | Defining circular economy

The circular economy concept has been used in different contexts by different researchers. The most widely used concept uses the 3R framework that explains the circular economy regarding the 3R framework/dimension (Reduce, Reuse and Recycle). While the framework has been used for more than a decade, researchers (such as Yan & Wu, 2011) suggest that the origin of this framework could not be traced. The use of the framework initiates as “how to” of circular economy and thus stands as a core principle (Blomsma et al., 2019; Reh, 2013). Another principle defining the circular economy is based on the systems perspective that explains circular economy to be composed of four different levels of the CE system i.e., micro, meso and macro systems (Blomsma et al., 2019; Heeres et al., 2004). The waste hierarchy principle stands as another principle of the circular economy that is supported in the work of Linder and Williander (2017) which is the Cradle to Cradle (C2C) concept. The three C2C principles are “waste equals food, respect diversity and use current solar income” (Braungart & McDonough, 2002), out of which “waste equals food” is a key component of the circular economy. However, there are several other concepts of circular economy promoted by several schools of thought such as Performance Economy, Regenerative Design, Industrial Ecology, Blue Economy, Permaculture, Natural Capitalism, and Industrial Symbiosis (Ogunmakinde et al., 2021). All these schools of thought complement each other and support Scott's (2015) approach to the relationship between circular economy and sustainability (Parida et al., 2019; Van Renswoude et al., 2015). Thus, all thought streams on circular economy suggest that the core principles are related to sustainability and sustainable development and suggest how the circular economy concept aims to maintain, safeguard and/or restore the quality of the environment, strengthen economic prosperity, develop social equity, and well-being and protect the future generations.

2.2 | Circular economy and business models

Researchers in the business application of CE have focused on its four building blocks which are “materials and product design, new business models, global reverse networks and enabling conditions”

(Planing, 2015). The transition to a circular economy, on one hand, may depend on the decision making of the policymakers (EMF & McKinsey, 2013) and on the other, may be determined by the business entities by adding circularity to their business models (Kanda et al., 2021; Van Renswoude et al., 2015). A circular economy-based business model may be considered as a mechanism to treat energy, resource value creation and entrepreneurship in different ways (Dey et al., 2019). In this context, Linder and Williander (2017) defined circular business model (CBM) as “a model in which the conceptual logic for value creation is based on utilizing the economic value retained in products after use in the production of new offerings” (p. 2). Mentink (2014) distinguished the circular economy as separate from circular business models. Thus, Mentink (2014) defined CE as “an economic system with closed material loops,” and circular business models as “how an organization creates, delivers and captures value with and within closed material loops” (p. 35). Mentink (2014) argued that CBMs may not essentially focus on ecological and social balance, in contrast to traditional business models, even though they may serve sustainability goals (Mentink, 2014). Van Renswoude et al. (2015) augmented this thought by suggesting that every business model may have a mixture of linear and circular activities in varied proportions and that there may not be a hundred per cent circular business model.

Researchers have derived the fundamental components of circular business models from the major postulates of the circular economy. Some of the notable frameworks are: normative requirements for business (Boons & Lüdeke-Freund, 2013), areas for integration (Laubscher & Marinelli, 2014), The ReSOLVE (i.e., regenerate, share, optimize, loop, virtualize, and exchange) framework (EMF & McKinsey, 2013), circular value creation (Van Renswoude et al., 2015), and the CB model canvas for high-value manufacturing (Okorie et al., 2021). There are several standard and applicable business model frameworks applied to circular business models. Notable among them are the business model canvas proposed by Osterwalder and Pigneur (2010); the integrated business model given by Wirtz (2011); the value proposition design developed by Osterwalder et al. (2014) and the four R model by Barreiro-Gen and Lozano (2020).

Very few researchers have focused on circular economy and small and medium enterprises and that too at a conceptual level. For example, Joustra et al. (2013) and de Jong et al. (2015) suggested five stages for small and medium enterprises (SMEs) to establish themselves in a circular economy. The first two stages suggest reading and researching circular economy and understanding whether the company, its partners and its stakeholders are ready for the CE. The next two stages are related to the evaluation of redesigning opportunities to incorporate products into an advanced circular business model. The last step is testing whether the value offered to the customers is what they are expecting and willing to pay for it. However, the lack of studies on the relationship between circular business models and small businesses implies that the same is in a nascent stage. This leads to the next section of the review.

2.3 | Circular value creation and entrepreneurship

In the recent past, there has been increased interest among academicians and practitioners in the domain of entrepreneurship (Suchek et al., 2022). These research topics explore the role of entrepreneurship in addressing sustainability issues (Kuratko & Morris, 2018), and there are several non-standard business models considered where the notion of value creation is augmented to include social and ecological value (Brehmer et al., 2018; Roome & Louche, 2016). The alternative business models are interpreted as circular economy-based entrepreneurship (EMF, McKinsey, & Sun, 2015), sustainable entrepreneurship suggested by Schaltegger et al. (2016) and sustainable business models (proposed by Bocken et al., 2014, and Morioka et al., 2017). The EMF and McKinsey (2012, 2013) also suggested four major archetypes of circular value creation that are: “a. *Inner Value Creation Loop: Maintaining the integrity of a product at its highest level via service and maintenance (to preserve materials, labour, energy, capital for their original purpose); b. Extending Value Creation Loop: Using products and materials longer via product durability or design for remanufacturing and reuse (to enable repeat cycles); c. Cascading Value Creation Loops: Cascading use in adjacent value chains (where the costs of reused products and materials are lower or have superior value compared to virgin or non-renewable materials); and d. Pure Value Creation loops: Creating pure, high-quality feedstock at the outset (avoiding contamination and toxicity to allow for reuse and cost avoidance of clean up or purification).*” Given the inefficiencies in the linear supply chain, tighter loops will benefit from high virgin material substitution (Dey et al., 2019). Whenever the costs associated with collecting, reprocessing, and returning the product, component or material into the economy are lower than the linear alternative, the circular systems would make more economic sense (Mishra et al., 2018; Sawe et al., 2021). With the resource prices increasing and the end-of-life treatment costs getting higher, the circular value creation is better than linear systems. Extending value creation loops is possible through more consecutive cycles (i.e., refurbishment of an engine core not only once but multiple times) or by spending more time within a cycle. The increased usage will thereby substitute virgin materials and counter-dissipate materials from the economy (EMF & McKinsey, 2012, 2013). However, the increased operating and maintenance costs lose out on the efficiency gains because of the rapid innovation of the product. Cascades (such as cotton clothing becoming fiber fill for furniture and subsequently biological nutrient), is rooted in the lower marginal costs of reusing the material instead of using the virgin material and their embedded costs such as energy, material and labor as well as externalities against the marginal costs of bringing the material back into the loop (EMF & McKinsey, 2012, 2013). Pure value creation loops require a certain purity of material and quality of components and products. In post-consumption material streams, the materials are available as mixtures because of the way they are collected or managed without segmentation and may not be handled without regard to preserving purity and quality. In such cases, scale economies and efficiency could be obtained through updating the original design of products and in the reverse processes (EMF & McKinsey, 2012, 2013). The process of

improvements to the product and the reverse cycle leads to reductions of the comparative costs of the reverse cycle while maintaining the nutrients at higher quality thereby extending the longevity and overall material productivity (EMF & McKinsey, 2012, 2013; Mishra et al., 2018). The circular economy model has the prospects to fulfill ecological and social sustainability concerns at the business level and propose sources of business and economic opportunities in the context of entrepreneurship (Ranta et al., 2018; Türkeli et al., 2018).

