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How does the interaction between organizational dynamic capabilities and multi-level institutional pressures impact the sustainable transformation of SMEs in developing countries?

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ABSTRACT:
Small and medium-sized enterprises (SMEs) in developing countries are in a paradoxical position with regard to governance of global sustainability. They are also expected to deal with increasingly stringent international demands for environmental and social compliance, which are cascaded down global value chains, as well as with domestic institutional environments characterized by regulatory gaps, a limited financial system, weak enforcement mechanisms, and poor environmental infrastructure. While the challenge of sustainability transformation is pressing in contexts of scarce resources, important knowledge gaps exist regarding the interaction between institutional pressures and organizational dynamic capabilities in driving transformation trajectories. In this study, the interaction between multi-level institutional pressures and organizational dynamic capacities is examined, and its influence on sustainable transformations of SMEs in developing countries is discussed. This study adopts a qualitative approach based on multiple case studies with in-depth interviews with the owner-managers of manufacturing and craft enterprises that are involved in export trade. It is rooted in an integrated theoretical framework, which combines the institutional theory, the dynamic capabilities perspective, and the study on sustainability transformation. Cross-case comparative synthesis and rigorous theme coding are used to analyze the data. The findings reveal that international, national, and industry-level institutional pressures interact, and an institutional duality exists that enables some structural obstacles to the progression of transformation, regardless of the individual enterprise effort, as domestic institutional failures and demands by buyers for corporate sustainability compliance happen at the same time. Consequently, despite the same institutional structure, companies develop a variety of different mixes of detecting, seizing and reconfiguring capacities that account for the heterogeneity in the nature of the transformation process. Three types of adaptive seizing are identified under a resource constraint scenario: collective seizing by sharing sustainability investments with industry partners; symbolic seizing by provisional certification to demonstrate intent before actual certification; and progressive seizing by a step-by-step process of investing. Intermediary organisations are key actors and at the same time disseminate global sustainability standards and co-develop firms' capabilities to respond. The study proposes that sustainability transformation in developing country SMEs should be conceptualized as a capacity journey that is institutionally shaped through successive stages where internal capacities either enable or constrain the ability to respond and external demands call for change.

KEYWORDS: Sustainability transformation, dynamic capabilities, institutional pressures, SMEs, developing countries, Bangladesh, circular economy.

FOREWORD

I express my heartiest gratitude to my supervisor, Professor Khaled Abed Alghani, for his cooperation and consistent guidance. I truly appreciate his intellect and expertise, which motivates me to work better. His rigorous feedback helps me to write a more refined thesis. I am confident that this thesis reflects the passion and efforts that I have put in, according to his vision. My deepest thanks is to my mother and wife for their tremendous support and love that drive me enthusiastically to move forward and gain the strength to achieve rigorous success in my life. They are always in my way to help me in all aspects of life. Especially my mother (absence of my father) pushed me from my childhood forward to fulfill my dear of contributing to academic research with my knowledge. Salute all those people who supported me always.

Disclaimer:

This thesis was prepared with original thought and research, and completed under the close supervision of my supervisor, accurately and transparently. Artificial intelligence was used only for writing clarity enhancements and grammatical corrections.

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Abbreviations

CSR Corporate Social Responsibility

CSP Corporate Sustainability Performance

EMS Environmental Management System

ISO International Organization for Standardization

NGO Non-Governmental Organisation

RBV Resource-Based View

BFLLFEA Bangladesh Finished Leather, Leathergoods and Footwear Exporters' Association

BGMEA Bangladesh Garment Manufacturers and Exporters Association

DoE Department of Environment (Bangladesh)

ERP Enterprise Resource Planning

JDPC Jute Diversification Promotion Centre

LWG Leather Working Group

RMG Ready-Made Garment

1 INTRODUCTION

There is growing pressure on sustainable business practices as the global environmental problems such as climate change, resource depletion, and biodiversity loss, are becoming more and more serious (Schaltegger & Wagner, 2011) SMEs play a significant role in this regard because they constitute over 90 percent of all businesses globally and offer over 70 percent of all employment (Johnson & Schaltegger, 2016). SMEs make an even greater contribution to economic growth, job creation, and industrial production in developing nations ((Klewitz & Hansen, 2014). Nevertheless, the quest to transform sustainability poses special issues to SMEs in developing countries such as resource constraints, low technical capacity, lack of managerial skills and complicated institutional settings with both lax domestic policies and strict international market conditions (Soundararajan et al., 2019). In order to accomplish worldwide environmental goals while guaranteeing economic progress and poverty reduction in the worldwide South, it is now essential to comprehend how these companies manage sustainability transformation. Due to what (Mair et al., 2012) term as institutional voids the absence or inadequate development of institutions that facilitate the market, developing countries present a rather complex and challenging context of SME sustainability transformation. In such cases, the institutional environment surrounding export-driven SMEs is typical of weak enforcement of regulations, the government not supporting environmental programs, inadequate infrastructure to support sustainable activities, and access to green finance and technology is low (Khanna & Palepu, 2011). Nevertheless, to remain competitive in the global markets, these very companies need to comply with increasingly demanding sustainability requirements of international customers, international certification bodies, and industry associations (Lund-Thomsen & Lindgreen, 2014). Multinational companies that source in the developing countries implement stringent environmental and social compliance policies and conduct regular global audits. Environmental laws are developed at the national level by governments, but are often constrained by capacity and resources (M. A. Delmas & Toffel, 2008). To maintain their reputation as a group and their access to the market, industry-level sectoral groups promote voluntary standards and best practices (Campbell, 2007).

These multi-level institutional constraints have created a difficult environment that SMEs have to negotiate to survive, maintain access to the market, and become competitive. According to institutional theory, organizations react to external forces in order to establish their legitimacy and obtain the resources they need to survive (DiMaggio & Powell, 1983; Scott, 2008). There are three key institutional pressures: normative pressures which are a result of the processes of professionalization, industry standards, and shared notions of how things should be done; coercive pressures which are imposed by regulatory agencies and powerful stakeholders who force organizations to meet certain mandatory requirements; and mimetic pressures which are the tendency of organizations to imitate successful organizations when they are in uncertain situations (DiMaggio & Powell, 1983).These pressures stimulate the implementation of environmental practices within the sustainability contexts, yet when they are acted simultaneously at the national, international and industry institutional levels, they often lead to conflicts, tensions and conflicting demands that complicate the organizational responses (Kostova et al., 2008). This institutional complexity, as defined by (Mair et al., 2012), is the most noticeable in developing countries where institutional voids are present alongside particular spheres of strong institutional strain, producing an institutional multiplicity that demands sophisticated navigational capabilities. To effectively overcome these complex, multi-level institutional pressures and transform sustainably, SMEs need to develop organizational dynamic capabilities that enable them to identify environmental changes, mobilize resources effectively and re-organize their operations, structures and strategic orientations. (Teece et al., 1997) define dynamic capabilities perspective as dynamic capabilities as the capacity of the firm to integrate, build and reorganize internal and external competences in response to the dynamic environment. The dynamic capabilities theory, which is a development of the resource-based view of the firm (Barney, 2001), emphasizes that competitive advantage in turbulent environments is not just a matter of possessing valuable resources but also having the ability to adapt, develop, and reconfigure such resources in response to environmental change. (Teece, 2007) categorized dynamic capabilities into three fundamental processes in reconfiguring capabilities to alter organizational assets and structures; seizing capabilities to mobilize resources to capture value; and sensing capabilities to identify opportunities and risks. Seizing in sustainability contexts

allows businesses to invest in greener technologies and environmental management systems, reconfiguring allows making it easier to incorporate sustainability into organizational routines and cultures, and sensing allows businesses to discover new environmental needs and stakeholder expectations (Dangelico et al., 2017).The development of these dynamic capabilities is a significant concern among resource-limited SMEs in developing countries, but it also presents the possibility of leveraging external limitations into a competitive advantage source (Amui et al., 2017).

In order to understand how SMEs in the developing countries can cope with environmental challenges and at the same time remain economically viable, it is important to understand the interplay of organizational dynamic capabilities and multi-level institutional pressures to bring about sustainability transformation. The institutional theory has been criticized because it declines organizational agency and perceives businesses as a passive subject of the institutional demands, and focuses on the external pressures as the principal drivers of organizational change (Oliver, 1991). The dynamic capacities perspective, conversely, focuses on the internal organizational adaptation processes, but often does not determine the external institutional contexts and constraints that result in the development of capabilities (Eisenhardt & Martin, 2000).To develop more comprehensive descriptions of organizational sustainability change, recent studies have demanded the incorporation of various theoretical perspectives (Zhu et al., 2013). Though dynamic capabilities mediate the way institutions decipher the institutional pressures so that some firms respond proactively rather than reactively, such integration acknowledges that institutional pressures can trigger capability development by highlighting performance gaps, which create an urgency to change and justify resource investments (Aragón-Correa & Sharma, 2003). Moreover, it can be a reciprocal and co-evolutionary relationship between institutional pressures and dynamic capabilities over time, where more complex responses can be made with increasing capabilities and more complex capabilities are necessitated by pressures (Amui et al., 2017).This combined method is particularly significant in understanding the sustainability change in SMEs in third world countries where capability

building has to rise above serious resource and knowledge limitation and institutional forces are both high through foreign customers and low through local enforcement.

1.1 Motivation and Research Gap

Our knowledge of the interaction of institutional constraints in sustainability and organizational dynamic capacities and their influence on change remains an important gaps in our knowledge, although the past studies have made important contributions to our knowledge of each of these aspects alone. Coercive, normative, and mimetic pressures have prompted organizations to engage in environmental practices as the institutional perspective has demonstrated (M. Delmas & Toffel, 2004; Jennings & Zandbergen, 1995). It has also been empirically demonstrated that stakeholder demands, regulatory requirements and the competitive dynamics influence corporate environmental strategies (Hoffman, 1999). Studies have shown that there is a plethora of organizational responses to institutional pressures, including strategic manipulation and violent resistance, as well as passive compliance (Oliver, 1991). Other ecological responsiveness motives that have been examined include ecological responsibility, legitimation and competition (Bansal & Roth, 2000). At the same time, the literature on dynamic capabilities has elucidated the way businesses create and utilize capabilities to achieve a competitive advantage in dynamic environments (Eisenhardt & Martin, 2000; Teece et al., 1997), and recent studies have examined sustainability-oriented dynamic capabilities (Dangelico et al., 2017). Although SMEs may have advantages in flexibility and commitment by their owners and managers, the studies on SMEs have identified their specific issues in the process of achieving sustainability, including a lack of resources, low bargaining power, and insufficient managerial capacity (Johnson & Schaltegger, 2016; Klewitz & Hansen, 2014).

Despite these significant research lines, there are still significant gaps in research theory and empirical research. First, despite their complementary discoveries, institutional theory and dynamic capacities views have mainly developed concurrently with little theoretical integration (Eisenhardt & Martin, 2000). The most common research approach institutional pressures and

organizational capabilities are viewed as independent variables instead of studying their interdependencies and mutual influences (Zhu et al., 2013). Second, little is known about how multi-level institutional pressures lead to the formation of dynamic skills and, on the other hand, how dynamic capabilities moderate organizational responses to institutional demands (Amui et al., 2017). Third, little research has looked at how capabilities help firms deal with conflicting or complementary cross-level pressures and how institutional pressures operating concurrently across multiple levels create complexity that may call for particular capability configurations (Kostova et al., 2008). Fourth, there hasn't been enough empirical research done on the impact question—that is, how the interaction between pressures and capacities truly influences sustainable transformation outcomes—especially when it comes to mechanisms and contingencies (M. A. Delmas & Toffel, 2008).

Such differences are particularly evident in developing countries, where SMEs have to deal with extreme capability constraints, a lack of institutional support, and high institutional demands toward sustainability by international stakeholders (Soundararajan et al., 2019). Khanna and Palepu (2010) and Mair et al. (2012) argue that institutional settings in developing countries are characterized by institutional voids, weak domestic enforcement, high overseas buyer demands, and multiple demands of numerous stakeholders. Very little is known about how SMEs in developing countries, specifically, develop dynamic skills to stay afloat in the face of institutional challenges at various levels. The question remains how resource-constrained businesses develop seizing capacities to mobilize the limited resources, reconfiguring capabilities to integrate sustainability, and sensing capabilities to determine the institutional needs (Johnson & Schaltegger, 2016).Also, in the context of developing nations, the time dynamics of the interaction of pressure-capability over time, such as the potential of feedback and path dependencies, are not studied (Amui et al., 2017).

