

Sustainable Entrepreneurship:

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Abstract

Sustainable entrepreneurship has emerged as a critical approach for addressing global environmental and social challenges by integrating economic viability with societal and ecological considerations. This study examines the role of dynamic capabilities (DCs) in sustainable enterprises, emphasizing the microfoundations that enable firms to sense, seize, and reconfigure resources for long-term sustainability. While prior research has acknowledged the relevance of DCs in sustainable enterprises, limited attention has been given to their underlying microfoundations. Using a multiple-case study design and abductive reasoning, this research maps the innovation trajectories of selected sustainable enterprises, offering insights into how DCs contribute to their survivability. The findings highlight the essential role of microfoundations in implementing socio-economically oriented solutions and sustaining continuous innovation. This study advances the theoretical discourse on DCs in sustainable entrepreneurship and provides practical insights into how sustainable enterprises can effectively identify, address, and manage entrepreneurial opportunities.

Keywords: Sustainable entrepreneurship, dynamic capabilities, microfoundations, sustainable innovation, multiple-case study, socio-economic solutions.

Introduction

In the face of pressing environmental and social challenges, businesses are increasingly expected to integrate sustainability into their core strategies. Sustainable entrepreneurship, which seeks to balance economic viability with social and environmental responsibility, has emerged as a critical response to these challenges. Unlike traditional entrepreneurship, sustainable entrepreneurship requires firms to continuously adapt and reconfigure their resources to maintain a competitive edge while creating long-term societal value. To understand how sustainable enterprises navigate this complex landscape, the dynamic capabilities approach offers a valuable framework.

From an analytical perspective, dynamic capabilities may be broken down into three distinguished activities: sensing threats and opportunities, seizing the opportunities, and staying competitive by reconfiguring resources. The organizational base of dynamic capabilities is formed by *microfoundations*, which support these three generic, corporate-level capabilities. According to Teece (2007), “distinct processes, skills, procedures, organizational structures, decision rules, and disciplines” are microfoundations. Thus, they form the basis for comprehending how competitive advantage is created.

In the context of sustainable enterprises, the concept of dynamic capabilities holds particular significance. However, over the past decade, only a handful of scholars have ventured into the exploration of sustainable enterprises through the

lens of dynamic capabilities (Amui et al. 2017; Knoppen and Knight 2022). While existing studies have begun to outline the potential dynamic capabilities of sustainable enterprises, limited attention has been devoted to delving into the fundamental components of these capabilities—commonly referred to as micro-foundations. These micro-foundations are instrumental in shaping the implementation of social solutions (Bhardwaj et al. 2022) and the long-term sustainability of enterprises, ultimately facilitating the creation of triple value.

Addressing this issue, we seek to explore how sustainable enterprises identify and exploit opportunities, address the recognized opportunities, and reconfigure their resource base in a continuum, thereby enhancing the continuous sustainable innovation. To achieve this, we utilize a multiple-case study design and an abductive reasoning-based analytical strategy to map out the innovation trajectories of sustainable enterprises. Our procedural approach in fact allows us to understand the historical development of selected case SEs that further enables us to comprehend how DCs facilitate the survivability of SEs. Overall, the study contributes to the theoretical advancement of dynamic capabilities within the context of sustainable entrepreneurship by emphasizing the evidence-based significance of micro-foundations of DCs for implementing socio-economically oriented solutions. Also, our study advances the practice-based understanding concerning “how sustainable entrepreneurial opportunities for sustainable enterprises can be effectively identified, addressed, and managed.

The remaining part of our study is structured in the following manner. An overview of theoretical evolution and the nature of sustainable enterprises is presented in section 2 along with the theoretical overview of DCs and their micro-foundations, which further leads to the framing of the research question. Section 3 elucidates the methodological choices and proffers an overview of selected case SEs. Relatively, major findings are presented in section 4. Further, section 5 presents a discussion of the study by highlighting its importance towards further theoretical advancement on SEs from the perspective of DCs. Lastly, section 6 presents the theory-oriented as well as practice-oriented implications and recommendations for further scholarly research in the direction carved out by our study.

2. Literature Review

2.1 The nature of sustainable entrepreneurship

The field of sustainable entrepreneurship is a nascent area of study that emerged from the convergence of sustainable management and entrepreneurship (Belz & Binder, 2017). It can be considered a dynamic concept that encompasses the integration of social, economic, and environmental dimensions (Haldar, 2019). As evidenced by the rise in for-profit, purpose-driven enterprises, sustainable entrepreneurship has become one of the vibrant subdomains, representing the increase in entrepreneurial solutions to social and environmental issues (Stubbs, 2017). Sustainable entrepreneurship is a multifaceted social phenomenon that necessitates systemic ways capable of addressing the entirety of the issue rather than just its components (Munoz & Cohen, 2019). Moreover, the concept of sustainable entrepreneurship has emerged in recent times to tackle the impact of entrepreneurial endeavors for sustainable development in a holistic manner.

Sustainable entrepreneurship is distinguished by key elements of entrepreneurial activities that prioritize individual initiative and expertise over management systems or technical procedures. Its primary objective is to achieve significant market success and drive societal transformation through environmental or social innovations (Schaltegger & Wagner, 201; Haldar 2019). Sustainable enterprises integrate economic, social, and environmental sustainability into their design to achieve long-term sustainability by combining resources and factors to accomplish certain objectives (Haldar, 2019). This study extends the definition of sustainable entrepreneurship to encompass economic, environmental, and social advantages gained via business ventures rather than solely concentrating on the resolution of social issues.