While the circular economy as a matter of inquiry has been recently focused on, circular entrepreneurship is even less explored in the CE framework (Suchek et al., 2022; Zamfir et al., 2017). Researchers conceptualize circular entrepreneurship as the process through which an entrepreneur explores and exploits opportunities in the CE domain (Cullen & De Angelis, 2020). However, this topic is in a very nascent stage in the CE literature and research-based empirical evidence on the ways it may be implemented is still limited (Cullen & De Angelis, 2020). In addition, very few researchers have focused on identifying how circular economy principles may be implemented through entrepreneur-driven innovative and novel business models (Gregori et al., 2019; von Kolpinski et al., 2023), more specifically in the context of small businesses and start-ups (Henry et al., 2020). However, the need for investigation in the same area could not be ignored since “*circular principles need entrepreneurial innovative spirit to become reality*” (Zucchella & Urban, 2019, p. 6). We provide a summary of the major scholarly work conducted in this domain in Table 1.

The notion of the triple bottom line in CE arose from researchers such as (Jonker & Faber, 2018) and (Frishammar & Parida, 2019) who suggested rethinking the role of CE beyond only contributing to the concerned business and profitability to joint value creation from a multiple stakeholder perspective and collective value (Jonker et al., 2020). Recent scholarship has contemplated considering CE as an umbrella concept that not only includes production, but also consumption and disposition processes (Kumar et al., 2019). While Kirchherr et al. (2017) have defined value creation in CE to encompass environmental, economic, and social value, researchers have noted the lack of conceptual models that include social dimensions (Ezzat, 2016; Homrich et al., 2018). The first principle of any business model is that it should be sustainable and thereby generate value for the business first. However, Schaltegger and Wagner (2011) suggest that firms need to be able to capture economic value while creating environmental and social value. This economic value may be in terms of direct operations of the firm, such as livelihood generation or indirectly such as waste reduction (Blomsma & Brennan, 2017). In addition, the company should be able to create superior customer value while contributing to sustainable development through the adoption of CE practices (Lüdeke-Freund, 2010). This would directly influence the business and the financial bottom line. Finally, the practices of the company should be able to benefit and influence other stakeholders besides the company and the customers. This is because of the interrelation between the CE practices of the company and its effect on society at large. The same may be manifested in circularity and sharing concepts, and the acknowledgment of change in consumption

TABLE 1 Major research in circular economy, value creation, and entrepreneurship.

Sl. No.	Author	Year	Country	Objective	Research approach	Methodology	Major findings
1	von Kolpinski et al.	2023	Germany	Investigates the internal dynamics of new and small firms that adopt a sustainable circular business model and identify the enablers, drivers, competences, and internal barriers to sustainable circular business model implementation.	Empirical (qualitative)	Case study	Develops four strategies to overcome barriers to sustainable circular business model adoption in young and small-scale companies: (1) human-centeredness, (2) high commitment at managerial level, (3) requirement of special skills, and (4) consideration of cultural aspects
2	Costanza	2023	N.A.	Explore the interplay between social entrepreneurship and circular entrepreneurship in the clothing sector	Empirical (qualitative)	Grounded theory using case	Develops a research framework based on a participative, interpretive, and iterative approach.
3	Awana et al.	2023	Australia	Identify barriers faced by circular startups at different phases of business development and growth	Empirical (qualitative)	In-depth interviews	The authors identify unique and common obstacles related to the distinctive and novel positioning of circular startups in promoting CE: Antecedent barriers; beginner barriers and growth barriers
4	Saharan et al.	2023	NA	Identify the various barriers and sub-barriers for circular entrepreneurs to adopt circularity in small enterprises in emerging economies.	Empirical	Mixed method: Best-worst method (BWM) and Multi-criteria decision-making (MCDM) method	Financial barrier observed as the most important barrier in the adoption of circular business modes. Other important barriers are "regulatory and operational barrier" and "challenges due to ambiguity of the concept."
5	Baah et al.	2023	Nepal	Investigate how circular enterprises drives technical capabilities (TC) to achieve circular economy (CE) performance through the moderating role of environmental dynamism.	Empirical (quantitative)	Structural equation modeling (partial least square)	Findings suggest circular ventures have a significant and positive effect on the development of TC and CE performance. TC has a strong and positive effect on CE performance. Environmental dynamism is found to significantly affect the relationship between TC and CE performance.
6	Shao et al.	2023	China	Explore factors that support and hamper producer-service enterprises' innovation capability to employ circular business model.	Empirical (quantitative)	Fuzzy Delphi method and gray-decision making trial and evaluation laboratory (DEMATEL)	Findings suggest the internal organization drivers as the main factors followed by external environmental, social, and economic pressures. The study also found the employees' perception of the circular business

(Continues)



TABLE 1 (Continued)

Sl. No.	Author	Year	Country	Objective	Research approach	Methodology	Major findings
7	Suchek et al.	2022	N.A.	Aims to bring entrepreneurship into the focus of discussions on CE	Conceptual	Literature review	model; increase in the workload; and training to be significant barriers to the integration of circular principles in business operations. The authors identified four thematic groups: Growing circular SMEs, born circular firms and start-ups, social entrepreneurship in CE, and support ecosystem for circular entrepreneurship.
8	Di Vaio et al.	2022	N.A.	Investigates the role innovation plays in the life cycle of entrepreneurial ventures seeking to create sustainable business models and tools for measuring the social impact of such ventures in sustainability assessment systems.	Conceptual	Literature review and bibliometric analysis	Explains how stakeholders' participation and engagement with institutional structures can be invigorated and how this affects the decision consequences for sustainable entrepreneurs.
9	Vedula et al.	2022	N.A.	Examines literature on social entrepreneurship (SE) and environmental entrepreneurship (EE) to expose potential linkages and propose future research direction	Conceptual	Bibliometric analysis	Proposes a conceptual framework identifying potential areas for collaboration and learning between SE and EE and proposes how these domains may be integrated to elevate the effect of the same on entrepreneurship.
10	Yin et al.	2022	China	Understand whether SME green entrepreneurship proxied by green innovation contributes to performance of SMEs.	Empirical (quantitative)	Time series	Green utility-model innovation has a significant and positive impact on performance. However, there was no evidence to support that green innovation positively influences firm performance.
11	Dantas et al.	2022	Pakistan	Explore antecedents and consequences of circular entrepreneurship in emerging markets.	Empirical (qualitative)	Case study	Circular entrepreneurs can be motivated both extrinsically as well as intrinsically. Circular entrepreneurship can have consequences through the lens of three dimensions of sustainability: Social, economic and environmental.
12	Re and Magnani	2022	Italy	Understand how circular firms co-create value with their key actors.	Empirical (qualitative)	Case study.	