Theoretically, filling in these gaps is crucial. An integrated model of how multi-level institutional pressure and dynamic capabilities interact to influence sustainability transformation would further institutional theory by considering organizational agency and capability heterogeneity by going beyond pressure-adoption models (Oliver, 1991). It would demonstrate the mediating role of institutional effects by organizational capabilities, whereby some businesses convert

challenges into opportunities and others struggle with compliance. The criticisms that dynamic capabilities theory is too silent on the external environmental factors that precipitate the development of capabilities may be overcome by incorporating the multi-level institutional constraints as a key antecedent (Eisenhardt & Martin, 2000). Moreover, the perspective of sustainable transformation as an emerging process, which is conditioned by external-internal dynamics, would be developed through the development of an integrated process model that would explain the processes that interrelate institutional demands, the development of capabilities, and the outcome of changes (Amui et al., 2017).

The practical significance is also interesting. The awareness of how multi-level institutional pressures propel capability development and how capabilities facilitate effective responses helps SME managers in developing countries to make strategic decisions about when and how to invest in capability building despite resource constraints (Johnson & Schaltegger, 2016). Policymakers can create more efficient support systems by having a better grasp of capability development routes (Soundararajan et al., 2019). The awareness of the capacity constraints of suppliers can enable global buyers to come up with more realistic sustainability guidelines and collaborative support programs (Lund-Thomsen & Lindgreen, 2014). This study expands on Delmas and Toffel's (2008) suggestion to look into how organizational responses differ depending on capabilities and answers Amui et al.'s (2017) call for research on the dynamic interaction between internal capabilities and external pressures in fostering sustainable innovation in emerging economies.

1.2 Research Goals and Inquiries

This study's main goal is to create an integrated theoretical framework that explains how organizational dynamic capacities and multi-level institutional pressures interact to affect sustainability transformation in small and medium-sized businesses in developing nations. Specifically, the paper intends to learn how the institutional pressures at the national, international and industry levels can trigger, constrain or enable the emergence of dynamic capabilities; how the organizational responses to the multi-level pressures can be mediated by

the dynamic capabilities and how the interaction between the institutional pressures and dynamic capabilities can influence the outcomes of the sustainability transformation.

The study tackles the following primary research topic to accomplish this goal:

How does the interaction between organizational dynamic capabilities and multi-level institutional pressures impact the sustainable transformation of SMEs in developing countries?

This main research question is investigated using three related sub-research topics:

What are the institutional pressures shaping this transformation? (The "Why")

This question examines the nature, sources, intensity, and structure of institutional pressures operating at different levels. It looks into normative pressures from industry groups and professional standards, mimetic pressures from competitive benchmarking, and coercive pressures from purchasers and regulations (DiMaggio & Powell, 1983). The multi-level approach focuses on how pressures may be consistent or inconsistent across levels and how they flow down the international to national to industry levels (Kostova et al., 2008).

What dynamic capabilities are developed in response to these pressures? (The "How")

This question explores avenues of building capabilities in low resource situations. It looks into how SMEs develop sensing skills to identify institutional needs, grabbing skills to mobilize resources, and reconfiguring skills to change processes and structures (Teece, 2007). Amui et al. (2017) concentrate on the issues that occur in the context of developing nations, the resources and processes that enterprises employ, and the pressures resulting in the development of capabilities.

What are the outcomes of this interplay? (The "Result")

This question is concerned with the way in which organizational changes, strategic positioning changes, and environmental performance improvements will eventually impact transformation results (Schaltegger & Wagner, 2011). It examines the conditions under which the pressure-capability-transformation relationship is moderated, the effects are linear or exhibit threshold effects, and the varying configurations of pressures and capabilities lead to different outcomes.

1.3 Key Concepts and Definitions

The main theoretical frameworks that guide the study are described in this section. Multi-level institutional pressures are the coercive, normative and mimetic forces that shape organizational behavior to socially acceptable norms and practices at international, national and industry levels (DiMaggio & Powell, 1983; Kostova et al., 2008; Scott, 2008). Coercive pressures are sources of formal rules, legislation and high stakeholder demands. The sources of normative pressures are professional norms, industrial standards, and processes of professionalization. When faced with uncertainty, organizational impulses to emulate successful peers give rise to mimetic pressures. Examples of international level pressures include global standards organizations, transnational certifying agencies, and multinational customer demands. Examples of national-level pressures include government rules, national policies and domestic law enforcement organizations. Industry level pressures include trade association standards, industry codes of behavior and competitive dynamics (Campbell, 2007).

Organizational dynamic capabilities are defined as the capacity of the firm to integrate, construct and reconfigure internal and external competences to respond to the fast changing environments (Teece et al., 1997, p. 516). This paper theorizes dynamic capabilities by considering them to be three fundamental processes, which is an extension of the resource-based paradigm (Barney, 1991). Within sustainability, sensing involves tracking legislative progress, finding cleaner technologies, and sensing stakeholder expectations. Sensing capabilities involve the process of scanning and analyzing the environment in order to detect possibilities and threats (Teece, 2007). To be sustainable, seizing involves channeling resources towards environmental investments and implementing management systems. Seizing capabilities include mobilizing resources to seize opportunities, including investment decisions, resource allocation, and execution (Dangelico et al., 2017). To maintain alignment, reconfiguring capabilities involves altering organisational assets, structures and procedures in the case of sustainable transformation, reconfiguring involves process redesign, organisational restructuring, and strategy reorientation (Teece, 2007). These three skills are connected with each other and complement each other. Schaltegger and

Wagner (2011) define sustainability transformation as an essential organisational change towards socially and ecologically responsible practices that encompass economic, environmental, and social concerns. Johnson and Schaltegger (2016) note that transformation follows a number of stages, such as strategic integration, systematic management, reactive compliance, and sustainability-oriented innovation. Klewitz and Hansen (2014) have listed the results of transformation as improvements in environmental performance that are measurable, sustainable practices and technologies, changes in organisational structures and processes, and changes in strategic positioning where sustainability is no longer a peripheral issue but a strategic priority.

In this research, small and medium-sized enterprises (SMEs) are independent owned and operated firms having less than 250 employees. Limited financial resources, concentrated decision-making, inadequate technical skills, and weak bargaining power are some of the unique issues faced by SMEs. But they also have potential benefits, such as organisational proximity that facilitates change, flexibility, and owner-manager commitment (Johnson & Schaltegger, 2016). SMEs operating in developing countries have to deal with additional environmental variables like less developed institutional structures, less government support, lack of access to technology and funds, and opportunities for leveraging networks and making a quantum leap (Mair et al., 2012). The interdependency between multilevel institutional pressures that trigger, enable, or constrain dynamic capability development and dynamic capabilities that moderate, mediate, or change organizational reactions to institutional pressures is referred to as the interplay between institutional pressures and capabilities (Zhu et al., 2013).This framework recognizes complex interactions whereby capabilities and pressures co-evolve within recurring cycles. As stated by Aragón-Correa and Sharma (2003), institutional pressures trigger capability building due to crisis, need for investment, exposure of capability needs, and external legitimacy to mobilize resources. On the contrary, where sensing allows the organization to identify opportunities before time, and seizing enables it to utilize them effectively, and reconfiguring allows deeper integration, dynamic capabilities serve as an intervening variable to institutional actions (Amui et al., 2017).

2 THEORETICAL FRAMEWORK

The confluence of institutional theory and dynamic capacities views, which each provide unique but complementary insights into organizational responses to environmental concerns, forms the theoretical underpinnings of sustainability transformation in developing country SMEs. To gain legitimacy and acquire resources to survive, organizations react to external forces of regulatory, normative and mimetic sources at different institutional levels such as international, national and industrial levels (DiMaggio & Powell, 1983, p. 147; Scott, 2008, p. 428). This is explained by institutional theory. According to Teece et al. (1997), Teece (2007), the dynamic capabilities perspective sheds light on internal organizational processes that firms use to detect changes in the environment, take advantage of opportunities through resource mobilization, and reorganize their operations and strategies to maintain competitive fitness in turbulent environments. The combination of these theoretical lenses allows us to develop a comprehensive view of how organizational capabilities mediate the interpretation of and responses to institutional demands and external institutional forces stimulate and influence internal capability development. Such two-way, co-evolutionary relationships particularly matter in the context of developing countries that are characterized by institutional voids, institutional duality, and resource limitations (Mair et al., 2012, p. 820; Zhu et al., 2013, p. 233).

This theoretical framework, which is summarized in this chapter, conceptualizes dynamic capabilities as mediating processes in which firms interpret, negotiate and respond to institutional demands with greater or less effectiveness, and places multi-level institutional pressures as critical antecedent factors which affect the outcomes of sustainability transformation as well as the development of dynamic capabilities.Institutional pressures operate by normative mechanisms that disseminate common norms and professional standards via socialization and education, mimetic mechanisms that promote imitation of successful or legal organizational practices in uncertain situations, and coercive mechanisms that entail formal regulations and strong stakeholder demands that are backed by sanctions and enforcement (DiMaggio & Powell, 1983, pp. 150–152). Examples of these pressures include international buyer

requirements and certification standards at the international level, government regulations and policies at the national level, trade association standards and competitive dynamics at the industry level. These pressures tend to bring about complexity as they conflict or create conflicting demands (Kostova et al., 2008, p. 995). Dynamic capabilities can guide businesses through this institutional complexity by sensing capabilities that recognize new opportunities and needs, seizing capabilities that mobilize resources to act despite constraints, and reconfiguring capabilities that radically transform organizational structures, procedures, and strategies (Teece, 2007, pp. 1322–1330). Sustainability transformation outcomes, such as improvements in environmental performance, organizational structural and cultural changes, and strategic repositioning around environmental competitiveness, are determined by the interplay between these institutional pressures and dynamic capabilities (Johnson & Schaltegger, 2016, p. 483; Schaltegger & Wagner, 2011, p. 224).

2.1 Sustainability Transformation in SMEs

2.1.1 Defining Sustainability Transformation

Schaltegger and Wagner (2011) consider sustainability transformation as an essential organizational change that leads towards socially and environmentally responsible practices that combine economic, environmental, and social concerns. Transformation and isolated practice adoption differ in the fact that the former focuses on systemic change, which entails the modification of multiple areas, including technology, processes, structures, capacities, cultures, and strategies. Johnson and Schaltegger (2016) claim that transformation is a process that is divided into the following stages: strategic integration, in which sustainability becomes a part of core strategy; systematic management, which entails formal environmental management systems; reactive compliance, where organizations conform to minimum required practices; sustainability-oriented innovation, which is new business models that are based on value

creation. As results of transformation, it is possible to consider improvements in organizational structure, strategic positioning, and environmental performance (Klewitz & Hansen, 2014).

2.1.2 SMEs and Sustainability: Challenges and Opportunities

SMEs have special challenges because of the transformation of sustainability. Johnson and Schaltegger (2016) state that having access to limited financial resources is an obstacle to the opportunity to employ specialists and obtain technology, reducing the possibility of environmental investments. Limited managerial competence is associated with small management teams that have generalist skills. Lack of technical knowledge is the reason why many people are ignorant of cleaner technology and behaviors. Influence over sustainability criteria is limited by weak bargaining power. Lack of access to networks and approaches available to bigger organizations leads to information, technology, and financing issues. Costs per unit increase due to a lack of economies of scale (Klewitz & Hansen, 2014). There are potential benefits to the SMEs. Rapid reaction without bureaucratic delays is made possible by organizational flexibility. Commitment by the owner-managers makes possible quick action even in spite of immediate expenses. Organizational proximity helps in communication and cultural change. Innovative ideas can result from necessity-driven creativity. Johnson and Schaltegger (2016) state that network embeddedness might provide cooperative resources of sustainability.

2.1.3 Developing Country SME Context

SMEs in developing nations have more difficulties. Efforts are complicated by institutional gaps such as lax enforcement, little government backing, little green funding, and poor environmental infrastructure (Khanna & Palepu, 2011). According to Soundararajan et al. (2019), export-oriented SMEs experience severe international pressure from buyers who require compliance despite their domestic limitations, resulting in institutional duality. Reduced cash availability, increased financing costs, and a lack of competence make resource restrictions more acute. SMEs can,

however, obtain sustainability knowledge outside of official channels by utilizing social networks, informal institutions, and community ties. Resources for capability building might be pooled through industrial groups or NGO collaborations. Opportunities for leapfrogging could make it possible to adopt newer technology without being constrained by legacy (Mair et al., 2012).

2.2 Dynamic Capabilities Perspective

The dynamic capabilities perspective is a basic theoretical framework that is used to understand how businesses develop and sustain a competitive advantage in changing environments by continually identifying, leveraging, and reconfiguring both internal and external resources and competencies. This perspective, which has been developed as a result of the criticism of the static resource-based view, postulates that the businesses in rapidly changing environments must possess higher-order organizational capabilities that enable them to adapt, recombine and renew the resources in response to opportunities and environment changes besides effectively making use of pre-existing resources (Eisenhardt & Martin, 2000; Teece et al., 1997). Dynamic capabilities differ with the normal operational capabilities because they have the capability to change the way businesses are conducted rather than to enable successful running of existing processes.