2.2 The essence of dynamic capabilities

The concept of dynamic capabilities pertains to the process by which a firm or an enterprise acquires and sustains its resources over time (Jurksiene & Pundziene, 2016). The dynamic capabilities perspective highlights the necessity for enterprises to adapt and develop in response to the evolving market environment (Mikalef & Pateli, 2017). It explains a firm's competitive edge (Jurksiene & Pundziene 2016) and emerge from "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" by "purposefully creating, extending, or modifying its resource" (Teece et al., Pisano, and Shuen 1997).

The majority of research on dynamic capabilities concentrated on large, established commercial enterprises. However, a small but growing corpus of research has looked beyond large, established businesses to small, start-up businesses - to the context of entrepreneurship. Previous scholarly investigations have examined the impact of dynamic capabilities, such as gaining a competitive edge and enhancing overall effectiveness (Zahra et al., 2006). Additionally, certain studies have emphasized the interconnected dynamics that exist between the individual-level (micro-level) and the organizational-level (macro-level) manifestations of dynamic capabilities (Ambrosini & Altintas, 2019).

Various scholars have made significant contributions in identifying and establishing the components that make up dynamic capabilities, including managerial capacity (Eisenhardt & Martin, 2000), routine and organizational learning (Zollo & Winter, 2002), positions, processes, and paths (Teece, 1997). These components are the micro-fundamental building blocks of dynamic capabilities (Bhardwaj et al., 2023). Dynamic capabilities not only strive to adapt a firm's resource base to changing customer needs and market trends but also allow enterprises to alter their environment through innovation and collaboration with the stakeholders (Teece 2007; Kindstrom et al., 2015).

As defined by Newbert (2005), dynamic capability is "*a process executed at the individual level*". As such, it is possible to think of global entrepreneurial competencies as micro-foundations of dynamic capabilities (Castellano et al. 2020). The identification of opportunities and sensing changes are crucial managerial and organizational activities that facilitate the implementation of individual dynamic capabilities. The micro-foundations of dynamic capacities further define them. Teece's model proposes three dynamic capabilities, namely sensing, seizing, and reconfiguring, and

elucidates the underlying micro-processes associated with each capability (Vézina, Ben Selma, and Malo 2019).

In the sustainable entrepreneurship context, relatively less research has looked into how opportunities are identified, developed, and exploited in social and environmental contexts (Belz & Binder, 2015). One of the main challenges faced by sustainable enterprises is integrating social and environmental issues into fundamental business processes and tools, as well as managing social and environmental issues using economic approaches (Schaltegger & Wagner, 2011).

To facilitate sustainable entrepreneurship, it is necessary to differentiate between various microfoundations individually tailored toward that purpose. The dynamic capabilities framework would be extended through the identification and implementation of such microfoundations, resulting in the framework being more comprehensive, well-attuned to the modern characteristics of the sector and its context, and better able to meet the specific challenges that sustainable firms face. To analyze the empirical data, the study implemented Teece (2007) tripartite classification of the dynamic capabilities at the firm level: sensing, seizing, and reconfiguring. The objective was to come up with a structural framework that was more comprehensive, incorporating the fundamental microfoundations that underpin the notion of dynamic capabilities. Even though these constructs are not new, their conceptual link to the exploration-exploitation dichotomy and related constructs in the market orientation literature confirms their significance and practicality (Kindstrom et al., 2013). However, incorporating a dynamic capabilities approach and its accompanying microfoundations allows for a more direct link to underlying variables.

2.2.1 Sensing capability

Sensing primarily involves collecting pertinent marketing intelligence. For firms aiming to gain a competitive edge, it is essential to have the ability to analyze both global and local markets, evaluate the actual preferences of customers, and internally gather ideas from a diverse group of personnel (Day, 2004; Teece, 2007; Kindstrom et al., 2013).

The broad micro-foundations of sensing capabilities can be observed in analytical systems and individual capacities for learning, as well as the ability to sense, evaluate, shape, and determine opportunities (Vézina et al., 2019). Teece (2007) outlines four more micro-processes that are of particular significance. These include the direction of internal research and development (R&D) efforts and the selection of new technologies. Furthermore, Teece highlights the need to

leverage suppliers and complement innovation, as well as tap into advancements in external science and technology. Lastly, Teece emphasizes the significance of defining target market segments, adapting to changing consumer demands, and embracing customer-driven innovation.

2.2.2 Seizing capability

A mere investment in technology and financial assets is not sufficient to seize capabilities. There needs to be a business model capable of sustaining and capitalizing on new opportunities as they arise. Seizing requires responsiveness and the willingness to disseminate market intelligence throughout the organization and take appropriate actions based on it (Kohli & Jawroski, 1990; Chesbrough, 2010; Teece 2010; Kindstrom et al., 2013).

The fundamental micro-foundations that underlie the ability to seize opportunities manifest in the form of organizational structures, operational procedures, strategic frameworks, and incentive mechanisms (Vézina et al., 2019). The broad microprocesses associated with seizing are commonly accompanied by microprocesses about defining the customer solution and the business model, determining decision-making protocols, establishing enterprise boundaries to govern complements and "control" platforms, and fostering loyalty and commitment (Teece, 2007).