TABLE 1 (Continued)

Sl. No.	Author	Year	Country	Objective	Research approach	Methodology	Major findings
13	Tapaninaho and Heikkinen	2022	Finland	Use of stakeholder theory to conceptualize value creation as a relational, systemic activity.	Empirical (qualitative)	Case study	Several co-creation forms exist between circular firms and their stakeholders. Identifies five joint value creation activities: Sharing the CE story, developing the industry, co-constructing knowledge for political decision making and creating local CE ecosystems and refining the business model.
14	Ardito et al.	2021	North America	Examine the direct and indirect effects of digital and environmental orientations on product and process innovation performance.	Empirical (quantitative)	Survey	Digital and environmental orientation have a positive direct effect on the likelihood that SMEs introduce product and process innovation. The indirect effect of pursuing a dual strategy toward digitization and environmental sustainability was found to have a negative impact on process innovation performance and a significant impact for product innovation performance.
15	Donner and Radic	2021	12 Mediterranean countries	Explore and identify the drivers and mechanisms of value creation in circular business models in agricultural food domain	Empirical (qualitative)	Case study	Six types of circular business models are found in terms of value creation and organizational form.
16	Kahupi et al.	2021	Not specified (Most likely, global west)	Understand stakeholders' perspective of building sustainable companies by innovators involving sustainable products.	Empirical (qualitative)	Grounded theory	Major findings: 1. Customers are generally receptive and embrace innovation; 2. sustainable entrepreneurs ensure that their business model is well developed just like their product; 3. the major barrier for sustainable innovations is not the cost, but nature of individuals to postpone change until their problems become grave; and 4. investing in sustainable innovations is more alluring in regions/countries with positive sustainability regulations.

(Continues)



TABLE 1 (Continued)

Sl. No.	Author	Year	Country	Objective	Research approach	Methodology	Major findings
17	Massaro et al.	2021	Global	Identify relationship between industry 4.0 and the circular economy and analyze how industry 4.0 can promote circular economy through its impact on businesses.	Empirical (qualitative)	Content analysis	Industry 4.0 can impact CE through: Promoting remanufacturing; increasing waste disposal; enhancing the efficiency of critical resources; and improving business models and the mission of companies.
18	Piowar-Sulej et al.	2021	NA	Understand environmental entrepreneurship and identify major research areas to determine future research	Conceptual	Bibliometric analysis	Future research could be identifying factors influencing entrepreneurial actions and the importance of various entities in the development of sustainable entrepreneurship
19	Rok and Kulik	2021	Poland	Investigate how circular start-ups plan and employ innovation into their business models	Empirical (qualitative)	Case study	Three major factors impact the design and development of a circular start-ups: Purpose-led intention for circularity as a solution, identifying the most critical social and environmental problems and the reason for the innovation.
20	Sawe et al.	2021	Developing countries	Identify major people driven factors that encourages CE practices in the SMEs and identify their interrelationships between them.	Empirical (quantitative)	Decision making trial and evaluation laboratory (DEMATEL)	People driven factors such as employee participation, training and knowledge sharing, leadership, and management along with strategic alignment are some of the most important significant factors in the adoption of CE practices.
21	Torres-Guevara et al.	2021	Colombia	Identify successful drivers for CE implementation	Empirical (qualitative)	Case study	Findings suggest five drivers for implementing CE in the construction sector: Management commitment, CE intermediaries, fertile ecosystem, identification of valuable materials and green teams.
22	Ceptureanu et al.	2020	Romania	Investigate impact of eco-innovation capacity on sustainable driven innovation of SMEs.	Empirical (quantitative)	Structural equation modeling (partial least squares)	Developing eco-innovation competency has a significant positive and beneficial impact on sustainability-driven innovation practices of SMEs.

TABLE 1 (Continued)

Sl. No.	Author	Year	Country	Objective	Research approach	Methodology	Major findings
23	De Angelis and Feola	2020	Italy	Study how circular entrepreneurship principles are translated into business models	Empirical (qualitative)	Case study	The most applied ReSOLVE actions are loop, optimize, and regenerate.
24	De Bernardi and Pedrini	2020	Italy	Understand and explore how distinct emotions that nourish environmental passion shape development of the identities and behaviors of entrepreneurs.	Empirical (qualitative)	Interviews	Environmental zeal motivates entrepreneurial behavior and creates different excitement levels thereby leading to the development of identities and behaviors.
25	Konietzko et al.	2020	Netherlands and Switzerland	Explore the process of circular business models (CBM) experimentation and how respondents develop and test their assumptions to achieve circular outcomes.	Empirical	Design-science framework	Awareness and the mindset of the respondent's impact how much attention and emphasis they pay to the circularity potential of their proposed CBM.
26	Mura et al.	2020	Italy	Analyze actions implemented by small enterprises which aim for circularity results. Understand the barriers, enablers and the relationship between CE, business strategy and performance.	Empirical	Mixed method (interview, survey, and focus groups)	CE implies a systemic approach to company's value creation. Waste management was identified as one of the widely applied CE practices by the companies, however resource saving practices least implemented. Major barrier for CE implementation is high cost.
27	Pieroni et al.	2019	Norway	Explore the business model configuration for CE based on product-service system (PSS).	Empirical (qualitative)	Action research	Configuration of the business model should satisfy certain conditions such as resource decoupling potential, economic growth, and superior customer value, which would contribute to circular economy.
28	Ceptureanu et al.	2018	Romania	Understand the perception of SMEs using ReSOLVE framework and identify the relationship between CE business actions and value creation.	Empirical (quantitative)	Survey	Six business actions of ReSOLVE framework are identified: Regenerate, optimize and exchange are correlated with circular economy in terms of value creation.
29	Kuratko et al.	2015	NA		Conceptual	Literature review	

(Continues)



TABLE 1 (Continued)

Sl. No.	Author	Year	Country	Objective	Research approach	Methodology	Major findings
30	Schaltegger and Wagner	2011	NA	Explore the theoretical viewpoints and contexts of entrepreneurship and suggest an integrated framework.	Conceptual	Literature review	Entrepreneurship is a significant notion at the individual, organization, and societal levels and thus a framework should be applicable at all levels. Environmental as well as social goals and policies determine the nature and degree of environmental orientation or social responsibility within a company

methods by the consumers and the society at large (Lee & Casalegno, 2010).