The dynamic capabilities perspective sheds light on how organizations can monitor changing environmental regulations and stakeholder expectations, mobilize resources to implement sustainable practices despite obstacles, and radically alter their structures, procedures, and strategies to integrate environmental considerations into core operations. The three basic capability clusters—sensing, seizing, and reconfiguring—that together enable sustainability transformation in organizational contexts marked by institutional complexity and resource constraints are examined in this section along with a review of the theoretical underpinnings of the dynamic capabilities perspective.

2.2.1 Foundations of Dynamic Capabilities Theory

The idea that a company's unique resources are the key to its success led to the development of the dynamic capabilities perspective. This perspective is based on the resource-based view, which was introduced by Barney in 1991. However, some critics, like Eisenhardt and Martin in 2000, argued that this view didn't pay enough attention to how companies use and create resources in changing situations. So, what are dynamic capabilities? According to Teece and his colleagues in 1997, they refer to a company's ability to adapt and change its resources and skills to keep up with a rapidly changing environment. This means that having valuable resources is just one part of being competitive - it's also important to be able to adjust and reconfigure those resources as needed. In other words, companies need to be able to integrate, build, and reconfigure their internal and external competences to stay ahead in a chaotic world. This concept highlights the importance of being flexible and able to change quickly in response to new challenges and opportunities. It's not just about having the right resources, but also about being able to use them in a way that creates a sustainable competitive advantage. By focusing on dynamic capabilities, companies can stay ahead of the curve and achieve long-term success.

2.2.2 Sensing, Seizing, and Reconfiguring Capabilities

Sensing Capabilities

Teece (2007) laid out dynamic capabilities as these three linked processes, sensing, seizing, and reconfiguring, though you can pull them apart for analysis. Sensing seems like the starting point, the most basic cluster anyway. It involves how organizations go about scanning and checking out their surroundings, both inside and out, to pick up on chances or risks that might sneak up. Businesses use procedures for that, seeking and investigating stuff to evaluate what is going on.
At a simple level, sensing means paying attention to signals from the environment that could be weak or not clear at all, and that is where interpretive frameworks come in, turning raw data into something useful, like intelligence you can actually work with (Teece, 2007, p. 1322). It feels kind

of demanding, this whole thing. Eisenhardt and Martin (2000) saw sensing as active processes that take a lot of cognitive effort, so organizations have to put in real investment. Things like search routines, roles that span boundaries, and groups that interpret together, all to handle signals that are complex and shifting fast. Some people might say it is just about being alert, but it is more structured than that, I think. Not everything ties together neatly here.

Given that environmental challengesre complex and keep changing being able to sense what is happening takes on a special importance for businesses that want to be sustainable. This means detecting not the rules that are already in place but also the direction that policy is heading in and how it will be enforced. This helps shape the future of compliance. Sensing allows organizations to keep track of developments at the international, national and industry levels. Research by Delmas and Toffel (2004) shows that sensing is important. It is not about monitoring regulations. Sensing also helps identify what stakeholders expect from businesses in terms of performance. These stakeholders include communities, workers, consumers and investors. By sensing businesses can recognize requirements before they become formal pressures. Sensing helps businesses identify practices and cleaner technologies. These can be developed inside or outside of their sector. It makes it easier to assess the consequences and prospective adoption paths. This is especially important for medium-sized enterprises, in poor nations. They need sensing capabilities to stay on track. The development of effective and targeted sensing processes is crucial for SMEs in developing countries to achieve sustainability transformation. Their sensing abilities are often hindered by low participation in professional networks, limited access to technical information, and a lack of managerial resources for thorough environmental scanning (Soundararajan et al., 2019). Organizations that focus on strengthening their sensing capabilities can identify environmental changes early. This allows them to take more strategic and intentional actions instead of just reacting under time pressure. As a result, they gain time-related advantages in their sustainability transformation efforts.

Seizing Capabilities

The second group of dynamic skills is called seizing capabilities. This group includes the processes that businesses use to allocate resources to take advantage of opportunities they identify and

respond effectively to threats. While sensing generates knowledge and understanding of opportunities and changes in the environment, seizing turns that awareness into real organizational action. It does this through implementation, resource coordination, and investment decisions (Teece, 2007, p. 1326). To implement chosen strategies successfully, seizing operates at the point where strategic decision-making meets operational execution. It requires not only identifying the right responses to perceived opportunities but also overcoming organizational inertia, securing necessary resources, and coordinating activities across functional areas. When things get rough, what matters most shows up not in data but in how fast a team moves. Smarts about the environment sit useless unless someone acts on them quickly. Speedy reactions turn insights into results. Without motion, even sharp awareness fades. Success hides less in knowing and more in doing. How swiftly an organization shifts gears can define its fate.

How groups manage their ability to act unfolds through several connected steps. Because chances to invest show up in different forms, choices must balance multiple pressures at once - weighing options, judging outcomes, measuring what it takes versus what exists. Since green projects often repay slowly or offer gains hard to pin on spreadsheets, acting means building methods that assign time, people, money wisely even when payoff stays unclear (Amui et al., 2017). Outside help shows up through joint efforts, shared networks, peer links across fields. Resources shift and join from places beyond company walls, also pulled in from close teams. Expert knowledge arrives from distant partners, tech flows in from third parties, funds appear through linked channels. When old routines resist change, when fixed budgets dig in, when key figures push back - moves by leaders step forward. Power shifts happen anyway. Ways of guiding decisions reshape slow systems. Action spreads at once into making things, buying parts, managing people, handling money, selling ideas - areas that used to work apart start connecting now. Alignment tools pull separate units into sync. Movement across borders of roles becomes how results take shape. Matching effort happens even when habits say no (Teece, 2007).

When it comes to turning green goals into real actions, companies need the ability to act fast even when roadblocks pop up. To balance eco-priorities with tight budgets and daily operations, acting decisively helps fund tech that cuts emissions, modernizes manufacturing, while setting up

systems that track environmental impact. Even sharp awareness of ecological issues falls short if workers lack hands-on skills - knowing what to do matters just as much as spotting the problem. Bringing in outside know-how, teaching staff new methods, or teaming up with experts becomes essential for progress nobody can ignore later on. Starting small does not stop some firms from tackling big challenges. Instead of waiting, they tap into customer networks to gain know-how. Money troubles slow many down, especially where green funding is scarce. Workers nearby might not have the right background either. Leadership time gets stretched thin when new systems roll out. Still, smart moves open doors - pairing up with rivals helps split expenses. Outside funds meant for progress can cover upgrades if asked for correctly. Guidance from partners eases the learning curve. Focus stays on keeping things running while changes take hold.

Reconfiguring Capabilities

Right there at stage three - where things really shift - is reconfiguration. It's how organizations overhaul routines, reshape skills, adjust assets, and redirect strategies. When conditions evolve, these moves keep firms aligned, not just reacting but remaking themselves. Such deep shifts decide if sustainability takes root in who an organization becomes - or just sticks around temporarily, fading once pressure fades. Sensing picks up signals earlier on, while seizing directs effort toward early actions. Transformation like this goes beyond surface fixes; it alters core ways of operating. (Teece, 2007). What happens behind the scenes in companies - how they are built, what habits guide them, what skills they rely on, their shared mindsets, and how they run things - influences everything from choices to actions; reshaping these pieces alters the core ability to shift toward real, lasting change, not just checking boxes or going through eco-friendly motions without meaning.

Learning never stops inside a company when it comes to adapting well. Outcomes from real-world trials feed insights back into daily operations. Outside information flows in just as much as internal discoveries do. Knowledge spreads across departments through regular exchanges between teams. These connections help piece together fragments of understanding into something usable

later on. Experience builds strength over time because people keep adjusting what they know. What gets learned today shapes how things work tomorrow. Capabilities grow quietly behind consistent efforts to absorb new details. (Eisenhardt & Martin, 2000). Shifting assets around often means moving money, people, or equipment to fit greener goals - sometimes selling off polluting holdings helps. Instead of keeping outdated setups, companies shift effort into eco-friendly projects, changing teams so green duties become part of daily work. What an organization knows how to do matters; upgrading skills allows it to operate sustainably, phasing out old ways that clash with environmental targets. New methods replace obsolete ones when survival demands fresh approaches. How value is created gets rebuilt entirely - not just adding green touches but making them central. Profit strategies reshape themselves once nature-focused results start driving market position. Relationships with customers and partners evolve when long-term earth health becomes the main compass. Old profit formulas fade as deeper ecological alignment takes root. Structures change quietly until what was optional now defines purpose. (Schaltegger & Wagner, 2011). Starting fresh can mean touching the quiet rules people live by at work. It might begin when usual ways of thinking shift without warning. A different mindset takes root slowly, like roots under pavement. Day to day choices start reflecting care for nature, almost by habit. This change skips grand plans, instead growing through small repeated acts. Old habits fade as new ones stick, unspoken yet clear. The feel of the workplace changes, not by order, but by constant practice. Underneath it all, what matters most gets rewritten in whispers, not slogans.

Start here. Real shifts in green practices come from deep organizational change, not just checking boxes. Because true progress sticks around even when outside pressure fades. When companies reshape their core abilities, they build lasting support for better environmental results. This kind of shift turns energy savings, less waste, and cleaner operations into normal daily goals - no longer extras tacked on after the fact. Instead of treating cleanup like a side task, it becomes part of how things run every day. Which demands new thinking about designing workflows, tracking outputs, and making steady upgrades behind the scenes. From within. Not forced by rules but built by choice (Aragón-Correa & Sharma, 2003). Shifting sustainability tasks into everyday departments instead of keeping them locked in separate teams shows real intent. When structures change this way, it sends a message - green goals matter everywhere, from buying supplies to designing

goods. Over time, updating regular work habits helps make eco-friendly choices automatic. Procedures evolve, reviews shift focus, decisions include planet impacts without extra oversight. Doing things differently today builds skills that weren't needed yesterday. Learning by doing plays a big role, so does talking with outsiders and sharing insights across divisions. This kind of growth opens doors to bolder moves down the road. Firms start seeing environmental strength as something that sets them apart. It stops being about following rules and becomes part of how they stand out. Customers who care about sustainability take notice, some pay more for proof. Markets respond when companies prove their claims (Johnson & Schaltegger, 2016).

Out there, where change never stops, one thing feeds another in quiet ways. Sensing picks up clues about shifts around the company, showing which changes matter most. Because of those insights, adjustments take shape - guided not by guesswork but by awareness built earlier. When actions follow through, they bring energy and tools needed to shift how work gets done inside. Once new patterns settle into daily habits and shared beliefs, the whole system starts noticing finer details it once missed. Over time, sharper attention leads to smarter moves, looping back to fresh rounds of learning, acting, reshaping - all shaped by what comes before (Teece, 2007).

2.3 Institutional Theory and Sustainability.

Institutional theory offers a basic perspective on understanding organizational responses to environmental pressures by describing how organizations are submissive to external institutional pressures in seeking legitimacy and acquiring resources necessary to survive and grow. The theory was based on sociological traditions that challenged rational-choice and technical-efficiency explanations of organizational behavior and structure. Rather, it suggested that organizations should embrace practices, procedures and structures not only to be technically effective but also to match institutionalized norms, beliefs and demands in their external environments (Meyer & Rowan, 1977, p. 340; Zucker, 1987, p. 443). Standards of appropriate organizational behavior are established and maintained by institutional actors, including governments, professional associations, dominant firms, and advocacy groups. Organizations operate in institutional fields,

communities of organizations that have common meaning systems, structures of regulation, and normative systems (DiMaggio & Powell, 1983, p. 148; Scott, 2008, p. 428).Although this adoption might be formal or have no bearing on the real technical operations, the need to gain legitimacy, social acceptance, approval, and credibility by institutional actors, leads to organizational adoption of institutionalized structures and practices that indicate adherence to institutional expectations (Meyer & Rowan, 1977, p. 341). This behavior of legitimacy seeking leads to isomorphism when organizations operating within the same institutional field react to similar institutional pressures by assuming similar structures, practices, and strategic orientations, making organizations within the same institutional field more similar over time, even though they may have different technical demands (DiMaggio & Powell, 1983, p. 149).