2.2.3 Reconfiguring capability

Successful businesses are known to grow inert and complacent over time, usually fine-tuning their current business model by focusing on exploitation rather than exploration. If the opportunities at hand are exploited, a small tweak to the model might be sufficient to sustain things, but as the environment changes, management will have to undertake substantial reconfiguration (Helfat et al., 2007; Kindstrom et al., 2013). The reconfiguring capability describes the ongoing realignment and alignment of particular tangible and intangible assets (Vézina et al., 2019). The reconfiguration of capabilities encompasses several components that empower organizations to effectively reallocate or reconfigure their resources (Bhardwaj et al., 2022). Teece (2007) delineates four microprocesses that constitute the underlying reconfiguration capability, namely: decentralization, governance, co-specialization, and knowledge management. The interplay and orchestration of the elements, rather than the presence of individual elements inside these micro-processes, is what creates the dynamic capabilities (Ince and Hahn, 2020; Teece, 2007).

3. Methodology

In this study, we undertook a qualitative approach because research on sustainable entrepreneurship is still relatively new and evolving. In alignment with Eisenhardt (1989) rationale, the selection of multiple cases for this study is underpinned by manifold advantages. By encompassing a variety of cases, the external validity of the study's findings is augmented, enabling the generalization of results across a broader spectrum. Furthermore, the inclusion of multiple cases facilitates pattern recognition and theory building. Four sustainable enterprises engaged in diverse businesses were selected as per the theoretical-purposive sampling (Eisenhardt 1989).

3.3 Data Collection

To emphasize the similar and varied procedures, asset positions, and pathways leading to the development of dynamic capacities, the sustainable enterprises were selected based on several criteria. First, all three organizations fit into the scope of our definition of sustainable enterprises as their primary aim is to create value in society by promoting sustainable solutions. Second, in addition to working with a social purpose, these organizations are concurrently involved in generating economic value to achieve their objective. The final selection criteria employed in this study is the extent of data richness about the selected examples, particularly in terms of their operationalization and overall growth.

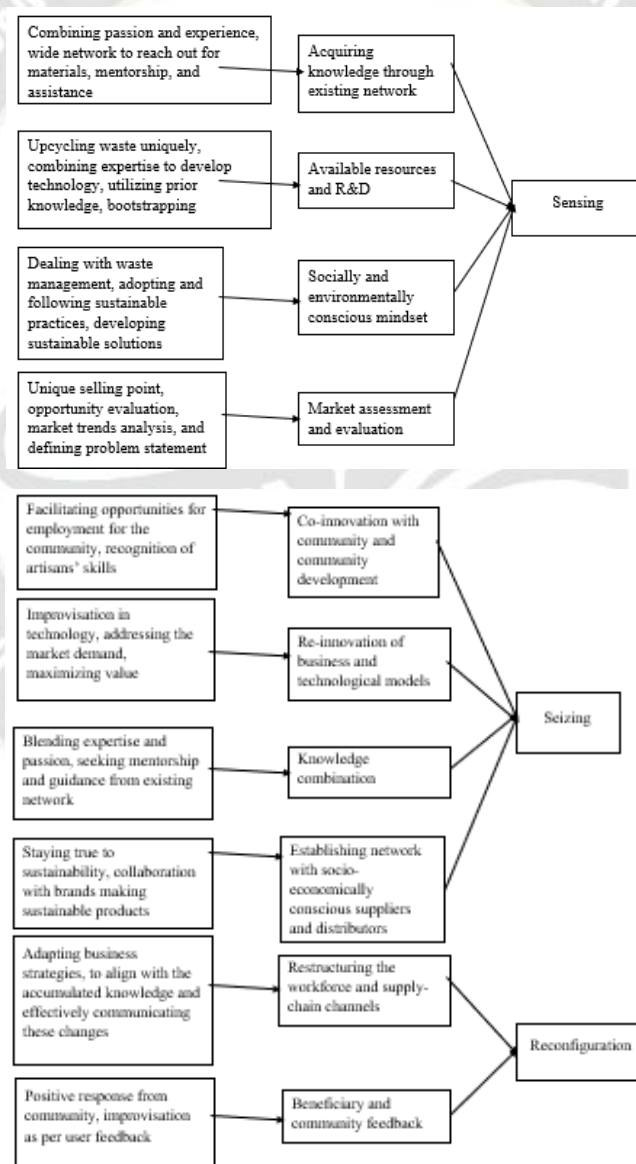


Figure 1: Dynamic capabilities and its associated micro-foundations for sustainable enterprises