Few studies in this area explore few facets of entrepreneurship and circular value creation such as Mishra et al. (2018) who analyze case studies of four products developed by a large FMCG company from Europe that is based on closed-loop circular economy-led notions. Mishra et al. (2018) further investigates the process through which the products created value, who were the recipients of the value, and the key hurdles faced in the implementation. The findings of Mishra et al. (2018) suggest that each case may be unique and that the creation of successful value propositions may be complex and may warrant concurrent reconfiguration of major building blocks of the business to ensure buyer acceptance and business viability. Another study by Cullen and De Angelis (2020) explored the case of a circular business model of a Britain-based drinks and beverage company and found circular business models to include the proposition, creation, delivery and capture of circular value and in the course of the same, an entrepreneur may create value for the inclusive system where it belongs. The third study by Rok and Kulik (2021) explored multiple case studies on circular start-ups from Poland and observed that the major driving force behind circular entrepreneurship is the internal motivations of the entrepreneur and that is what leads to “to maximize their positive impact and build sustainable value” (p. 1). Finally, a study by Tapaninaho and Heikkinen (2022) investigated the stakeholder relationship perspective of CE business models and observed the possibility of multidimensional value creation at multiple levels if stakeholders are engaged with each other.

2.4 | Research gap

The present scholarly understanding of circular value creation has been criticized as inadequate (Eikelenboom et al., 2021; Jonker & Faber, 2018). In addition, scholars have emphasized the need to rethink value creation beyond the conventional focus on a single firm and its business performance (Frishammar & Parida, 2019) to subsume the inclusive nature of CE and value creation (Jonker & Faber, 2018). Homrich et al. (2018) have emphasized that past research has not explored CE from the triple bottom line view and Ezzat (2016) also endorsed that certain aspects of CE (such as social) are absent in present literature.

In addition, there is little scholarly research on small entrepreneurship ventures that use/have used principles of CE at the core of doing business and the outcomes or impact of the same on the ecology and society (Cullen & De Angelis, 2020; Suchek et al., 2022) (refer to Table 1). In addition, less is known about entrepreneurial orientation and embeddedness in the context of circular value creation. This is crucial since the pursuit of value creation at the social and ecological levels is the core of CE-based business and typifies the entrepreneurial process (Cullen & De Angelis, 2020; Rok & Kulik, 2021). Besides, most empirical studies that explore circular/sustainable entrepreneurship in the CE are based on large corporations (Parida et al., 2019; Ünal et al., 2019; Zamfir et al., 2017) and have focused

on the triple bottom line (e.g., Cullen & De Angelis, 2020; Gelhard & Von Delft, 2016; Mishra et al., 2018) (refer to Table 1). Considering the discussion and the research gaps, it is evident that there is a need to understand the role of the entrepreneur in the process of circular value creation, that too for a small business/start-up and from an interpretive approach that illuminates the process and its components. This leads to the study methodology.

3 | METHODOLOGY

We use a case study approach in the present study for multiple reasons. First, our research questions aim to explore a novel phenomenon that has not been extensively researched and involves a phenomenon where the context and the case may be difficult to separate from the context in which the phenomenon occurs (Halinen & Törnroos, 2005; Yin, 2009). Thus, in the present study, the phenomenon of circular entrepreneurship and circular value creation by an entrepreneur warranted an exploration in its real-life context so that the research unveils the mechanism involved in the context and the interaction of the same with the focal phenomenon (Halinen & Törnroos, 2005). Second, a case-study based approach allows for flexibility, richness, and holistic viewing of a phenomenon (Miles & Huberman, 1984). Third, given that the research questions aimed at exploration, we needed a unique phenomenon that explains and augments the theory of circular value creation instead of hypotheses testing or measurement. Thus, a case study should allow the same as it allows the identification of key variables, patterns, processes and major themes and sub-themes of a phenomenon, that aid in theory building instead of theory testing (Eisenhardt, 1989; Miles & Huberman, 1984; Yin, 2013). There are instances of the application of the case method in CE research such as Okorie et al. (2021) and thus our approach was justified.

We followed the approach suggested by Eisenhardt (1989) to structure the research methodology. The first step was to perform a detailed literature review to understand the gaps and to assert that there was a need for more explanation. The next stage was focusing on the phenomenon under observation and selecting the right case/s. The case/s thus selected were exemplars of the phenomenon under observation. Next, we crafted the interview protocol and associated documents that would facilitate the data collection. While doing the same, we also ensured to check for documental evidence that would be needed to triangulate the findings. Following this, we entered the field and conducted a series of interviews with the protagonist in her workspace. The same allowed for data that was grounded in the real setting of the protagonist. We conducted three rounds of data collection while simultaneously analyzing the data. During the analysis, we focused on within and cross-case patterns to develop the process model and link concepts in a coherent structure. The emergent model was compared with existing theories to enfold the literature. The analysis stopped as we reached theoretical saturation when we moved to discuss the implications.

3.1 | Data collection

The case study selected for study is an entrepreneurship firm called “Pure Living” which was started by a young female entrepreneur named Laxmi Menon in 2013. The case study is unique and contextual in multiple aspects. First, it discusses the entrepreneurship venture of a small entrepreneur, unlike a corporation. Second, it illustrates the journey of the entrepreneur illuminating the process and components of circular entrepreneurship in the course. Third, the entrepreneur has multiple ventures that were started one after the other thereby allowing for enough within-case contrasts leading to the richness of the findings. Combining all the reasons, the case method suits the research objectives and justifies an interpretive exploration. The data was collected primarily through three rounds of in-depth interviews of the founder totaling a recording of three and a half hours. Alongside the interviews, the authors collected information about the company from news reports and social media discussions of the company and the founder by the different stakeholders to achieve validity through triangulation (the methodology is summarized in Table 2).

Triangulation may be defined as “a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study” (Creswell & Miller, 2000, p. 126). Triangulation is one of the major procedures in qualitative research to improve the reliability and validity of the findings. Triangulation in the case study method has been suggested by Yin (2009) as an essential component. The intermingling of multiple methods, such as review of documental evidence, unobtrusive observations, and direct interviews, may lead to a reliable and valid construction of the reality under investigation (Yin, 2009). Thus, triangulation of the data related to the same phenomenon may improve the analysis and understanding of the problem under investigation. Researchers may perform triangulation by involving multiple researchers while analyzing and interpreting the same data or different data at different points in time, related to the same phenomenon. Triangulation may also be performed by cross validating the field data with published/documental evidence. Triangulation does not dictate a fixed method for all problems and may involve multiple methods of data collection and analysis and the chosen method may depend on the context, criterion and rationale of the research study (Golafshani, 2003). Patton (2002) discussed four major types of triangulation methods that are data triangulation, investigator triangulation, theory triangulation, and methodological triangulation. In the present case, we used triangulation for the first objective.

3.2 | Data analysis

The data analysis was conducted in three stages. First, the interview transcripts and related materials (collected from other sources) were used to create an “event history database” (Van de Ven & Poole, 1990). The event history enabled us to build a chronological narrative of the entrepreneur's journey over three of her major ventures that were cross validated from secondary data sources (such as

TABLE 2 Summary of the research process.