The institutional pressures to sustainability manifest themselves in three different yet interrelated factors that collectively affect the behavior of corporations in relation to the environment in terms of industry, organizational structure, and geographical setting.The government has rules to protect the environment. They make sure people follow these rules. Big companies that buy things from companies also want them to follow these rules or they will not do business with them. There are groups that check if companies are doing what they are supposed to do for the environment and they have to follow standards. People who have an interest in these companies also want them to be responsible when it comes to the environment. If they are not people might think badly of them. All of these things show how companies are pressured to do things in a way because of what other companies and society expect from them. This is called isomorphism. Researchers, like DiMaggio and Powell and Delmas and Toffel have written about this.DiMaggio and Powell (1983, p. 152) and Hoffman (1999, p. 352) agree that normative isomorphism is a product of the processes of professionalization that establish shared norms and standards that characterize proper organizational behavior. It is also propagated by industry associations which advance sector-specific best practices in sustainability, professional education through which managers are socialized into environmental management principles, consultant advice which disseminates particular responses to environmental issues, business networks which create normative expectations regarding corporate environmental performance. Mimetic isomorphism

occurs due to organizational tendencies to pattern themselves after other organizations that are perceived to be more legitimate or more successful in their operations, particularly in the context where there is technological uncertainty on effective environmental solutions, weak cause-effect relationships between environmental practices and performance outcomes, and symbolic uncertainty about how to respond appropriately to stakeholder environmental demands (Bansal & Roth, 2000, p. 718; DiMaggio & Powell, 1983, p. 151).According to Jennings and Zandbergen (1995) page 1018 and Delmas and Toffel (2008) page 1028 regulatory pressure often makes companies follow rules and copy what others are doing. This pressure leads to a kind of professionalization where companies focus on following regulations. Companies also copy what other leading companies are doing. All these pressures work together. Make it happen faster that many companies start to follow environmental practices.

2.3.1 Foundations of Institutional Theory

Institutional theory gives a way to understand how organizations deal with outside pressures from their environment. It came from sociology and pushed back against those old ideas about rational choices (Meyer & Rowan, 1977). I think the main point is that organizations operate in these setups full of rules, norms, and ways of thinking that shape what they do, sometimes helping and sometimes limiting them, (Scott, 2008). They chase after legitimacy, which is basically getting accepted by society or seen as credible. This comes from looking to groups like governments, professional associations, or even stakeholders. That search affects how organizations set up their structures and what they do in practice, not just for efficiency but more for fitting in (DiMaggio & Powell, 1983).

Sometimes organizations put in place forms or procedures that do not really connect to their actual work. But they do it to look like they are following the expected standards, just to get that legitimacy. It feels a bit off, how that can happen. (Meyer & Rowan, 1977), and it sticks out as something that is easy to overlook in how businesses run. Not everything ties together perfectly though. DiMaggio and Powells (1983) really got into why organizations end up looking so similar over time, especially in the same area. They came up with this idea of institutional isomorphism,

which I think helps explain a lot. There are three main ways this happens, and its kind of interesting how they build on each other, or at least seem to. First off, coercive isomorphism comes from all these pressures that an organization cant really ignore. Like, if it depends on government regulations or what big stakeholders want, or even legal stuff that forces changes. That makes everyone conform just to survive, I guess. Then theres mimetic isomorphism, which feels a bit different. When things are uncertain, organizations start copying what others do, especially the ones that look successful or legit. Its like, why risk it when you can just follow the crowd. Normative isomorphism is the third one, and it ties into how professionals get trained and connected. Networks, education programs, and these shared ideas about whats proper all push things toward sameness. It seems like that spreads through the field pretty naturally.

These pressures, coercive, mimetic, normative, they are key for figuring out how the bigger institutional setup shapes what organizations actually do. Sometimes I wonder if one type dominates more in certain situations, but anyway, the framework sticks around for good reason. Scott (2008) came up with this idea about institutional theory, breaking it down into three main pillars that kind of shape how things work in organizations. The regulative one is all about rules and regulations, you know, setting up governance so people follow through with sanctions if they don't. It feels like that pillar pushes for clear frameworks to keep everything in line. Then there's the normative side, which deals with values and what people expect from each other, like duties that everyone sort of agrees on. I think it makes sense because standards help guide behavior without always needing strict rules. The cultural-cognitive pillar is a bit trickier, its based on shared ideas that everyone takes for granted as part of reality. These three connect in ways that reinforce each other, structuring how organizations operate overall.

2.3.2 Institutional Pressures for Sustainability

Scholars have found out that institutional influences have a significant effect on corporate environmental policies, and many studies using institutional theory have explained the organization’s implementation of environmental initiatives (Jennings & Zandbergen, 1995). The coercive influence in relation to sustainable practices is exerted by government legislation for

environmental protection through waste management and emission standards and from multinational firms who compel their suppliers to adhere to their standards (M. Delmas & Toffel, 2004).Normative pressures emanate from industry trade groups that espouse good practices, professional organizations that define standards of environmental management, and changing societal views about environmental responsibility in companies (Hoffman, 1999). As suggested by Bansal and Roth (2000), mimetic pressures arise when firms do not know what constitutes an effective way of dealing with the environment and hence emulate the approaches adopted by their more successful peers. Studies have revealed that ecological responsiveness in firms is prompted by ecological responsibility, legitimization, and competitiveness (Bansal & Roth, 2000). However, there are varying organizational reactions to such pressures, and Oliver (1991) classified five response types, from manipulating to acquiescing. These involve avoidance through hiding or shielding, compromising by balancing or bargaining, complying due to habit, imitation, or adherence, defiance through rejection or confrontation, and manipulation by co-opting or influencing. The choice depends on the nature of pressure faced by the organization, its source, the specific requirements involved, the type of pressure, and organizational characteristics including goal congruence and dependencies. In particular, according to Soundararajan et al. (2019), this is especially relevant to SMEs facing contradictory pressures and lack of resources for compliance in developing countries where it cannot entirely resist powerful forces.

2.3.3 Multi-Level Institutional Pressures

The complex environment is formed through the impact of institutional forces working at multiple levels, such as national, international, and industry (Kostova et al., 2008). Multinational firms, international standard-setting organizations, transnational advocacy networks, and global governance institutions serve as sources of international institutional pressure. Global certification schemes and sustainability requirements imposed by buyers to suppliers represent global pressures for sustainability (Lund-Thomsen & Lindgreen, 2014). National institutions, state policy, and domestic regulations function as sources of national institutional pressure. Sectorial norms, industry associations, and competition serve as sources of industry-level pressure.Multi-

level pressures become complex when there is conflict or competing demands from multiple levels of influence. Duality may result in cases where businesses function within countries with loose local regulation but are required to work under stringent global buyer conditions (Mair et al., 2012). Multi-level pressures are particularly significant in developing countries, where global pressures from value chains typically outweigh local institutional capacities (Soundararajan et al., 2019).

2.3.4 Developing Country Institutional Contexts

According to Khanna and Palepu (2010), emerging countries possess distinctive institutional environments characterized by the presence of "institutional voids," which are situations where the institutions required to promote market transactions are either non-existent or inadequately developed. Gaps in regulatory oversight, capital markets access, legal structure, and intermediaries constitute some of the institutional gaps. Weakness in enforcement, weak technical help, weak green investments, and weak monitoring systems are some examples of environmental gaps (Mair et al., 2012). The growing influence of global certifying agencies, international lobbying organizations, and multinational buyers is exerting increased pressure on businesses in emerging economies despite these environmental gaps (Soundararajan et al., 2019). Hence, enterprises experience both powerful international institutions and powerless local institutions concurrently, leading to institutional duality. Furthermore, in developing countries, informal institutions such as norms, values, and networks that exist outside formal institutions tend to exert a stronger effect on actions than formal institutions that rely on the enforcement of laws.

2.4 Integrating Institutional Theory and Dynamic Capabilities

2.4.1 Theoretical Complementarities

The dynamic capacities and the institutional theory have given us complementary views on the understanding of organizational transformation. Institutional theory is interested in the way organizations respond to the pressure to gain legitimacy and emphasizes the external environmental pressures as behavioral determinants (DiMaggio & Powell, 1983). Yet, it has been criticized to underestimate the variability of agency and capability and the organizations as passive receivers (Oliver, 1991). Conversely, dynamic capabilities are concerned about the manner in which business organizations perceive, capture and reorganize internal processes as source of adaptability (Teece et al., 1997). In the meantime it has been criticized on the basis of lack of sufficient information on the external conditions that result to the development of capabilities (Eisenhardt & Martin, 2000). These complementarities are indicative of the The organizational processes underpinning sensing capabilities operate across several distinct domains. First, sensing requires systematic processes for directing internal research and development activities toward emerging technological frontiers, enabling firms to identify cleaner production methods, energy-efficient technologies, and innovative environmental management approaches before competitors. Second, sensing encompasses processes for tapping exogenous developments in scientific knowledge, technological innovation, and market evolution, including engagement with research institutions, technology suppliers, industry associations, and professional networks that serve as conduits for knowledge flows across organizational boundaries (Teece, 2007). Third, sensing involves continuous monitoring of customer needs and market dynamics, identifying how stakeholder preferences regarding environmental performance are evolving and where sustainability-driven market opportunities may emerge. Fourth, and critically for sustainability transformation, sensing encompasses intelligence-gathering processes focused on regulatory trajectories, enabling firms to anticipate forthcoming environmental requirements rather than simply reacting to enacted legislation. Effective sensing depends on organizational structures that actively support search, learning, and interpretation, including

boundary-spanning roles that connect the organization to external knowledge sources, internal knowledge management systems that aggregate and synthesize distributed intelligence, and leadership attention structures that prioritize environmental scanning as a strategic activity (Dangelico et al., 2017).
potentials of integration that consider internal organizational capabilities and external institutional aspects.

2.4.2 How Institutional Pressures Trigger Capability Development

Through a variety of ways, institutional forces can initiate dynamic capability growth. To begin with, in situations when organizations are faced with short-term threats to their legitimacy or access to the market, acute pressures produce crises requiring rapid growth in capabilities (M. A. Delmas & Toffel, 2008). Second, sustained investments in sensing, seizing, and reconfiguring processes are explained by unrelenting requirements, which contribute to the accumulation of capabilities incrementally (Amui et al., 2017). Third, pressures identify skill gaps by pointing out organizational weaknesses and promotion of targeted growth to address deficiencies. Fourth, pressures help in the allocation of resources by providing external justification to internal investments (Aragón-Correa & Sharma, 2003). Although normative pressures enhance sensing by participating in a network, coercive pressures often stimulate seizing development because organizations assemble resources to do so and mimetic pressures can stimulate all three abilities by benchmarking.

2.4.3 How Dynamic Capabilities Mediate Institutional Responses

Dynamic capacities mediate the way organizations interpret and respond to institutional pressures and enable organizations to be diverse even in similar situations. Sensing facilitates proactive response and not reactive response by facilitating early detection and premeditated development (Teece, 2007). Powerful sensing helps businesses anticipate the shifts in regulations,

as well as recognize the expectations of stakeholders ahead of competitors. Seizing encourages effective compliance by facilitating effective mobilization of resources and successful implementation (Dangelico et al., 2017). Companies that have a high level of grabbing can successfully implement the required technologies and use resources. Through facilitating the change of structures, processes, and cultures, the reconfiguring makes it possible to integrate deeply, beyond the superficial acceptance (Amui et al., 2017). Capacity to reconfigure strongly helps organizations to radically transform operations and re-position positioning to go beyond needs and potentially gain a competitive advantage (Aragón-Correa & Sharma, 2003).

2.4.4 Co-Evolution and Feedback Loops

Institutional pressures and dynamic capabilities are co-evolutionary and mutually dependent on each other via feedback loops (Amui et al., 2017). When successful responses boost confidence and support greater investments, positive feedback arises. This will form a positive feedback loop where capabilities allow effective response, response illustrates value and shown value spurs further development. In case of failure to respond due to lack of skills, there emerges negative feedbacks that create a gap that motivates new attempts. Path dependencies occur as decisions made at an early stage of the development of capabilities determine future directions by creating patterns of resource allocation, accumulation of knowledge, and organization forms (Teece et al., 1997). Sequences in which initial development is initiated by pressures, enhanced reactions are facilitated by emergent capabilities, responses facilitate learning-enhancing capabilities, and responses facilitate proactive strategies are all part of temporal dynamics.

2.5 Conceptual Framework

Based on theoretical foundations, this section presents an integrative conceptual framework which guides empirical studies on how organizational dynamic capabilities and multi-level institutional pressures interact to influence sustainable change in SMEs in developing countries. The framework brings together the research on sustainability transformation, dynamic capacities and institutional theory.