Table 3: Illustrative quotes/ archival data

Dynamic Capabilities	Micro-foundations	Illustrative Quotes/Archival Data
Sensing	Acquiring knowledge through existing network sources	<p>After doing my post-graduation in fashion management and working as a designer for some time, I wanted to start my own business. Since <u>the fashion</u> industry is one of the most polluting industries, I wanted to come up with a sustainable solution, and I chose the accessories line after combining my passion and experience. (Founder, Kalavai)</p> <p>I already had a wide network in the field of design and fashion...I reached out mainly to material libraries, which are organizations and places concentrating <u>on a large</u> number of different materials...and offer <u>to a wide</u> range of industries, architectural studios and things. (Co-founder, Malai)</p> <p>Since I was already associated with Atal Incubation Centre, I sought their mentorship in starting Energinee, and they even helped me in connecting with my co-founder, expansion of the business...overall, a step-by-step guidance was provided at every stage of the business. (Founder, Energinee)</p> <p>Before starting Ecoplore, I consulted an eco-stay in Jim Corbett, with whom I partnered later on. I took their advice and guidance and always <u>reached</u> out to them for anything that we doubted. (Founder, Ecoplore)</p>
	Available resources and R&D	<p>I have always been beguiled by nature's flora...I wanted to create a unique combination of gifting by using flowers...we upcycle the flowers...collect the already used flowers from temples and weddings which can otherwise be wasted...then preserve it in the form of wall decors and other forms of jewelry. (Founder, Kalavai)</p> <p>We developed most of our supporting technology <u>from scratch</u> because we were developing material that didn't come from a set of ready-made technology...so we have to combine expertise from various industries and put everything together. (Co-founder, Malai)</p> <p>When my earlier start-up was forced to shut down, I had to come up with something new...I already had the temple waste problem in mind, and then I thought, now is the right time to bring a solution...I had the confidence that something could be done. After applying the concretization technology I learnt during my diploma, it was time to utilize that knowledge practically...So, I converted the waste into fine craft items. (Founder, Energinee)</p> <p>When I realized that in the name of tourism, we are only polluting nature, I was determined to bring a sustainable solution for the people who love <u>traveling</u> but, in the process, do not harm nature. My start-up is a bootstrapped one. I am happy that it came so far that people are now liking it. (Founder, Ecoplore)</p>
	Market assessment and evaluation	<p>Back in 2019, I did a bit of research from my side and I spotted that there are two or three brands in the Resin jewelry segment and what lacked there in terms of unique selling point or any other sort of uniqueness, I figured out the business models of competitors are purely based on reseller model and deceiving customers that their products are handmade. (Founder, Kalavai)</p> <p>During my research, I was evaluating the opportunities of transforming bacterial cellulose into some fine products and when I came to India, five years back,</p>

		<p>nobody was growing bacterial cellulose here...but I got to meet my co-founder who was very much interested ...the water of coconut is sort of waste for processing units and we utilized that waste by transforming it into fine products. (Co-founder, Malai)</p> <p>While working in Atal Incubation Centre, I learnt the nuances of starting a start-up... for every start-up, four things are very essential – problem statement, solution, idea validation and scalability...problem (the temple waste) was there in front of me ...solution was molding the ashes into concrete material and before commencing the business in full mode, a pilot was also done...after getting a good response, Energinee was started. (Founder, Energinee)</p> <p>Even though I did not have any prior experience <u>in the sustainable</u> tourism industry, I did ground research for approximately a year...understood the market patterns in the industry... the nuances of eco-friendly tourism ...identified which platforms promote eco-friendly stays...what the term eco-friendly hotel meant...how the term was defined...identified eco-properties accordingly and began my business. (Founder, Ecoplore)</p>
	Socially and environmentally conscious mindset	<p>People are getting deceived by the term ‘sustainability’ and ‘eco-friendly’ as some of the existing brands just provide eco-friendly packaging but ours is a sustainable brand that focuses on the three P’s – people, profit and the planet...not only the packaging but to make my brand an eco-friendly and environment friendly was a crucial step for me. (Founder, Kalavai)</p> <p>I was keen to explore the potential in India for employing a traditional bacterial-cellulose as a material...along with my co-founder, we targeted it towards the sustainable fashion market, with a view that fashion is the second most polluting industry, beaten by oil. (Archival data, Malai)</p> <p>By transforming the temple waste into fine craft items, Energinee Innovations facilitates environmental sustainability through eco-friendly products...we deal with waste management. (Founder, Energinee)</p> <p>For Ecoplore, our mission of maintaining sustainability and following sustainable measures is the topmost priority. We are not running behind commercial benefit, but we have enough commercials to survive. (Founder, Ecoplore)</p>
Seizing	Co-innovation with community and community development	<p>We are not only trying to bring a positive impact on the environment but also at the community level...since the coconut water would otherwise be discarded and potentially harm soil, repurposing creates a positive impact. (Archival data, Malai)</p> <p>I work with artisans whom we generally call ‘kaarigars’ in the north, who make brass frames...through this collaboration, we are giving employment and also respecting their skills. (Founder, Kalavai)</p> <p>We train prison inmates to create craft items using ash generated from temples. At the same time, we are working on their rehabilitation and reformation by enhancing their skills and providing employment. (Founder, Energinee)</p> <p>Through Ecoplore, we are trying to contribute to local communities by giving them employment. Every eco-hotel listed on our website employs the local</p>