Step no.	Name of the step	Actions	Objective
1	Getting started	Definition of the research question Balanced focus on theory and hypothesis building	Literature gaps Need for exploration rather than confirmation
2	Selecting case	Specify phenomenon under observation Theoretical sampling	Achieve theoretical flexibility Focus on relevance instead of generalization
3	Crafting protocols and data collection instruments	Multiple methods	Grounding of theory by triangulation
4	Entering the field	Simultaneous data collection and analysis Multiple rounds of data collection	Adjust the protocol to increase richness of data Explore emergent themes and uniqueness of the case
5	Data analysis	Within case analysis	Focus on patterns, explore the process
6	Forming hypotheses	Linking themes and codes in a coherent model	Confirm existing theories, augment and build new theory/constructs
7	Enfolding literature	Compare and contrast with existing concepts/theories	Increase validity and generalizability
8	Reaching closure	Achieving theoretical saturation	Incremental insights are not generated

Note: Adopted from Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, 14(4), 532–550 (p. 533).

newspaper articles). Second, we generated codes from the interview transcript and merged them to identify key themes (Eisenhardt, 1989) while using the constant comparison method suggested by Strauss and Corbin (1994), where data collection and analysis happen simultaneously. The coding process is comprised of both open coding (to understand the major categories of the phenomenon) and axial coding to understand the phenomenon under inquiry by creating linkages among codes and categories at a higher level of abstraction (Strauss & Corbin, 1994). Both researchers participated independently in the coding process leading to the initial coding scheme created separately by both. Subsequently, the researchers compared their findings where inter-coder reliability was 95%. The codes for which disagreement occurred were discussed by the researchers leading to either merging of the codes or renaming them. The third stage of the analysis was “enfolding” of the findings with insights from circular value creation and entrepreneurship and CE literature. This allowed us to contextualize and develop our findings from a theoretical grounding (Eisenhardt, 1989). Reliability of the data was ensured through checks for credibility, transferability, dependability, conformability, and integrity (as suggested by Lincoln & Guba, 1985, Wallendorf & Belk, 1989).

4 | FINDINGS

We first provide an overview of the three ventures by the case protagonist (Table 3) as subcases of circular entrepreneurship. Subsequently, we discuss the process of circular entrepreneurship using the analyzed data.

4.1 | Sub case 1. The seed pen

In 2014, the seed pen idea was materialized. The seed pen concept was a replacement for plastic pens and was aimed at reducing the usage of plastic. The pen was created using recyclable paper/newspaper sheets. The idea was to roll the pen refill over the newspaper/recyclable paper and create a paper casing for the pen refill instead of plastic. For better utilization of the pen space and to give back to the environment, the founder decided to put a seed in the pen which could stay put for a significant amount of time but still germinate once the refill was over. Because of high demand, the company innovated a seed pen-making machine like a sewing machine to reduce the effort of rolling the pen. Several women groups were trained to use the machine and create the pen. The idea was widely accepted by consumers and business houses alike and by late 2019, the company was selling approximately 150,000 pens per month. The idea inspired both other start-ups and large companies to launch similar products.

4.2 | Sub case 2. Chekutty dolls

In August 2018, severe floods affected the state of Kerala in India and during that time, the idea of the Chekutty doll was conceptualized, out of the need to help the weaver's community who were badly affected and had ready to market material (such as sarees) destroyed as an after effect of the flood. The idea was to create small doll figurines out of the soiled/damaged clothes that were accompanied by a story. The objective was to promote a symbol of hope. This resulted

TABLE 3 Summary of the subcases.

Sl. No	Name of the product/project	The Core idea	Type of business model	Expected impact	Archetype of circular value creation (as per EMF & McKinsey, 2012, 2013)
1	Seed pen	Replacing the plastic pens (outer covering) with used paper pens and to add to the value by putting a seed to reduce the plastic use and increase the forest cover	B2B and B2C	<ul style="list-style-type: none"> Reduce the carbon footprint Social impact of usage behavior Creation of employment opportunities for unskilled individuals 	Extending value creation loops and cascading value creation loops
2	Chekutty dolls	Dolls made out of soiled fabric during the Kerala floods to help the weavers community	B2B and B2C	<ul style="list-style-type: none"> Reuse of the stained clothes Support the weavers community 	Cascading value creation loops
3	Shaaya—The bedding project	Bedrolls created out of tailoring waste of PPE suits to be used by COVID 19 patients at an affordable rate	B2G	<ul style="list-style-type: none"> Waste management through use of the tailoring waste of PPE suits Job creation Create bed rolls used in COVID-19 recovery centers at an affordable rate 	Cascading value creation loops

Note: B2B = Business to Business; B2C = Business to Consumers; B2G = Business to Government.

in the employment of several people while making dolls out of waste clothes and the project helped the company to recover the estimated losses of the weaver's community. The Chekutty dolls became a symbol of inspiration and received a good amount of support from society.

4.3 | Sub case 3. Shaaya the bedding project

The Shaaya project started in February 2020. The original idea was to create bedrolls from the cloth scrap generated by tailors that could be distributed to the homeless. The initial idea was to use any cloth scrap to braid by inserting scraps into the braid and then create bedding that could be distributed. However, with the onset of the COVID-19 pandemic, the cloth scraps got replaced with personal protective equipment (PPE) scraps and the created bedrolls were supplied to COVID-19 recovery centers. This resulted in multiple outcomes such as creating employment opportunities, and provisioning of economical bedrolls that were less expensive and could be reused after washing and sanitizing the same (the cotton bedrolls were expensive and had to be destroyed after use by a single patient). The company sold more than 1000 bedrolls between August and November 2020. The overview of the sub-cases is summarized in Table 3.

4.4 | The process model of circular entrepreneurship

The analysis of the case study data revealed three major themes of circular entrepreneurship that were connected in a process model (summarized in Figure 1). The initiation of the process could be traced back to the background of the entrepreneur even before she decided to become one. For instance, the main protagonist discussed an event

from her past that made her think that the total rejection of non-sustainable products such as plastic bags may not necessarily be a solution as it may create inconvenience for specific stakeholders in an economy. However even though the background may be influencing the motivation to become an entrepreneur, it may not necessarily happen immediately, nor it may be directly related to the product/business idea that is finally rolled out. This leads to the first proposition of the study:

P1. The background (such as past experiences and socio-economic background) of the entrepreneur influences his/her motivation for circular value creation.

4.4.1 | Motivation

The major stage of the circular entrepreneurship process was found to be the motivation behind the venture formation. Here we found four major sub-themes. The first among them was a personal experience. Personal experience in the present case was found to be coming from the day-to-day use of a product by the entrepreneur and the individuals near her.

“In Kerala, India, the literacy rate is extremely high and almost everybody uses a pen. So why not replace the plastic content of the pen with paper? A pen has a refill and to hold the refill, the outer cover is plastic as well as a cap of the pen which is also made of plastic. Also, I saw many people around me who use use-and-through plastic pens thus adding to the plastic waste. Thus, I thought why not replace the plastic content of the pen with recyclable paper/newspaper.”