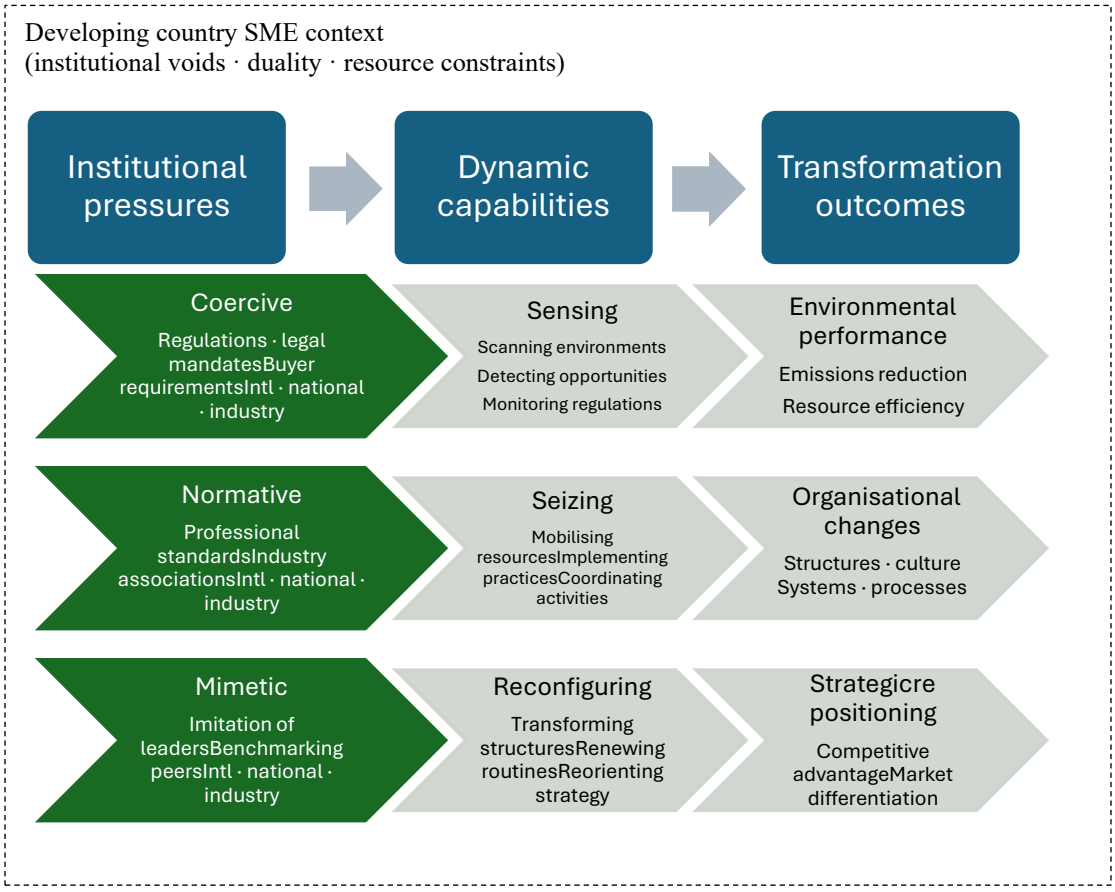

Figure 1: Conceptual Framework: Multi-Level Institutional Pressures, Dynamic Capabilities, and Sustainability Transformation.

The conceptual framework supports the notion that multi-level institutional pressures (coercive, normative and mimetic pressures in the international, national and industry level) are significant

antecedents that influence the formation of dynamic capabilities (sensing, seizing, reconfiguring) and the results of sustainability transformation (environmental performance, organizational change, and strategic positioning). Dynamic capabilities mediate the relationship between the pressures and transformation. The concept also has feedback loops which describe processes of co-evolution where the outcomes of transformation affect future development of ability and institutional contexts. This combined paradigm guides empirical studies that examine the way capabilities are activated by pressures, the way capabilities mediate responses, the impact of the interaction on transformation and how these processes work within the context of SMEs in developing countries.

3 RESEARCH METHODOLOGY

This chapter elaborates the research methodology that is used to examine the interaction of multi-level institutional pressures and organizational dynamic capabilities to influence sustainability transformation in small and medium-sized enterprises (SMEs) in the leather industry in Bangladesh. The epistemological commitments of the research, the nature of the research questions and the contextual peculiarities of the leather industry of Bangladesh, as an industry with intensive chemical processing, effluent generation, issues of chromium management and a unique institutional environment where weak domestic environmental enforcement is combined with strong international buyer sustainability demands guide the methodological choices.

3.1 Research Philosophy and Paradigm

The philosophical underpinning of the current study is an interpretive, constructivist approach that assumes social actors' interpretations of their experiences, actions and environments constitute social reality (Creswell & Poth, 2018, p. 24). Social constructionism is an ontological stance that assumes social actors who perceive, interpret and respond to events such as institutional pressures, capability building, and sustainable change are not independent. Instead, they are influenced by inter-organizational relations, organisational practices, management thinking and institutional processes that are only meaningful within their organisational context (Bryman, 2016, p. 28).This ontological stance leads to an interpretive epistemology that involves the researcher working closely with the subjective interpretations, meanings and knowledge that the managers and owners of the leather SMEs are bringing to their sustainability issues.

This study is especially well suited to the interpretive paradigm due to three reasons. To begin with, the research questions, which involve how and by what mechanisms the institutional pressures and dynamic capabilities interact, are by definition processual and mechanism-based and cannot be viewed through the prism of purely objective measurements (Creswell & Poth, 2018, p. 8). Second, the contextual complexity of the Bangladeshi leather industry, which is

manifested in institutional voids, the duality of institutions between weak domestic enforcement and strong international buyer demands, and extreme resource constraints in SME operations (Mair et al., 2012, p. 820; Moktadir et al., 2018, p. 632), requires profound contextual knowledge that cannot be sufficiently reflected Third, the conceptual synthesis desired in this paper - the connection between institutional theory and dynamic capabilities in an under-theorized empirical setting - can be attained by grounded, theory-building inquiry as opposed to theory-testing (Eisenhardt, 1989, p. 548).

In the framework of interpretivism, the current study uses an abductive reasoning method, which alternates between empirical observation and theoretical framework. Abductive reasoning, which Saunders et al. (2019, p. 149) refer to as the act of going back and forth between theory and data, is especially appropriate to the research that aims to build upon and enhance the existing theoretical frameworks in the context of interaction with new empirical contexts. In contrast to the purely inductive methods which construct the theory based on the data only, abduction enables the researcher to draw on the conceptual resources of the institutional theory and dynamic capabilities and be truly open to new patterns and mechanisms that the data may bring up. This methodology takes into account the theoretical underpinnings of Chapter 2 whilst holding that empirical results can produce new theoretical outcomes based on the particular institutional facts of the leather industry in Bangladesh.

3.2 Qualitative Research Approach

The research is a qualitative study, which is characterized by the focus on the interpretation of social phenomena by the meanings, interpretations, and experiences of participants instead of quantifying them and examining them statistically (Bryman, 2016, p. 375). The choice of the qualitative inquiry is based on the epistemological orientation outlined above and the nature of the research questions. Qualitative research is best suited when the focus of the research is on understanding processes and not outcomes, when the theoretical constructs of interest is complex and context-specific, and when the phenomenon under investigation is poorly known or exists in a particular social setting that requires thick description (Creswell & Poth, 2018, p. 45).

All these conditions describe the current study. The key research question, which is the interaction of institutional pressures and dynamic capabilities in the process of sustainability transformation, is by nature processual, it needs an in-depth knowledge of organizational mechanisms, decision-making sequences, and co-evolutionary dynamics that cannot be simplified into variables and quantified without losing the very complexity that makes the phenomena theoretically interesting ,The theoretical concepts that underpin this research - sensing capabilities, institutional duality, reconfiguring processes, and co-evolutionary dynamics - are multi-faceted and contextual; their manifestation in the Bangladesh leather industry is shaped by the industry's unique history of environmental non-compliance, the forced relocation of tanneries from Hazaribagh to the Savar Tannery Industrial Estate, the criteria of the Leather Working Group (LWG) certification, and the ZDHC chemical management system, which all require contextual rather than abstract treatment (Mair et al., 2012, p. 819; Moktadir et al., 2018, p. 633).

In addition, very little work has been done on the interaction between institutional pressures and dynamic capabilities in developing country leather SMEs (Amui et al., 2017, p. 308), so this is an area where theory-building through in-depth qualitative research is more relevant than theory-testing through quantitative research. Qualitative approaches allow the researcher to follow up on emergent themes and topics, which is vital for research on the Bangladeshi leather industry, where the response of the firm to sustainability pressures is influenced by informal institutional norms, personal buyer-seller relationships and community networks that cannot be captured by survey instruments.

3.3 Research Design: Multiple-Case Study

3.3.1 Justification for Case Study Research

This research adopts a case study research design, which Yin (2018, p. 15) describes as "an empirical inquiry that investigates a contemporary phenomenon (the case) in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident." If the researcher has no control over the events, the questions are "how" and "why" questions, and the study focuses on a contemporary phenomenon in its natural context, case study research is believed to be the most suitable (Yin, 2018, p. 11). The current study meets these three criteria: sustainability transformation is a contemporary phenomenon in the institutional and environmental context of Bangladesh's leather industry; the research question is about how institutional pressures and capacities interact; and the researcher has no control or manipulation over the organisational responses of leather SMEs.

The case study method is also justified by the potential for what Yin (2018, p. 20) calls analytic generalization where the researcher creates theoretical propositions that can be tested on theories rather than samples. The theoretical goals of the present study, in which the aim is to build an integrated model of the interaction between institutional pressures and dynamic capabilities in the context of sustainable transformation of leather SMEs, align with this type of generalization. Besides helping to develop theoretical insights from the complexity of organizational reality, case studies also help to identify complex mechanisms and contingencies that are lost in statistical analyses (Eisenhardt, 1989, p. 532; Flyvbjerg, 2006, p. 219).

3.3.2 Single Case versus Multiple-Case Design: Justification for the Multiple-Case Approach

The focus on only Bangladeshi leather SMEs raises the question of whether a single-case or multiple-case design is acceptable. Here, we discuss why, while valuable, a single-case design would not be sufficient for this study's theoretical goals and why a multiple-case design was used, albeit within the same industry.

Table 3.1 The following table compares the different research designs:

Criterion	Multiple-case study (selected)	Single case study	Survey	Ethnography
Research purpose	Explanation + theory building	Deep single context	Variance testing	Cultural immersion
'How/why' questions	Yes — primary strength	Yes	No	Partial
Cross-case comparison	Yes — within leather sector	No	Possible	No
Within-sector variation	Captures size, stage, location differences	One firm only	Statistical only	One site
Developing country context	Replication across leather sub-contexts	One firm's context	Requires large N	Prolonged fieldwork
Theory generalisability	Analytic (moderate–high)	Analytic (limited)	Statistical	Thick description
Feasibility for SMEs	3–5 cases, manageable	1 case, easiest	Low response rates	Very demanding

Table 3.1. Comparison of research designs for this study

If the case study was of a unique, extreme, revelatory or longitudinal nature, and could only be investigated through single-site fieldwork, a single-case design would be appropriate (Yin, 2018, p. 47). A single leather SME would provide in-depth understandings of the sustainability process of a single firm, and this design would be appropriate in some cases where access or time

constraints exist. But this study's single-case design poses a major theoretical problem because the research questions are about not only the interaction between institutional pressures and capacities within the firm, but also the variation in the interaction and outcomes among firms within the industry.Do companies with different levels of interest in sustainability differ in their perceptions of institutional forces? Do smaller leather SMEs, with fewer resources, structure their seizing capacities differently than larger firms? Are the reconfiguring processes of companies that have been certified by the Leather Working Group (LWG) different from those currently working towards compliance? The diversity of a multiple-case design is required for these questions (Eisenhardt, 1989, p. 536).

Importantly, focusing on a single industry sector (leather) changes the emphasis from variance between industry sectors to variance within the sector, but does not remove the need for multiple cases. The population of Bangladesh's leather SMEs is highly diverse in terms of firm size, ownership structure, export market focus, sustainability status, certification, location (Savar Tannery Industrial Estate versus other locations), product focus (wet-blue tanning versus finished leather versus leather goods), and the strength of relationships with foreign buyers. Theoretically, firms at different levels of these dimensions are expected to perceive different institutional pressures, mobilise different capabilities, and have different outcomes in terms of transformation, making this within-sector variation important. A multiple-case study technique allows more complex conclusions to be drawn from the study than a single-case study.

A multiple-case study is based on replication, not sampling (Yin, 2018, p. 55). Cases are chosen in order to anticipate the same results (literal replication) or different results for theoretically predicted reasons (theoretical replication). In the leather industry, theoretical replication is expected when firms vary in size, sustainability status, or certification status, and therefore, have different capabilities and transformation options; literal replication is expected when firms face identical buyer demands and regulatory conditions. Analytical generalization is enhanced when the cases converge on the theory; the context and conditions of the theory are illuminated when

the cases diverge in theoretically predicted ways, producing a better analytical outcome than a single case.