		community where it operates. This is the kind of return we are trying to provide <u>to the local</u> community. (Founder, Ecoplore)
	Re-innovation of business and technological models	<p>Generally, people perceive that resin is not biodegradable...so I tried to make the jewelry uniquely by offering a biodegradable product ...I pour around five layers of resin to make the product intact and durable...the product can last long by keeping it either in a cotton pouch or wrapping it in a tissue to avoid scratch marks. (Founder, Kalavai)</p> <p>We feel the need to improve the existing parameters of the materials...to improve the current production facility and stuff like that...but I don't necessarily feel the need to improve the methods of innovation. (Co-founder, Malai)</p> <p>We are still getting demands from various states across the country to set up our stores in those states...however we can't set up multiple stores at present...so when people came to know about our organization, then they started reaching out to us for training their staff and volunteers...that seemed feasible that instead of setting up stores, we designed a new training program where we train people in various states to transform the temple waste into idols or statues. (Founder, Energinee)</p> <p>For our customers, sustainability was not always the priority, instead, budget was. That has been a <u>challenge</u>. <u>How</u> do we follow the budget aspect <u>and balance</u> it with the sustainability of the accommodations we were promoting? We tried to manage by focusing on the budget of the customers. (Founder, Ecoplore)</p>
	Knowledge combination	<p>Since I did my post-graduation in fashion management from NIFT and after working as a designer, but before starting my own business...I did some research and combined my expertise with passion and started Kalavai. (Founder, Kalavai)</p> <p>I had a wide network in the field of design and fashion...I reached out mainly to material libraries, which are organizations and places concentrating <u>on a large</u> number of different materials ...and offer <u>to a wide</u> range of industries and architectural studios and things. (Co-founder, Malai)</p> <p>I had prior knowledge of the concretization technology, and I applied it to the temple waste...converted it into fine craft items. Further, I was being mentored by the Atal Incubation Centre at every step of the start-up. (Founder, Energinee)</p> <p>Since I did not have any experience in the sustainable industry, I did some ground research and reached out to the eco-hotel in Jim Corbett, which is now our partner...took their guidance in starting the impact-based enterprise. (Founder, Ecoplore)</p>
	Establishing a network with socio-economically conscious suppliers and distributors	<p>The process of establishing partnerships is not very complicated, it just has to align with being sustainable...I prefer brands that make completely hand-made products. Even the products, if I collaborate, should be of hand-made <u>ones</u>. (Founder, Kalavai)</p> <p>We partnered with the coconut processing unit in Channapatnah...that's our partner for manufacturing basically...they generally do not <u>use coconut</u> water...for them it's a waste but for us it's a raw material. (Co-Founder, Malai)</p> <p>In the initial days, I collaborated with some colleges <u>to</u> make the bins to collect temple waste and to save on the cost...today we have many big corporations as</p>

		<p>our partners and our major share of revenue comes from them...all of them are interested in working for the cause of protecting the environment. (Founder, Energinee)</p> <p>I partner with those hotels that stay true to sustainability. If some properties discontinue following sustainable measures, then we remove them from our website because we want to stay true to sustainability, and for us, sustainability is at the core of Ecoplore. (Founder, Ecoplore)</p>
Reconfiguration	Restructuring the workforce and supply-chain channels	<p>Earlier it was a one-man show as Kalavai was started by me, all the aspects of business were done by me...but now I have hired a digital marketing person for the promotion to reach out to wider audience...we have Kaarigars (artisans) from Northern India who make the brass frames to create jewelry. (Founder, Kalavai)</p> <p>We have to change the structure of the organization...majorly because of the funding...we had to keep searching for the sources of funding...as we are majorly a self-funded organization...so depending upon the funding we got access to...we sometimes have to change the focus of the business model but not drastically. (Co-founder, Malai)</p> <p>We have incorporated many changes...pre-pandemic we focused only on utilizing temple waste and corporate gifting products but post pandemic as per the demand...we trained people...partnered with many big corporations and started a new vertical as per festive demand...which also proved a great hit such as soil Rakhi and Ganpati idols for immersion. (Founder, Energinee)</p> <p>One of the major changes which happened was during the pandemic period...a lot of people reached out to us to get their eco-houses constructed...it was something that we didn't plan neither it was in our roadmap...but it was a pivot which we have achieved on the path of working on and due to an external impact. (Founder, Ecoplore)</p>
	Beneficiary and community feedback	<p>After taking feedback from some of our customers, I've introduced a budget-friendly product line for college students who can afford the products. (Founder, Kalavai)</p> <p>We engage in discussions with our customers and take their feedback. Of course, we take suggestions to improve the existing products and the way we serve them (Co-founder, Malai)</p> <p>Based on the positive feedback and response received from the community regarding our products, we decided to start a new product line which is related to making Rakhi by using natural soil. (Founder, Energinee)</p> <p>User feedback is very crucial for us...it's because of that we got to <u>know</u> which location people have more demand for and we started identifying more hotels in those particular locations where there was a demand for. (Founder, Ecoplore)</p>

4. Findings

The focus of this section of the study is on how each case of sustainable enterprise developed dynamic capabilities to create multiple or triple values. Based on an in-depth analysis of each of the four cases of sustainable enterprises, the components of the dynamic capabilities for each case have

been provided. In particular, the conceptual framework of dynamic capabilities has been used to examine the activities and actions of selected cases about the development and mobilization of their respective organizations.

4.1 Kalavai

4.1.1 Sensing

Kalavai started its operations from Chennai. By combining her passion and experience [in the fashion](#) industry, Chindu, the founder of Kalavai, thought of coming up with a sustainable solution in the fashion industry, which is considered one of the most polluting industries. Before starting the business, some ground research was done to identify the target segment and to become aware of what the competitors lack in the jewelry industry. The unique selling proposition of Kalavai [is the emotional](#) connection of the customers. After differentiating her brand in terms of offering biodegradable products, the founder of Kalavai proffers:

Back in 2019, I did a bit of research from my side and I spotted that there are two or three brands in the Resin jewelry segment and what lacked there in terms of unique selling point or any other sort of uniqueness, I figured out the business models of competitors are purely based on reseller model and deceiving customers that their products are handmade.