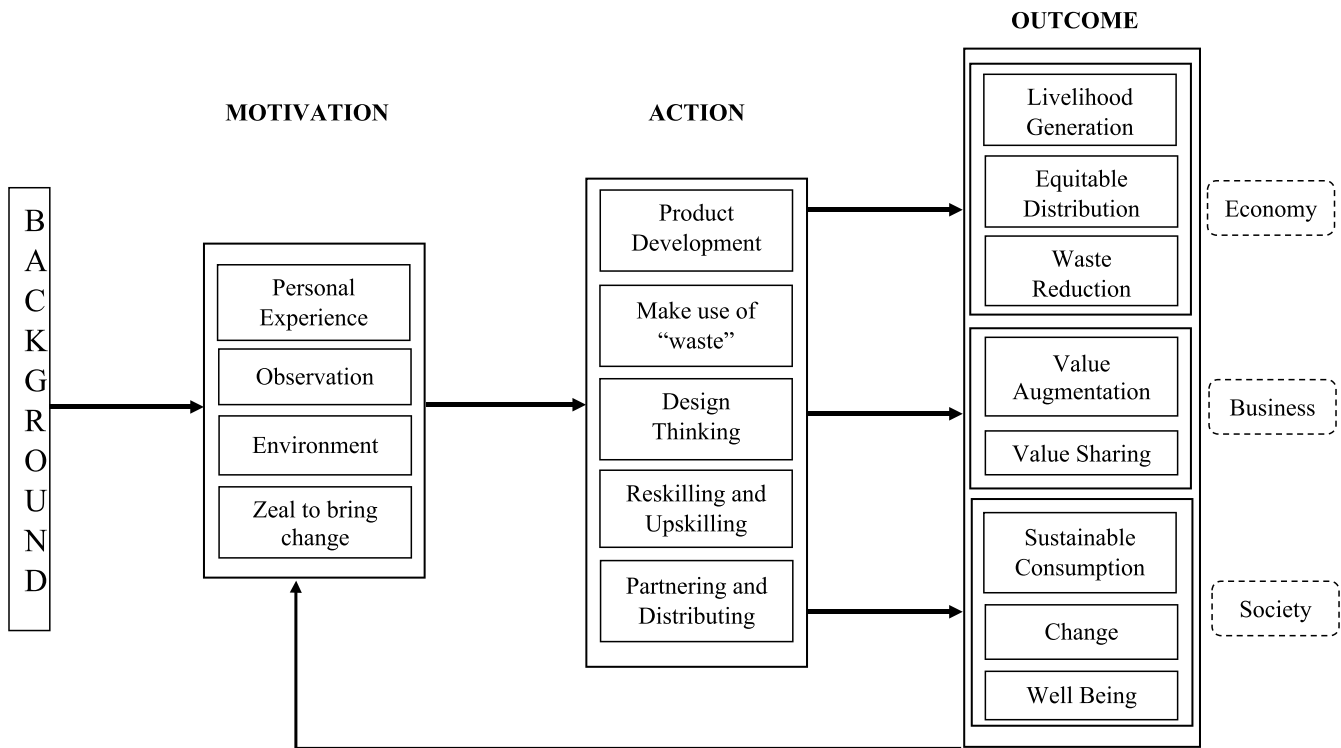


FIGURE 1 The conceptual model of circular serial entrepreneurship.

Personal experience may also influence the entrepreneur to explore areas beyond her expertise as was the case with the seed pen.

The second sub-theme was observation. Observation of two distinct phenomena may be linked by the entrepreneur leading to a new business idea aimed at creating circular value.

“I used to go to Bangalore very frequently and while traveling I used to always find kids sleeping in a hut or roadside without any bedding, not even a cloth. That used to hurt me deeply and on the other hand, being a designer, I knew that tailors have the bulk of cloth scrap that is usually burnt as it is considered waste. ... I was wondering if we could use this scrap to create a bedding for the kids.”

The third sub-theme was the macro-environment that may create an unexpected situation that the entrepreneur may utilize to generate value from an otherwise “waste” situation. This was the case with the Chekutty dolls (small dolls made of cloth).

“In mid-2018, Kerala was affected by a flood. Even though I was staying in a safe place, I was affected by the pleas of different people and was looking for an opportunity to help my people. One day I got a call from my friend who visited the weaver’s society and was trying to sell materials not affected by several fashion designers. Those products which were on

higher shelves were in sellable condition, but not those at lower levels or on the ground. There were products worth INR 2.1 million that were not in sellable condition. Everybody who visited the weavers told them that the stock needed to be burnt to make space for the new one that the weavers would make. I considered that as a challenge and thought of making something from those waste cloth.”

However, the data yielded that the all-encompassing thread between the sub-themes happened to be the internal motivation of the entrepreneur to bring positive and sustainable change at multiple levels. This functioned as a catalyst to foster the other themes of motivation into workable value propositions. This leads to the second proposition:

P2. The motivations for circular value creation (namely, personal experience; observations; the environment; and the zeal to bring change) lead to action or behavior that uses entrepreneurship to create circular value.

4.4.2 | Action

The next stage of circular entrepreneurship was the action phase which had five sub-themes, all related to the different actions taken up by the entrepreneur to create, promote and distribute circular value. The first sub-theme was product development. It was found

that the product development phase may require the entrepreneur to learn new skills such as the case of Seed pens or think of creative alternative uses of an existing product such as the Chekutty dolls.

The next sub-theme was the activity of making use of the so-called “waste.” The entrepreneur was found to create novel value propositions from products that were considered as “waste” by the very producers of it.

“I bought a few pieces of soiled clothes and tried to do all the processes to make it better, but it was torn, and the colors had gone. Thus, I realized it is not possible to make it completely new. However, I was not ready to take this as a defeat and I started seeing it deeply. I could see people disturbed and stressed during this time. Then a thought struck, why not create a symbol of a Keralite (person from the Kerala state in India) who is stressed but has not lost hope using this fabric. Without wasting time, I made a doll, named it Chekutty (en. Mud child) and created a short story around the same. The story indicated that we are not hiding negativities rather we are highlighting it and the tagline mentioned ‘Chekutty has a scar, Chekutty has stains, but Chekutty was the one to survive the flood’. Thus, we highlighted the scars and the stains and those became the trademark of the Chekutty dolls.”

Two important insights emerged from this sub-theme. The first is that nothing is a “waste” if a viable alternative can be thought out of it. Second, what is “waste” for one stakeholder may be converted into something of significant value for another using creativity and effort.

The next sub-theme was that of design thinking. While the entrepreneur was not found to explicitly mention this word in her entrepreneurial journey, it was evident that she was following the basic blocks of design thinking (proposed by Hasso-Plattner Institute of Design at Stanford, also called the D school) implicitly. Both the Chekutty doll and the Shaaya projects started by empathizing at the stakeholder level, followed by defining the problem. This was followed by the ideation phase where multiple alternatives were considered. Subsequently, the prototype of the product and the testing of the idea was done. This process was also iterative in some cases where adjustments were made according to the issues faced in between.

“I wanted to replace the plastic content of the pen with recyclable paper, and we looked into multiple ways through which the paper can be rolled over the refill. To add more value to the pen we thought of multiple additions, and subsequently decided on adding a leaflet of information (including quotations from famous personalities and some famous facts) and utilizing the space by adding a seed in the cap of the pen. The seed could be planted once the refill of the pen is utilized.”