3.3.3 Multiple-Case Design Specification

This research adopts a multiple-case, embedded design (Yin, 2018, p. 48) with three to five cases from the leather SMEs of Bangladesh only. The embedded design involves multiple units of analysis for each case (i.e., organisational level analysis of the firm's institutional environment and sustainability transformation journey, and sub-unit level analysis of each of the three dynamic capability clusters - sensing, seizing, reconfiguring), allowing for within-case and cross-case analysis (Yin, 2018, p. 56).

The single-sector approach is tailored to the purpose of three to five cases. Eisenhardt (1989, p. 545) claims that theoretical saturation (when further cases do not add to the analytical insights) is attained with four to six examples. The range of three to five is acceptable because saturation might be achieved with a smaller number in a single-sector study with high contextual similarity than in a multi-sector study. This range of cases is selected to represent the major dimensions of variation within the sector: at least one leather SME with 10-100 employees and one with 50-250 employees; at least one company that has achieved LWG certification and one that is working towards it but has not achieved it; and cases that represent different parts of the leather value chain. With replication logic, Yin (2018, p. 61) suggests a minimum of three cases; the target range easily meets this criterion and is achievable for qualitative case studies in Bangladesh.

3.4 Case Selection and Sampling

3.4.1 Case Profiles

It is useful to contextualize each firm in its particular operational and institutional setting prior to a thematic analysis of the findings. The key characteristics of the five case firms relevant to the research questions are summarised in Table 3.2.

Case Enterprise	Position	Employees	Export Markets	Time duration
LTH-01	Managing Director	(20–30)	Europe, USA	00:41:00 hour
LTH-02	Managing Director	85	Netherlands, Dubai, Saudi Arabia, Bangladesh	01:51:00 hour
LTH-03	Managing Director	Not specified	UK, Africa, Malaysia, Australia	00:51:00 hour
LTH-04	Managing Director	55	Japan, Italy, Canada, Spain, Netherlands, Malaysia (9 countries)	01:01:00 hour
LTH-05	Managing Director	31 (+ distributed outworkers)	Australia, Canada, Malaysia, Saudi Arabia, Netherlands	00:37:17 hour

Table 3.2: Overview of Case Enterprises

While the cases vary in firm size, market focus and sustainability, they share common contextual factors: they are all part of the leather and craft industry in Bangladesh, they all have to deal with the specific institutional binary of weak domestic enforcement and stringent international buyer demands, and they all operate under the resource scarcity typical of SMEs in developing economies (Khanna & Palepu, 2010; Mair et al., 2012).

3.4.2 Purposive Case Selection

Cases are chosen using purposive sampling - in particular, criterion-based purposive sampling (Creswell & Poth, 2018, p. 158) - rather than random or representative sampling. Purposive sampling is the norm and most suitable method for case study research in qualitative research, where the purpose is not statistical representativeness but the selection of information-rich cases that can inform the theoretical constructs and research questions of the study (Patton, 2015, p. 46). Random sampling would be inappropriate for this study because it would not guarantee that cases have the attributes (exporting, SME, sustainability, within-sector variability) needed for the theoretical comparisons the study calls for.

The criteria used to select the leather SME cases are summarised in Table 3.3:

Selection criterion	**Rationale and operationalization**
SME size: 10–250 employees	Ensures resource constraints characteristic of SMEs while maintaining sufficient organisational complexity for capability differentiation within leather processing operations
Export-oriented operations	Ensures exposure to international buyer requirements representing coercive multi-level institutional pressures; export firms face the strongest sustainability demands from global value chains

At least 3 years of sustainability engagement	Ensures sufficient organisational experience to discuss sensing, seizing, and reconfiguring processes meaningfully and to observe observable transformation outcomes
Variation in sustainability stage	Cases are selected to span a range from early compliance-oriented firms to more advanced sustainability-integrated firms, enabling theoretical replication across development trajectories
Willingness to participate	Voluntary informed consent; minimum 2 senior representatives per case willing to be interviewed across strategic and operational levels

Table 3.3. Criteria for selecting cases for the leather SME multiple-case study

3.5 Data Collection

3.5.1 Overview of Data Sources

This research adopts a multiple data collection approach in line with Yin's (2018, p. 113) triangulation principle, which enhances the credibility of case study research by convergence of evidence from multiple sources. The main data sources are: semi-structured interviews with organisational informants; organisational documents; industry and regulatory documents specific to Bangladesh's leather industry. While no site visits are made during the data collection process for this study, the researcher has first-hand experience of the work environment of the Bangladesh leather industry from a visit to a leather factory prior to the start of this research.

Table 3.3 provides an overview of these sources, the data types gathered and their links to the research questions:

Data source	**Type of data collected**	**No. per case**
Semi-structured interviews (primary)	Institutional pressures experienced; capability development processes; transformation outcomes; contextual challenges in the leather sector	5–7 interviews (owner/Managing Director+ operations + compliance/sustainability role)
Company documents	Environmental policies; ZDHC/chemical management certifications; effluent treatment records; buyer audit reports; annual/sustainability reports	All available
Industry & regulatory documents	BFLLFEA guidelines; Bangladesh DoE Tannery Industrial Estate regulations; buyer code of conduct documents; ZDHC MRSL; Leather Working Group standards	Per case context
Field observation notes (pre-research, contextual; not part of formal data collection)	Researcher's knowledge of tannery working environment (tannery effluent treatment facilities, chemical management, factory layout) from a pre-research tour of the factory; applied to understand and interpret interview responses and documented records	1 visit (pre-research, contextual; not part of formal data collection)

Table 3.4. Data collection protocol: sources, types of data, and research question links

3.5.2 Semi-Structured Interviews

The main method of data collection is semi-structured interviews, in line with the interpretivist approach to the study and the role of the meanings and experiences of organizational actors in the research questions. Semi-structured interviews are chosen over structured interviews because they enable the researcher to follow the theoretical themes, while being open and flexible to follow up on unexpected responses, to probe deeper into the interviewees' accounts, and to adapt the interview to the interviewees' knowledge and experience (Bryman, 2016, p. 471). They are preferred over unstructured interviews because the theoretical framework outlined in Chapter 2 offers specific constructs - types of institutional pressure, dynamic capability processes, transformation outcomes - that need to be probed across all cases to allow cross-case comparison.

An interview guide is designed based on the research questions and theoretical framework to cover the following areas: the nature, sources and intensity of institutional pressures faced by leather SMEs (coercive pressures from Bangladesh's Department of Environment, ZDHC chemical regulations, buyer code of conduct, and LWG certification; normative pressures from BFLLFEA, professional networks, and chemical management training; mimetic pressures from peer leather companies and industry leaders); the development of sensing capabilities to track regulatory, buyer sustainability code of conduct, and environmental technologies; the processes through which seizing capabilities mobilise financial and human resources for sustainability despite resource constraints; the processes of organisational reconfiguration to integrate sustainability; the interaction and co-evolutionary dynamics between institutional pressures and capabilities over time; and sustainability transformation outcomes in terms of environmental performance, organisational change and strategic positioning.

Interviews are carried out in Bangladesh in Bangla or English as preferred by the informant, with translation services if needed. Interviews are designed to last 45-75 minutes, and audio recording and verbatim transcription are only conducted with the informant's permission. If an informant

refuses to be recorded, extensive notes are taken during the interview and elaborated upon immediately following. Two pilot interviews are conducted in the first case to test the interview guide and understandability of the questions before the study moves on to the next cases.

3.5.3 Documentary Data

Documentary data is a secondary but valuable source of data which allows triangulation of interview data, limits the need for retrospective recall, and provides access to practices as they are recorded rather than as they are remembered during interviews (Yin, 2018, p. 120). For each leather SME case, the researcher aims to access: environmental management and sustainability policies; ZDHC MRSL (Manufacturing Restricted Substances List) compliance records; Leather Working Group audit and certification reports; effluent treatment plant (ETP) data; buyer code of conduct documents and correspondence; ISO 14001 certificates (if held); and internal communications related to sustainability initiatives. The Bangladesh Department of Environment's tannery regulations, buyer sustainability standards and Bangladesh Finished Leather, Leathergoods and Footwear Exporters' Association (BFLLFEA) guidelines are drawn from the industry level to understand the institutional barriers faced by the cases.

3.6 Data Analysis

3.6.1 Analytical Strategy

The data analysis process is a systematic seven-phase process based on the procedures outlined by Miles et al. (2020), Braun and Clarke's (2006) approach to thematic analysis and Strauss and Corbin's (1998) coding procedures for grounded theory, adapted for case study research. The analytical approach involves within-case analysis - to gain an in-depth understanding of each leather SME case individually - and cross-case analysis - to identify patterns, repetitions and differences across cases - in an iterative cycle between data and (Eisenhardt, 1989, p. 540).

Table 3.4: The seven phases of analysis are summarised in

Phase	Activity	Purpose / output
1	Data familiarisation and initial reading of all transcripts, documents, and field notes	Immersion in data; preliminary impressions; identification of salient themes
2	Initial open coding: labelling segments line-by-line without imposing prior categories	Generation of descriptive codes grounded in participant language (Strauss & Corbin, 1998)
3	Within-case analysis: grouping codes into themes for each case individually	Case-specific pattern identification; narrative construction per case
4	Focused coding: collapsing codes around research questions and conceptual framework constructs	Alignment of empirical themes with sensing, seizing, reconfiguring; pressure types; outcomes
5	Cross-case analysis: systematic comparison across cases seeking convergence and divergence	Analytic generalisation; theoretical pattern replication or contrast (Yin, 2018)
6	Theoretical integration: connecting patterns to institutional theory + dynamic capabilities framework	Theory refinement; identification of novel mechanisms and propositions
7	Member checking and negative case analysis	Trustworthiness; disconfirming cases strengthen or qualify findings

Table 3.5. Seven-phase data analysis process

3.6.2 Coding Procedures

Coding is done in two cycles. To avoid theoretical concepts overriding emic meanings (the meanings used by leather SME managers) and preventing new patterns unique to the leather industry environment from being discovered, in the first cycle open or descriptive codes are used to code interview transcripts and documentary data, using the participants' own words where possible. This approach follows Strauss and Corbin's (1998, p. 101) recommendation to base initial codes on the data rather than a preconceived theoretical framework in order to avoid the latter acting as a screen that obscures new patterns specific to the leather industry environment.

Second-cycle or pattern codes are applied to cluster the first-cycle codes into higher-order themes that map to the study's theoretical framework: coercive, normative and mimetic pressures; international, national and industry pressure levels; sensing, seizing, and reconfiguring capability processes; and transformation outcomes categories such as ZDHC compliance, LWG certification progress, ETP operational improvements, and strategic repositioning. A coding template, part of the audit trail, documents the connection between empirical codes and theoretical constructs (Yin, 2018, p. 131). The template is reviewed by the research supervisor as part of the peer debriefing process described in Section 3.7.

Rather than using dedicated qualitative data analysis software, data is managed and coded using Microsoft Word and Microsoft Excel. This decision reflects a consistent dedication to immersion in the data, as well as a clear and unambiguous audit trail accessible without the need for specialised software. Microsoft Word's Comments and Track Changes functions enable the researcher to immediately record comments on field notes and interview transcripts. This enables the researcher to code, add interpretive notes and make pattern notes in the text itself. Through the researcher's close engagement with the language and narrative structure of the participants, this "hands-on" approach to data analysis supports the emic focus of the first cycle of coding (Bryman, 2016, p. 591).

The rows of a coding matrix in Microsoft Excel represent a segment of data and the columns represent the first-cycle code, second-cycle code, theoretical construct to which the code is mapped and the case from which the segment is taken. This matrix can be sorted and filtered by the codes applied to the segments of leather SME cases, pressure types and capability clusters, which facilitates systematic cross-case comparison and case comparison outputs to inform the cross-case synthesis in Section 3.6.3. Since all coded documents, the Excel coding matrix, and the researcher's notes are retained as an audit trail, all decisions are traceable, transparent and open to review by the researcher's supervisor (Yin, 2018, p. 131).

In a study of this scale, with three to five cases, each of which generates two to three interview transcripts, as well as documentary and observational data, the manual approach is particularly appropriate.The interpretive scrutiny afforded by manual close reading is a strength, not weakness, and the data are large but not so large as to require computer help (Lincoln & Guba, 1985, p. 289).

3.6.3 Within-Case and Cross-Case Analysis

The first step in within-case analysis is to develop a detailed story for each leather SME in line with the four sub-questions of the research. Each narrative traces the firm's institutional pressures at the global (buyer demands, LWG, ZDHC), national (Bangladesh DoE, BFLLFEA) and industry levels; the processes of building capabilities in sensing, seizing and reconfiguring clusters; the ways of interaction between pressures and capabilities; and the reported sustainability transformation outcomes. To ensure the narrative is grounded in the participants' perspectives and to provide clarity on the evidence used to make analytical claims, direct quotations are often used.