4.1.2 Seizing

After recognizing the opportunity in the fashion industry, Kalavai came up with its Resin jewelry brand that offered biodegradable products. The focus was to upcycle the waste and transform it into a product that has an emotional [connection](#) with the customers. Before mass production, the products were first tested on a small segment. once accepted, it catered to the needs [of the target](#) audience. Based on the positive feedback, the operations of Kalavai began. The organization develops various hand-made products such as [necklaces](#), rings, wall décor, [bookmarks](#), and earrings. But what lies at the core of Kalavai is the sustainability aspect of the products. As the founder explains:

Generally, people perceive that resin is not biodegradable...so I tried to make the jewelry uniquely by offering a biodegradable product ...I pour around five layers of resin to make the product intact and durable...the product can last long by keeping it either in a cotton pouch or wrapping it in a tissue to avoid scratch marks.

The process of establishing partnerships is not very complicated, it just has to align with being sustainable...I prefer brands that make completely hand-made products. Even the products, if I collaborate, should be hand-made [ones](#).

4.1.3 Reconfiguring

The mission of Kalavai is majorly based on an emotional selling point; the sale of sustainable jewelry makes [it](#) self-sufficient to continuously address the social mission of

reducing waste [in the fashion](#) industry. However, [over time](#), it realized that, to reach [a wider](#) audience, the organization needs more personnel in terms of workforce and resources. Based on the feedback of customers, the organization even started a new line of affordable products for college students. As the founder said:

Earlier it was a one-man show as Kalavai was started by me, all the aspects of business were done by me...but now I have hired a digital marketing person for the promotion to reach out to wider audience...we have Kaarigars (artisans) from Northern India who make the brass frames to create jewelry.

4.2 Malai

4.2.1 Sensing

The main idea behind starting Malai came [from acquiring](#) knowledge [through an existing](#) network. During the research project, the co-founder identified that bacterial cellulose has the potential to be transformed into fine products. In Southern India, this opportunity remained unexplored as most of the people were unaware about it. After identifying the potential market where coconut water is a waste for many agricultural processing units, Malai realized that this opportunity could be addressed by coming up with something which is sustainable and environment friendly. Besides that, the existing network and experience was utilized to tap the available resources. As the founder stated:

During my research, I was evaluating the opportunities of transforming bacterial cellulose into some fine products and when I came to India, five years back, nobody was growing bacterial cellulose here...but I got to meet my co-founder who was very much interested ...the water of coconut is sort of waste for processing units and we utilized that waste by transforming it into fine products.

4.2.2 Seizing

After recognizing the opportunity, Malai exploited the opportunity by taking strategic decisions such as co-innovating with the community and focusing on community development. The organization [established a network](#) with socio-economically conscious suppliers and then developed the products following a series of experimentation and improving the products subsequently. As the founder explained:

We are not only trying to bring a positive impact on the environment but also at the community level...since the coconut water would otherwise be discarded and potentially harm soil, repurposing creates a positive impact.

We partnered with the coconut processing unit in Channapatnah...that's our partner for manufacturing basically...they generally do not use coconut water...for them it's a waste but for us it's a raw material.

4.2.3 Reconfiguring

In the strategic plan of 'Malai', the key driver is the customer's feedback about the products. The organization implemented substantial strategic decisions to execute its marketing approaches. Based on the customers' responses and feedback, the improvisation is done. However, gradually, the organization realized that it needs to redefine its business model to adapt to the changing needs. As the co-founder said:

We have to change the structure of the organization...majorly because of the funding...we had to keep searching for the sources of funding...as we are majorly a self-funded organization...so depending upon the funding we got access to...we sometimes have to change the focus of the business model but not drastically.

4.3 Energinee Innovations

4.3.1 Sensing

Energinee innovations started its operations from Uttar Pradesh. As the founder of Energinee was already associated with an incubation, he utilized internal resources and the knowledge accumulated and came up with a sustainable solution to address waste management produced by temples. As stated by the founder:

Since I was already associated with Atal Incubation Centre, I sought their mentorship in starting Energinee and they even helped me in connecting with my co-founder, expansion of the business...overall, a step-by-step guidance was provided at each and every stage of the business.

For any start-up, the very first thing is to define the problem. The problem of waste generated by temples already existed, the founder sensed it and decided to come up with a solution by the utilization of existing knowledge base and transformed the temple ash into concrete products. Prior to mass production, a pilot was also conducted to gather feedback about the product. As the founder proffer:

While working in Atal Incubation Centre, I learnt the nuances of starting a start-up... for every start-up, four things are very essential – problem statement, solution, idea validation and scalability...problem (the temple waste) was there in front of me ...solution was molding the ashes into concrete material and before commencing the business in full mode, a pilot was also done...after getting a good response, Energinee was started.

4.3.2 Seizing

Energinee Innovations, being aware of prevailing social issues and exhibiting increased confidence in the potential of their idea, applied concretization technology to transform temple ash into refined handmade items. During the entire process beginning from the idea generation till its implementation, the existing network and mentorship from the incubation was sought. Along with tackling the problem of waste management, Energinee Innovations focused on development of the community by training the prison inmates about how to make handicrafts using temple ash, which in turn upgraded their skills and provided them employment. Along with co-innovating with the community, various training programs were initiated across the country to train people that turned out to be a huge success. The organization collaborated and partnered with several corporations to create stability while achieving shared goals. As the founder said:

We train prison inmates to create craft items using ash generated from temples...at the same time we are working on their rehabilitation and reformation by enhancing their skills and providing employment.