The next sub-theme was reskilling and upskilling. This phase involved action at the entrepreneurial level and the stakeholder level network of the entrepreneur. While all the ventures mentioned in the case required basic skills that could be performed by almost anybody, they required some level of understanding of the dos and don'ts. Thus, it needed a certain level of upskilling of the entrepreneur.

“We were making the Seed Pens in the backyard of our home, and it was me and my relatives who were rolling the paper. However, we realized that with the increasing demand, this may not be a feasible model and we must automate the process. After months of iteration and thinking, I realized that this can be created in a sewing machine kind of automatic machine. I met a person who helped me out and we created the paper pen making machine. Interestingly, the cost of production of the Seed Pen making machine was initially around INR 20,000. However, with some rework in the design, the cost came down by more than half.”

Some level of reskilling of the other stakeholders involved in the process was also performed.

“Most of the women knew how to braid hairs and thus they were told to use the same braiding skills to braid a scrap of PPE material to make beddings. However, they needed to be trained to roll the scrap braids by fixing nails to make beddings that are of uniform size and quality.”

Finally, given that the entrepreneur was a small start-up, significant action was required in the form of partnering and distributing. This is where it was observed that for circular value generation to be implemented, multiple stakeholder involvement is required such as that from the staff, corporate houses, government and society at large. Thus, we have the next proposition:

P3. The actions by the entrepreneur (such as new product development, making use of “waste,” reskilling and upskilling of stakeholders) lead to the major outcomes of circular value creation.

4.4.3 | Value

The outcome of the actions led to the generation of circular value that could be divided into three subcategories of economy, business and society. We now discuss each one of them.

At the economic level, the circular value generated was in three forms. First, the entrepreneur was successful in generating employment and livelihoods for a significant amount of people including people from marginal sections of society.

“Not only were people employed with me for making the Seed Pen, but there were various people and organizations who were using Seed Pen to create their

source of livelihood. I got several letters and messages from different people and organizations including a physically disabled person thanking me that I could give him the idea to make Seed Pens which he now uses as a source of livelihood.”

In addition, in some cases, it was also found that alternative employment opportunities were generated for stakeholders. At the economic level, the value was also generated through the reduction of demand–supply gaps. While there was a demand for low-cost reusable bedding and there was an ample supply of material that could be used to create the same, the demand and supply were operating in different markets without any connection between them. In this case, the entrepreneurship venture Shayaa bridged the gap to bring certain level of demand–supply equilibrium. Finally, all the ventures were aimed at and were found to lead to waste reduction and reuse which is a fundamental pillar of the circular economy.

The next category of value creation was at the business level. The entrepreneur was found to augment the value of a product (that could have otherwise been wasted) even beyond the economic value of the original product.

“The weavers used to sell one saree initially within a range of INR 1200–1500. We used the soiled sarees to make Chekutty dolls. We made 360 Chekutty dolls from one saree, each of which was sold for INR 25. Thus, the Chekutty dolls made from a single saree fetched INR 9000 out of one saree that was way above what we expected.”

Value augmentation was however also observed through products such as the Seed Pen where the value of the product does not become zero even after the core product has been utilized. One of the most unique findings at the business level was that of value sharing. In the present case, the entrepreneur was not found to be bothered about her profits (which is a vital component of the triple bottom line) as she was more interested in circular value creation.

“I do not take patents for any of my product innovations. I want to create a difference in society and that would be possible if I could share the knowledge with anyone who wants to pursue the same and can bring about a change and can earn a source of livelihood along with a sustainable business venture. I provide free training to students, different organizations, and groups to produce many products that I innovated.”

Thus, the sharing of value beyond upstream and downstream becomes evident from the circular business model of the present case.

The third category of value creation was at the societal level. At the society level, one of the major components of value creation was that of sustainable consumption. Both from the cases of the Seed Pen

and the Shaaya, it was evident that a circular business model may foster sustainable consumption practices such as the Seed Pen (that gives back to the earth) or the Shaaya bedding (that promotes reuse). Second, even with the small scale of the entrepreneur, she could bring in change. This change was manifested in the attitudes and behavior of multiple stakeholders such as the consumers (e.g., using the seed pen), the producers (e.g., learning new uses of the same product), and the other stakeholders (e.g., such as people who started manufacturing products innovated by the focal firm). Third, value creation was also manifested in the well-being at the societal level. For some stakeholders, this was financial well-being, (e.g., for the weavers and employees); while for some others, it was psychological (such as the customers), while for some it was a mix of physiological and psychological well-being (e.g., recipient of the Shaaya bedding). This leads to the final proposition:

P4. The major outcomes of circular value creation are observed at various levels of the economy, business and society.

P5. The outcome of circular entrepreneurship provides fresh motivation to the entrepreneur to continue and innovate.

Finally, the entrepreneur was found to derive motivation from each venture (and circular value creation), learn from the same and continue/modify the entrepreneurial process.

“Each new venture is learning for me. The outcomes achieved motivate me to keep up the work I am doing. They also help me understand what went right/wrong and what to continue and where to modify.”

The findings are summarized in the process model (Figure 1). The process model illustrates circular value creation to have three major stages. The first stage is that of the motivation of the entrepreneur. The motivations, however, would be influenced by the background of the entrepreneur. The motivations could be generated by external forces such as observations and internal forces such as the zeal to bring a change. The motivations lead to actions performed by the entrepreneur to create circular and sustainable business ventures. The actions range from ideation to new product development or finding new reusable innovations. In such courses, the actions also involve upskilling and/or reskilling of the workforce and finding new ways of partnering or distributing the products. These actions then lead to the outcome in terms of value creation. Value creation is manifested at multiple levels: the economy, the business, and the society. At the economic level, value creation is in the form of waste reduction, livelihood generation and equitable distribution of resources. At the business level, value is created through value augmentation, that is, extending the value of the product through new uses. At the societal level, value creation is through promoting sustainable practices (such as the seed pen), bringing change and the well-being of multiple

stakeholders involved in the entire process (such as workforce and consumers).

5 | IMPLICATIONS

5.1 | Theoretical implications

The existing literature on circular value creation has predominantly explored the phenomenon from the perspective of large firms (e.g., Torres-Guevara et al., 2021). It also paints an incomplete picture of the process of circular value creation as the existing literature focuses on either the antecedents of circular value creation (e.g., De Bernardi & Pedrini, 2020; Rok & Kulik, 2021) or the consequences (e.g., Pieroni et al., 2019; Tapaninaho & Heikkinen, 2022). There is also a sparsity of understanding on circular value creation at distinct levels by entrepreneurs as extant research has explored parts of it (e.g., Re & Magnani, 2022). Finally, extant research has been concentrated on developed nations and the global West (we could find only three empirical papers out of 24 in the relevant literature) (refer to Table 1). Based on this premise, we discuss the implications of the present study.