Cross-case analysis uses Yin's (2018, p. 175) cross-case synthesis approach with a case-by-case comparison matrix in Microsoft Excel that maps each theoretical concept across all the leather SME cases. Patterns of consistency, where the same mechanisms and processes are observed

regardless of the size of the firm, or whether it is certified or not, or at what stage of the sustainability journey it is in, strongly support claims about how Bangladeshi leather SMEs navigate sustainability transformation. To explain the conditions, contingencies, and boundary conditions that explain the difference, such as the different capability configurations of LWG-certified and non-certified firms, divergent patterns - where cases differ in theoretically expected or unexpected ways - are examined. According to Braun and Clarke (2006, p. 96) and Miles et al. (2020, p. 300), According to Braun and Clarke (2006, p. 96) and Miles et al. (2020, p. 300), negative cases - where an expected pattern is not found - are sought and analysed, rather than dismissed.

3.7 Research Quality and Rigour

Trustworthiness is used to evaluate the quality of qualitative research, using the four criteria of trustworthiness (credibility, transferability, dependability, and confirmability) proposed by Lincoln and Guba (1985). These criteria are the qualitative equivalent of the quantitative criteria of internal validity, external validity, reliability, and objectivity.

These criteria, their meanings, and the specific strategies used in this study are tabulated in Table 3.5:

Quality criterion	**Definition (Lincoln & Guba, 1985)**	**Strategies employed in this study**
Credibility (internal validity)	Confidence that findings accurately represent participants' realities	Member checking; prolonged engagement; triangulation across sources; negative case analysis; peer debriefing
Transferability (external validity)	The degree to which findings can apply to other contexts	Thick description of cases and context; purposive case selection with explicit rationale; reporting of contextual conditions
Dependability (reliability)	Consistency and repeatability of the research process	Case study protocol; interview guide; audit trail of decisions; reflexivity journal; systematic coding procedures

Confirmability (objectivity)	The degree to which findings are shaped by participants, not researcher bias	Reflexivity statement; chain of evidence documentation; verbatim quotations; competing interpretations considered

Table 3.6: Quality techniques and trustworthiness criterion

For each leather SME case, summaries of case narratives are presented to key informants and feedback is sought on their accuracy and thoroughness to conduct member checking (returning research findings to participants). This approach enhances credibility by confirming the researcher's interpretations are consistent with participants' views, and by providing an opportunity to detect interpretive errors or omissions (Lincoln & Guba, 1985, p. 314). Convergent evidence from multiple sources increases confidence in the analysis and divergent evidence leads to investigation of the causes of disagreement. Data triangulation (interviews and documents) is carefully applied (Yin, 2018, p. 130). In the case of the leather industry, where decoupling between legitimated environmental commitments and operational practices is known to occur, triangulation of interview reports with documentary evidence, such as ETP reports, ZDHC compliance certificates and LWG audit reports, is especially important (Meyer & Rowan, 1977, p. 357; Moktadir et al., 2018, p. 645). The validity of interpretations is also enhanced by the researcher's background knowledge of the pre-existing context of leather manufacturing, gained through a personal tour of a leather factory before starting the research. This enables more meaningful engagement with participant accounts of tannery environmental management practices.

The rich case narratives in Chapter 4 offer a thick description (Bryman, 2016, p. 390) of the individual leather SME cases, including their position in the Bangladeshi leather value chain, their buyer-supplier relationships, their regulatory history and their sustainability performance. The researcher maintains a reflexivity journal throughout the research process, documenting the researcher's analytical decisions, interpretive insights, and potential biases due to the researcher's prior knowledge or assumptions about the Bangladesh leather industry. This

reflexive account of the interpretive process supports confirmability (Creswell & Poth, 2018, p. 260).

3.8 Ethical Considerations

This research complies with the research ethics guidelines of the University of Vaasa. The key ethical considerations to be considered when working with organizational informants in developing countries for qualitative fieldwork are informed consent, confidentiality and anonymity, protection from harm, reciprocity, and researcher positionality. This research follows the University of Vaasa's research ethics. Informed consent, confidentiality and anonymity, protection from harm, reciprocity and researcher reflexivity are ethical considerations when carrying out qualitative fieldwork with organizational informants in developing countries.

In each of our research findings, we use anonymization procedures to ensure confidentiality and anonymity of case organisations and informants. In all cases, informants are referred to by their role (e.g., Owner-Manager, Production Director, Compliance Officer); cases are anonymized (e.g., Leather-SME-1, Leather-SME-2). Primary data, such as interviews, field notes and documents, are securely stored on university computer systems (password-protected) and confidential. The confidentiality of sustainability data is recognised. In the case of Bangladesh's leather industry, where there is institutional pressure from overseas customers, revealing some environmental performance or compliance issues could have a significant impact on affected firms. Moreover, anonymization seeks to avoid buyers, competitors or regulators from identifying individual firms.

One way to avoid harming informants is to ensure that their participation does not jeopardise their jobs or reputation. Informants are not asked to reveal information that may be commercially confidential, and that could damage their business if disclosed; the questions in the interview guide are designed to uncover organizational experiences and processes, not personal information. The voluntary consent process, anonymity and the exploratory nature of the

questions help to counter a power dynamic where informants from SMEs in a developing country context may feel compelled to respond or to respond in a way that makes the SME's sustainability performance look good.

By offering to provide a summary of the research findings to participating businesses after publication, reciprocity is met, enabling them to access comparative data about sustainable practices among leather SMEs. In a context where SMEs face huge knowledge gaps on institutional developments and best practices in sustainability, this reciprocity is particularly important (Soundararajan et al., 2019, p. 392). One way to overcome researcher positionality is to reflexively recognize that the researcher's personal and professional background, theoretical perspectives, and institutional affiliations shape the interpretation of evidence. The researcher's interpretive decisions, biases, and shifting perspectives are captured in the research reflexivity log (or diary). Additional viewpoints that challenge and enhance the researcher interpretations are acquired through peer debriefing with the study supervisor and ongoing discussions with peer academics (Creswell & Poth, 2018, p. 260; Lincoln & Guba, 1985, p. 308).

4. EMPIRICAL FINDINGS AND DATA ANALYSIS

The empirical results from in-depth semi-structured interviews with five owner-managers and founders of small and medium-sized businesses (SMEs) in Bangladesh's leather and related handicraft industries are presented in this chapter. The cases are leather bag manufacturing (LTH-01, Dhaka), leather goods (LTH-02, Dhaka), finished leather goods (LTH-03, Hazaribagh/Dhaka), genuine leather items (LTH-04, Hazaribagh) and upcycled fabric and jute handicrafts (LTH-05, Kapasia, Gazipur). As a whole, these enterprises provide a diverse, but contextually relevant, snapshot of the domestic and export leather and sustainable craft sectors in Bangladesh.

4.1 Case Profiles and Contextual Background

It is useful to contextualise each firm in its particular operational and institutional setting prior to a thematic analysis of the findings. The key characteristics of the five case firms relevant to the research questions are summarised in Table 4.1.

Case Enterprise	**Position**	**Employees**	**Product Focus**	**Export Markets**	**Sustainability Stage**
LTH-01	Managing Director	(20–30)	Leather bags (B2B & B2C domestic brand Gutipa)	Europe, USA	Intermediate – DOE certified, solar installed, Fair Trade (lapsed)
LTH-02	Managing Director	85	Leather goods (executive bags, accessories)	Netherlands, Dubai, Saudi Arabia, Bangladesh	Intermediate – WFTO provisional member, LWG-sourced leather

LTH-03	Managing Director	Not specified	Finished leather goods, bags, shoes	UK, Africa, Malaysia, Australia	Early-intermediate – targeting compliance factory by 2027
LTH-04	Managing Director	55	Authentic leather bags, wallets, jackets, full range	Japan, Italy, Canada, Spain, Netherlands, Malaysia (9 countries)	Intermediate – 5S/Kaizen implemented, ISO in process, LWG planned
LTH-05	Managing Director	31 (+ distributed outworkers)	Upcycled fabric jewellery & jute handicrafts	Australia, Canada, Malaysia, Saudi Arabia, Netherlands	Advanced in ethos – zero-waste model, natural dyes, solar

Table 4.1: Contextual Background of Case Enterprises

While the cases vary in firm size, market focus and sustainability, they share common contextual factors: they are all part of the leather and craft industry in Bangladesh, they all have to deal with the specific institutional binary of weak domestic enforcement and stringent international buyer demands, and they all operate under the resource scarcity typical of SMEs in developing economies (Khanna & Palepu, 2010; Mair et al., 2012).

Taslima Miji founded Leatherina Pvt Ltd in 2016 as a manufacturer of leather bags for US and European clients, along with a local brand. The company relocated its plant from a residential area in the capital to an industrial area to obtain the Department of Environment's (DOE) Environmental Clearance Certificate, a basic compliance requirement that is an example of

response to coercive pressure. Managing DirectorBin Karim founded Jolson Leather Ltd in 2018, which grew from a three-person micro enterprise to an 85-person, Dhaka-based manufacturer exporting to four international markets. It has already enjoyed its first taste of sustainability by partnering with the Netherlands-based World Fair Trade Organization (WFTO). Shan Leather Ltd. was founded in 2018 by Shahadat, a leather technology graduate who undertook further training at Picard Germany. It has its office in Hazaribagh and a design house in Mugbazar, Dhaka, and is working on a compliance plant to be set up by 2027. LTH-02Ltd. was founded in 2016 by a woman entrepreneur and has expanded from five to 55 employees by focusing on quality. It recently completed 5S and Kaizen implementation, and is in the process of obtaining ISO certification. Started in 2013 by Managing Directorin rural Kapasia, Gazipur, LTH-05 is perhaps the most naturally sustainable enterprise. The company started with upcycled fabric scraps and has evolved into jute handicrafts and natural dye experiments, adopting a rural, solar-powered, zero-chemical production model, with work outsourced to outworkers in multiple districts.

4.2 Multi-Level Institutional Pressures: The Why of Sustainability Transformation

The first study sub-question investigates the nature, sources, intensity and structure of institutional pressures that drive sustainable transformation at various levels (national, international, and industry) in the example firms. The analysis of the interview data shows the existence of a complex, multi-layered institutional framework, where demands from several layers are not only additive but often lead to tensions, contradictions and strategic problems that the SMEs have to cope with, using limited resources. The results are presented below according to the three institutional levels mentioned in the theoretical framework (DiMaggio & Powell, 1983; Kostova et al., 2008).

4.2.1 International-Level Pressures: Coercive and Normative Demands from Global Value Chains

The most salient and important determinant of sustainable behaviour in all five situations is international institutional forces. These constraints are primarily imposed by international buyers, certification bodies, and customs regulations, but they are now also growing in number as normative pressures, which are propagated through trade shows, professional networks and industry bodies.

The most frequently mentioned coercive factor was the need for certification from foreign customers. The Leather Working Group (LWG) accreditation is the most prominent international standard in leather industry that requires compliance with chemical management (ZDHC MRSL), water usage, energy usage and social compliance standards. Although not always needed, the Managing Directorof LTH-01 said, "most buyers they will request LWG certificate. Besides, it's not only offered to European customers. Additionally, our US buyer wants to make sure that the provider of our leathers is compliant." In addition to legislative requirements, this trans-regional spread of LWG criteria is indicative of a globalisation of expectations on certification.

The Managing Directorof LTH-02 of LTH-02 said that he first encountered the Dutch buyers in an Italian trade show in 2022, and was confronted with international sustainability standards that he had never come across before. His initiative to visit the Netherlands to meet with the World Fair Trade Organization (WFTO) and to become a temporary member of the organization is an example of how international buyer demand can be a catalyst for rapid capabilities development when combined with entrepreneurial sensing.

The owner of LTH-04 feels that the red zone classification of Hazaribagh is an institutional pitfall as it does not allow the company to get the Environmental Clearance Certificate, a basic document required for many international compliance procedures. This is because the government will not certify it, despite the business being physically located in a designated industrial area. She could show the efforts to comply, but not the actual ISO certificate, when a

UK buyer requested the ISO certificate documentation, this was not the end of the relationship. The size and formality of the buyer determine the pressure of international pressure, and the owner-founder startup firms are more free than large enterprises that are strictly regulated.

Professional socialization and knowledge transfer are two ways that normative international pressures function. The Managing Directorof LTH-01 confirms Hoffman's observation (1999) on the normative role of professional associations and advocacy groups in institutional fields in that he explained that the awareness of the changing sustainability requirements is brought to LTH-01 through "donor agencies and also financial international financial institutions like World Bank, ITC and many other organizations they are working in collaboration with our government.