We are still getting demands from various states across the country to set up our stores in those states...however it's not possible for us to set up multiple stores at present...so when people came to know about our organization, then they started reaching out to us for training their staff and volunteers...that seemed feasible that instead of setting up stores, we designed a new training program where we train people in various states to transform the temple waste into idols or statues.

4.3.3 Reconfiguring

The mission of Energinee Innovations is to facilitate environmental sustainability through eco-friendly products. The ability of the organization to generate revenue through the sale of sustainable handicrafts allows it to achieve self-sustainability and maintain a consistent focus on its social mission of supporting marginalized communities and prison inmates. However, as the company grew over time, particularly after the pandemic, it became clear that its strategic decisions required certain reformulation as per the growing demand. The organization thought of coming up with new verticals related to sustainable products to tackle the festival season demand. The decision was taken after considering the positive feedback from the community. As the founder explained:

We have incorporated many changes...pre-pandemic we focused only on utilizing temple waste and corporate gifting products but post pandemic as per the demand...we trained

people...partnered with many big corporations and started a new vertical as per festive demand...which also proved a great hit such as soil Rakhi and Ganpati idols for immersion.

4.4 Ecoplore

4.4.1 Sensing

The idea behind starting Ecoplore [ways](#) to bring a change in sustainable tourism that emerged from the internal entrepreneurial resources. During her eco-stay in Malaysia, the founder realized that the concept of personal touch was missing in Indian tourism. After analyzing the market trends and seeking advice from the existing network, Ecoplore was started. What lies at the core of Ecoplore is sustainability, so only those eco-hotels are listed that follow sustainable measures. Ecoplore is the brainchild of socially and environmentally conscious [entrepreneurs](#). As the founder explained more about sensing:

When I realized that in the name of tourism, we are only polluting the nature, I was determined in bringing a sustainable solution for the people who love [traveling](#) but, in the process, do not harm nature...my start-up is a bootstrapped one...I am happy that it came so far that people are now liking it.

In addition to the aforementioned procedures, market analysis and evaluation, resource utilization, and research and development are other activities that contributed to the conception of the organization.

Even though I did not have any prior experience [in the sustainable](#) tourism industry, I did ground research for approximately a year...understood the market patterns in the industry... the nuances of eco-friendly tourism ...identified which platforms promote eco-friendly stays...what the term eco-friendly hotel meant...how the term was defined...identified eco-properties accordingly and began my business.

4.4.2 Seizing

Upon identifying the existence of a social issue and identifying a potential avenue for action, the sustainable enterprise proceeded to adopt strategic decisions in order to seize the identified opportunities. The [organization, along](#) with fulfilling its mission of reducing carbon footprints, also considers contributing to the local community where it operates by generating employment opportunities for the local people. The business model was developed by engaging the stakeholders [in the decision](#) making process.

Through Ecoplore, we are trying to contribute to local communities by giving them employment...every eco-hotel

listed on our website provides employment to the local community where it operates...this is the kind of return we are trying to provide [to the local](#) community.

The company has retained its brand aesthetics over time. This has helped the company build its reputation. Further, the partnerships and collaborations are done keeping in mind the sustainability aspect of the organization. As the founder stated:

The eco-stays with whom we work and partner are the best examples of collaboration as without them the Ecoplore would not have any existence, and it's because of the sustainable measures that these stays follow, actually make Ecoplore much more sustainable. Every time we come across a new eco-stay, our first priority is to see what sustainable measures it follows.

4.4.3 Reconfiguring

The major driver in Ecoplore's strategy has been the socio-economic sustainability of the organization. The organization made significant strategic decisions to execute its market strategy in order to seize the opportunities. Earlier the organization focused on elite customers but over the course of time it realized the need to make certain amendments as per the needs [of the target](#) group. As explained by the founder:

Earlier our focus was on elite customers but gradually, we understood that if we want to promote the concept of slow travel, we have to make changes in our budget by keeping in mind the budget of the customers as budget forms a crucial part from the customer's perspective.

Ecoplore had realigned and restructured the operations of Ecoplore as per the customers' demands. Restructuring the operations has [helped](#) the organization in fulfilling customers' demands. As the founder said:

I think the pandemic made us realize that surviving through the tough times is one of the biggest measures of success and post pandemic we are getting demands from those customers who are conscious about the environment...we have considered the customer feedback about the locations of our eco-hotels and acquired new hotels in the areas where there was more demand which has helped us a lot in meeting the expectations of our customers.

5. Discussion

This section focuses on the analysis and exploration of the emerging themes in cross-case analysis, specifically the micro-foundations related to sensing capabilities, seizing capabilities, and reconfiguring capabilities of sustainable

enterprises, as classified within the threefold framework of dynamic capabilities.

The findings of this study highlight the critical role of dynamic capabilities in fostering sustainable entrepreneurship, particularly in the context of Indian enterprises. The research identifies that opportunity sensing, resource reconfiguration, and stakeholder collaboration are pivotal capabilities that enable firms to navigate sustainability challenges while maintaining competitive advantage. These insights contribute to the understanding of how businesses integrate sustainability into their core operations through an adaptive and strategic approach.