The most important contribution of the present study is an exploration of the process of circular entrepreneurship and the resultant circular value creation. While the need for this has been voiced by researchers (Filser et al., 2019; Gregori et al., 2019; Suchek et al., 2022), our study addresses the call through a holistic exploration of the entrepreneurial journey of a small entrepreneur (Henry et al., 2020). In addition, the findings from the present study contribute to the larger domain of circular economy as it notes the significance of small businesses in contributing to CE at multiple levels (i.e., economy, business, and society) (Brehmer et al., 2018; Ferasso et al., 2020; Kuratko & Morris, 2018). In addition, the case also acts as an exemplar of the relationship between CE business practices and resilience (Kennedy & Linnenluecke, 2022) and how this resilience leads to value at multiple levels. Second, the present study uses an in-depth exploratory approach to illustrate circular value creation by a small business owner. Thus, it acts as a real-life example of circular entrepreneurship and circular value creation and addresses the call for similar studies by researchers such as Henry et al. (2020) and Cullen and De Angelis (2020). In doing so, the findings address some of the questions raised by Mentink (2014) on the various components that are unique to a circular business model such as the value proposition, the product and the key actions or processes.

Third, it should be noted here that the three subcases studied exemplify at least two separate ways of circular value creation as suggested by EMF and McKinsey (2013) (refer to Table 3). The seed pen venture exemplified both extending and cascading value creation loops while both the Chekutty dolls and the Shaaya project exemplified cascading value creation loops. Thus, our study supports the notion of circular value creation suggested by other scholars at different levels (Lim, 2017; Van Renswoude et al., 2015). The fourth and very novel contribution of the present study indicates that the

entrepreneur motivated to create circular value may not be expecting a “triple bottom line” as their own profits may not be the objective at all for starting a venture. Thus, our findings provide a different view (as against, e.g., Mishra et al., 2018; Cullen & De Angelis, 2020) to the notion of a “triple bottom line” in the case of circular value creation. The fifth and final contribution of the study is an attempt to uncover the process of circular entrepreneurship within the umbrella of circular economy as it illuminates how an entrepreneur explores and utilizes opportunities (that may come from internal or external sources) leading to CE outcomes.

5.2 | Managerial implications

The present study provides several managerial and policy-level implications. First, the study provides an understanding of how circular value creation may be practiced by a small enterprise. Thus, it (the model developed) may function as a template for other companies who want to build/implement a circular business model thereby contributing to CE. In addition, given that the cases are all based on a small venture, an entrepreneur need not be worried about scale but can create a substantial impact even on a small scale. Second, the model developed in Figure 1 brings forth a notion of value sharing. Given the size of the target market (in our case at least, it was not feasible for the protagonist to cater to it alone), it may be a better option for the business not to retain the product/knowledge within itself but to share it with competitors so that the value spreads. This way, it would lead to co-opetition rather than competition. This implies that in the case of circular value creation, multiple firms may operate in the same domain and may be successful as the market size is large and there may be enough space for everyone to operate. Thus, our study contradicts the basic notion of the triple bottom line in the case of circular business models and calls for more practitioner thoughts on the same. The same line of thought may be extended to the non-market based forces that contribute to sustainability as propagated in the COP28 by the United Nations.

Third, the study also illustrates novel ways of thinking so that CE could be fostered through the redesigning of products and processes. Thus, the implications for practitioners are that novel ways of thinking may come out of formal processes such as design thinking but may also come from the macro-environment. Thus, the entrepreneur should be open to innovative ideas and thoughts that may come from any source. They should experiment and use design principles to think of novel solutions of “reuse” that create value for the primary and the secondary stakeholders. The fourth implication from the present study is the role of corporate support in fostering circular business models and circular value creation. At different points in time, the entrepreneur was found to receive support from corporate houses either in the form of a buyer or promoter. The same support would contribute to CE through circular value creation and delivery. Thus, entrepreneurs operating with the objective of circular value creation should actively seek out support from large business houses to scale up their ideas. This may also foster co-opetition as mentioned earlier.

5.3 | Policy implications

The next implications of the present study are from the policy perspective. The findings from the study underline the need for policy measures to support the entrepreneurial ecosystem. In one of the sub-cases, it was observed that a demand–supply gap occurred because of information asymmetry between two markets. This is where policymakers may intervene to create bridges (e.g., through information dissemination) that may foster a circular business model thereby contributing to CE. The root of this idea has been well supported in the deliberations of the recently concluded COP28, the nations conference on climate change organized by the United Nations Climate Change group. The findings from the case study discuss the role of cooperation between different parties for sustainable practices, which was a critical component of the success of the focal firm in our case. The findings also support another notion of innovation to reduce wastage, which was another point highlighted in the present case (especially the seed pen). Thus, the policy makers in COP28 may be inclined to support similar non-market endeavors that practice and propagate the basic principles of sustainability and may defer climate change. Second, the cases mentioned in the present study observed the entrepreneur to generate/facilitate livelihood on the supply side because of circular value creation. However, to achieve this at a larger scale there is a need for networks and platforms that may educate the entrepreneur about the labor resources that are available and suited for a particular venture. In such a case, the circular value creation may be scalable, and the resources would be utilized to a larger extent. Thus, the government may be able to provide these networks and platforms to facilitate circular businesses. Finally, the role of the government in facilitating a conducive structure for promoting circular economy was implicit in the cases as it was found that the government may play a key role as a buyer and promoter of products/services aimed at the CE.

6 | CONCLUSION AND SCOPE

The domain of entrepreneurship and circular value creation has received recent attention (e.g., Suchek et al., 2022). However, conceptual and review papers have suggested the need for empirical work that explores the intersection of CE and entrepreneurship and its effect on value creation (e.g., Piwowar-Sulej et al., 2021; Vedula et al., 2022). We explore the concept of circular value creation using a multiple case study design from a developing nation. The major findings indicate the process of circular value creation that starts from the background of the entrepreneur and leads to circular value creation. The value creation may be generated at different levels (supporting the concept of a triple bottom line). The value created works in a loop like structure that motivates the entrepreneur to create newer ventures that apply the principle of circular economy to create value.

The present study explored an interesting and rarely explored area in CE. The findings from the present study bring forth a picture

of a small entrepreneur's journey and show how circular value creation may happen for multiple stakeholders. The present study has novelty, but also some limitations that may pave the way for future research. First, the study used a single entrepreneur (and three sub-cases) to illustrate the phenomenon. While this in no way undermines the value of the findings, future studies may investigate contrasting cases from multiple entrepreneurs to generate new insights. Second, the study used an interpretive approach and depended on qualitative data. Future research may be conducted using positivist approaches and quantitative data to validate our model numerically. Finally, the study had a developing nation context. There have been scholarly insights into the difference in entrepreneurship between developed and developing nations. Thus, researchers in the future may replicate the same study in a developed nation and try to gauge the similarities and differences that arise in the circular value creation model because of the context. To summarize, the present study is a novel contribution to the less researched field of circular value creation in entrepreneurship and should foster more interest in the same.

CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest.

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