One of the key findings is that opportunity sensing allows sustainable entrepreneurs to recognize emerging environmental and social issues as market opportunities. This proactive approach enables firms to anticipate regulatory changes, consumer preferences, and technological advancements that align with sustainability objectives. The results indicate that enterprises demonstrating a strong capability in opportunity sensing are better positioned to integrate sustainability into their business models effectively.

Resource reconfiguration emerges as another crucial dynamic capability, facilitating the adaptation of business models and operational processes to achieve sustainable outcomes. Entrepreneurs who successfully reconfigure resources, such as financial capital, technology, and human expertise, can develop innovative products and services that address environmental and societal concerns. The study finds that firms with robust resource reconfiguration mechanisms are more likely to implement sustainability-driven innovations and achieve long-term business viability.

Furthermore, stakeholder collaboration is found to be an essential capability for sustainable entrepreneurship. Engaging with external partners, including governmental bodies, non-governmental organizations (NGOs), and supply chain actors, enables firms to access crucial knowledge, financial support, and market networks necessary for sustainability transitions. The findings suggest that businesses that actively engage in multi-stakeholder collaborations tend to develop more resilient and scalable sustainability initiatives.

The study also identifies key challenges faced by sustainable entrepreneurs in the Indian context, including regulatory hurdles, financial constraints, and consumer awareness. Despite these challenges, enterprises that effectively leverage their dynamic capabilities can overcome barriers and create a competitive advantage through sustainability-driven differentiation. The role of institutional support, in the form

of policy incentives and industry collaborations, is highlighted as a critical enabler in reinforcing sustainable business practices.

Overall, this research contributes to the theoretical understanding of sustainable entrepreneurship by linking it to the dynamic capabilities framework. The findings emphasize that sustainable entrepreneurs must continuously develop and refine their capabilities to sense opportunities, reconfigure resources, and collaborate with stakeholders to sustain long-term growth. Future research can explore sector-specific variations in the application of dynamic capabilities and examine the long-term impact of sustainability initiatives on firm performance. These insights offer valuable implications for entrepreneurs, policymakers, and scholars interested in advancing sustainable business practices in emerging economies.

6. Implications

By examining combinations of microfoundations that contribute to the sustainability of sustainable firms, the study opens up new scholarly avenues. The diverse set of microfoundations identified in the study can be considered as a framework that significantly influences the performance and creation of social values in sustainable firms and help them build dynamic capabilities. The study also highlights how studying sustainable enterprises in context of microfoundations can fill in the gaps in existing literature about sustainable enterprises from a micro-strategic perspective. Furthermore, it strengthens current conceptualizations and aid in identification and development of the core strategic components or micro-foundations that facilitate the capacity to sense and seize opportunities, and reconfigure the resource base of sustainable enterprises.

From a managerial perspective, this research contributes to our understanding of how sustainable businesses develop, sustain and exploit their dynamic capabilities with regard to their innate micro-foundations to integrate the resources and competencies necessary for long-term socio-economic value. Further, the study highlights the management of the development of microfoundations of dynamic capabilities for sustainable firms, as well as the role of sustainable entrepreneurs and internal entrepreneurial resources. In order to direct resources and competencies toward the joint pursuit of social mission and economic goals, practitioners may therefore be familiar with how to align prospective business model with their social purpose.

The study illustrates that sustainable businesses benefit from their microfoundations in their pursuit to identify and seize opportunities. Firms generate social value either by

benefiting the stakeholders or by collaborating with them. The authors, thus, propose the establishment of a sustainable network comprising both internal and external beneficiaries and stakeholders.

In this vein, it can be contended that in order for sustainable enterprises to bring about social transformation, the ecosystem they operate in, the business model they employ, the sustainability of beneficiaries, and the integration of social and economic dimensions all need to be in harmony. Furthermore, the ongoing process of renewing and transforming the resources and skills, namely by reconfiguring capabilities, promotes the sustainability of organizations. Practitioners must effectively implement these advancements, while the literature requires further conceptual growth in the specific area.

8. Conclusion

This study explores sustainable entrepreneurship through the lens of the dynamic capabilities approach, highlighting how entrepreneurs develop, adapt, and reconfigure their resources to achieve both economic and environmental goals. The findings reveal that sustainable entrepreneurs leverage sensing, seizing, and transforming capabilities to identify opportunities, integrate sustainability into business models, and drive long-term impact.

A key insight from this research is that sustainable entrepreneurs do not operate in isolation but are deeply embedded in ecosystems that include government policies, market forces, and social networks. Their ability to navigate these external factors determines the success of sustainability-driven ventures. Additionally, the study underscores the role of innovation, stakeholder engagement, and strategic agility in overcoming barriers to sustainability.

Despite these contributions, this research acknowledges limitations, such as its qualitative nature and focus on specific case studies, which may affect generalizability. Future studies can further explore how different industries and geographies shape sustainable entrepreneurship dynamics.

Overall, this research extends the understanding of sustainable entrepreneurship by integrating the dynamic capabilities framework. It provides valuable insights for policymakers, investors, and entrepreneurs seeking to develop sustainable business models that are both resilient and impactful. By fostering adaptability and continuous learning, sustainable entrepreneurs can drive meaningful environmental and social change while maintaining competitive advantage.

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