4.2.2 National-Level Pressures: Regulatory Voids, Enforcement Gaps, and Government Limitations

Mimetic pressures at the global level include benchmarking against more sustainable competitors and imitating techniques observed at international trade shows. "Recently I have just adopted one technology... it's a software that gives a 3D look of like, for example, a bag and gives a 360 rotation of the product," the respondent said about attending trade shows and seeing new technologies. This mimetic use of virtual product display technology demonstrates how SME managers are exposed to next-practice developments through participation in international trade shows, which they subsequently try to imitate.

The most typical national regulatory pressures in leather industry cases are related to environmental certification and plant location requirements. While the Department of Environment (DOE) Environmental Clearance Certificate is officially required for all manufacturing activities, the leather industry, which has always been the main industry in Hazaribagh, is structurally unable to get it because of the red zone designation of the area. LTH-04 owner said that so far, the Hazaribagh area is in red zone, hence they do not get environmental certificates as those who have factories in the Hazaribagh area. For us, it's a significant task.

One of the most important institutional lacunae in the country for the industry is the failure of the government to complete and put into operation the Effluent Treatment Plant (ETP) in the area of Savar Tannery Industrial Estate, the proposed relocation area for Hazaribagh tanneries. Several sources say that the biggest hurdle to getting LWG certification and access to top foreign markets is the underutilized central ETP. The Managing Directorof LTH-01 was irritated and said that she had great expectations to repair their ETP and if this is repaired or it becomes fully functional, this is going to make a huge difference in terms of attracting more international buyers. This is a case of a manufacturer of leather products (not a tannery) reflecting the lack of supply chain infrastructure, which reaches all the way down the value chain, even to the level of finished leather users.

A key national institutional challenge that affects investment potential for sustainability is the financial system constraints. The Managing Directorof LTH-02 explained the incompatibility of the banking system with the investment cycles of SMEs: "If I borrow from you today, then the next month, from the 10th of the next month I have to pay the instalment. If we produce a product for a company, though, will we get a refund in a month or two? No way. Even if we export, LC 90 days, one 20 days. The mismatch between the time period of installment repayments by banks and the time period of export income realization is always a disadvantage to SMEs who wish to invest in sustainability projects with long payback periods.

In SMEs, where resources are limited, the obligations on compliance with bureaucracy, such as renewing trade license, VAT and tax registration, are examples of obligations that create stress and occupy managerial time. We have to renew many licenses every year, and they are $1,000 to $2,000 per license each year, and they don't have to be renewed annually. The owner of LTH-03 said that despite the progress made in digitalising official documents like e-trade licenses, e-tin and e-VAT, systemic problems remain: "The government is now providing support. However, it's not methodical.

4.2.3 Industry-Level Pressures: Peer Dynamics, Association Limitations, and Competitive Mimicry

Industry-level pressures, operating within the leather and craft industries in Bangladesh, offer a more nuanced picture than the national and international pressures. Peer dynamics are typified by a mix of cooperative solidarity, especially among smaller businesses dealing with similar issues, and informational opacity, or the unwillingness to share competitive knowledge. Although there are industry associations, the majority of informants believe they are not very effective.

Peer pressure was always described as a motivating factor and never as a threatening factor in all the situations. The Managing Directorof LTH-01 says that the relationship with the industry leaders is “an inspiration” and not a threat: “Some of the industry leaders are better off than us.” Thus, we are a successful SME business. We are working to be better each day. Competitive pressure in the leather goods industry in Bangladesh is in an early stage of competition, which is manifested as aspirational benchmarking, not menacing rivalry.

The owner of LTH-03 gave a good explanation of how design imitation is prevalent in the industry: "Nobody wants to come up with their own design, they just copy another person's design. The perceived value of developing original design capabilities is diminished and innovation incentives are suppressed by this informal mimicking, which is a negative kind of mimetic isomorphism. The same informant describes a positive mimetic dynamic in which some players intentionally try to share information with other entrepreneurs, going to trade shows and trying to convince other players to come along.

Association membership and governance is not a one-size-fits-all concept. The owner of LTH-03 was not impressed by the leaders in private industry associations, and was not inclined to join. This is why I don't participate a lot. He only continued to be a member of associations connected to the government (JDPCA). According to the owner of LTH-04, their membership to Bangla Cluster, SME Foundation, Dhaka Women Chamber and Barisal Women Chamber is important tools for collective voice: "they are still advocating. However, not much occurs. Finally, it's like little kids

screaming for their mommy. This metaphor encapsulates the underlying problem of industry association advocacy in Bangladesh's SME context: persistent, but not strong enough to deal with institutional weaknesses in the system.

Due to the lack of effective association support from the formal sector, the respondent acted out on his own to organize an informal association of ten enterprises around him in his industrial area: "I have organized an association myself. Thus, we discuss with each other any problems we may have and then collaborate to solve them. This is an example of how a business may form an informal cooperative organization to share resources, when they believe that formal methods are inefficient, in the context of developing shared solar energy systems on an industry-wide level.

It is interesting to find that donor organizations and international development organizations have an influence in the creation of normative pressure at the industry level. Several respondents cited the SME Foundation's JICA (Japan International Cooperation Agency) training programs as vital support in building capacities. The owner of LTH-04 gave an explanation about how a SME Foundation project with the assistance of JICA implemented the Kaizen Approach, a Japanese Management System, and credited the entire factory implementation to the SME Foundation's advice. This shows how international development organizations can be pressure transmitters at industry level to bring in global best practices in the local institutional setting.

4.3 Dynamic Capabilities Developed in Response to Institutional Pressures

The second sub-question of the research explores the way SMEs react to the multi-level institutional challenges outlined above, through the development of dynamic capabilities such as sensing, seizing and reconfiguring. The interview data reveal considerable differences in capability configurations among the five cases, which reflect differences in market orientation, ownership structure, firm age and access to external knowledge sources. Importantly, the data show that capability development in resource-constrained SMEs is often not systematic or deliberate, but

rather evolves through interactions with specific institutional demands in the problem-solving process.

4.*3*.1 Sensing Capabilities: Detecting Environmental Changes and Institutional Requirements

In the cases, sensing capabilities are manifested in personal network monitoring, scanning of digital platforms, buyer-mediated information transfer and participation in trade shows and training programs—all the organizational processes through which businesses scan, interpret and respond to signals in the environment. SMEs' environmental scanning is largely informal and opportunistic, and dependent on the owner-managers; only in the largest firm are formal and systematic environmental scanning processes evident. Buyer connections are the primary means of sensing changes in market standards and regulations in all five scenarios. This information is provided by our buyers when they discuss what they require, what we don't, etc. and how that information reaches LTH-01, as explained by Managing Directorat LTH-01.

The SME Foundation has a very important role in sensing facilitation with respect to LTH-04 in particular. As the owner explained, the Foundation proactively informed her about relevant training options as her capacities grew when she needed this training with her products. You must have that. Guided sensing is an institutional compensation mechanism to detect competence deficiencies in resource-poor SMEs: an external support institution that works efficiently to conduct environmental scanning for smaller firms.

The lack of sensing capability is easily seen. The owner of LTH-03 admitted that they were not certain what certificates they would need at each stage of the export market, "We don't even know where to go to get some certifications," they said. This is the only thing that restricts us. The owner of LTH-04 would have been able to grow its capability faster had he recognized the need for ISO earlier: "If I had known five years ago what I know now about ISO, I would have taken those steps much earlier.

4.3.2 Seizing Capabilities: Mobilising Resources for Sustainability Implementation

In all cases the most limited capability cluster is the ability to seize capabilities – the organizational procedures that businesses use to mobilize resources to take advantage of opportunities and address threats identified through sensing. This is a reflection of the financial, human and technical limitations which are common to SMEs in developing countries. Within these constraints, however, there are various forms of innovative resource mobilisation strategies, as illustrated by the cases.

Self-financing (from operating earnings) is the most frequently used means of mobilizing resources in all of the examples. LTH-01's Managing Directorsaid they attempt to raise the money from their profit in their business. In some cases it is the case because we have to keep the business going; when it is needed, we have to think of it as an investment. This profit reinvestment paradigm is a basic pacing limit for sustainability investment, since capturing opportunities only depends on the profitability of the operation, which depends on buyer relationships, order volumes and macroeconomic factors.

His description of his 2022 WFTO provisional membership application illustrates a unique approach to seizing, applying regulation intent as a tool for market access, not full compliance. He was able to create a strong sign of his commitment to sustainability that his customer was willing to accept by enrolling in WFTO provisional membership shortly after his first meeting with Dutch buyers at the Italian trade show, without having completed the full compliance audit. Using trajectory rather than current status, this "demonstrating progress" seizing method seems to work especially well for startup brand buyers who have more discretion than big corporate buyers.

In the case of technology-light businesses, human capital grabbing – investing in employee training and competence development – becomes a more available seizing technique than capital investment. The owner of LTH-04 shared her experience on how she shares sustainability

knowledge in her company: "We try to fit sustainability into our existing manpower. Training is provided, kept up and discussed at meetings. The owner of LTH-01 also noted that it is impractical for the SMEs to have a technical person on their staff to deal with sustainability issues separately: "For the SMEs, it's very difficult to hire someone, a technical person who will look after these sustainability issues separately. Instead, both firms embed sustainability requirements within their existing roles, a strategy that works well in a resource constrained environment, but can restrict the depth and uniformity of sustainability practice.

One innovative answer to a lack of resources is collective grabbing, where local businesses pool their resources for sustainable use. The respondent explained that his group of 10 nearby factory owners are building solar systems in their factories to help each other during the lean season. The tactics described in SME literature on cluster-based environmental upgrading are similar to this collective action approach for grabbing sustainability investment opportunities (Klewitz & Hansen, 2014).

4.3.3 Reconfiguring Capabilities: Transforming Organizational Structures, Processes, and Cultures

Reconfiguring capabilities – the organizational processes through which firms fundamentally change their asset configurations, operating processes, competency portfolios and strategic focus – is the most critical and complex capability cluster for case enterprises. The data collected in the interviews reveal reconfiguration in several aspects: organizational routine renovation, production process redesign, factory relocation and physical infrastructure transformation, cultural and mental shift, and strategic reorientation towards sustainability as a competitive differentiator.

One of the most noticeable examples of physical asset reconfiguration in all of the examples is the relocation of factories. The only way for LTH-01 to get the DOE Environmental Clearance Certificate would be to move from a metropolitan residential area into a designated industrial

zone. This resulted in significant disruption and cost to the organization, but paved the way for the business to be legally operated and for future certification paths. LTH-01 Managing Directorsaid "This is a wonderful acquisition of the certificate from our Department of Environment. This reconfiguration was not only legally and legally enforceable, but also institutionally imposed, as it brought about enduring capability gains in terms of legal status, compliance and credibility with buyers.

Examples of production process reconfiguration for sustainability abound, ranging from investments in energy efficiency to chemical substitution, waste reduction, and natural materials. To minimize waste of leather, LTH-01 used water-based adhesives rather than synthetic adhesives, installed solar panels, switched the machine motor from a conventional to an energy-efficient servo motor, and enhanced the efficiency of the cutting sections. The changes are not one-off, LTH-01's Managing Directorsays, "we try to create a habit in our factory so that everybody is aware of the cost of energy. By incorporating incremental sustainability improvement into everyday operating procedures, LTH-04's implementation of the Kaizen continuous improvement approach represents maybe the most institutionalized type of process reconfiguration: "Kaizen means regular development which you have to apply continuously."

Upcycling waste is a unique reconfiguration invention that has been reported in numerous cases. Waste reconfiguration can generate new revenue streams and reduce the environmental impact, as LTH-01 did with leather waste to create small pouches, keyrings, purses and bookmark products, and thus secure a large order from a Norwegian book festival. In a similar way, Jolson used scraps of leather from wristbands, key rings, button holders and cable holders: "I try to create something with it, rather than discarding it, because it's chemically treated leather. Waste valorisation is the base of LTH-05's entire business strategy as they convert the left over fabric from the apparel industry into jewelry and ornaments before expanding their business to jute handicrafts using natural dyes.

Strategic reorientation (sustainability from compliance to competitive differentiator) is reported at several moments during the instances. This is a better market positioning, says LTH-01's Managing Director: "This makes our buyers happy because they know we care and it gives them the leverage to get better space in their retail market. The owner of LTH-04 has a well-defined strategic plan, starting with social compliance, then compliance factory, LWG certification and eventually going global.

4.4 Interaction Mechanisms Between Institutional Pressures and Dynamic Capabilities

The interaction mechanisms between institutional pressures and dynamic capabilities, in terms of how pressures trigger the development of capabilities, how capabilities shape organisational responses to pressures, and how these processes evolve over time, are the focus of the third study sub-question. The diversity of sustainability transformation processes observed in the examples can be attributed to a range of different mechanisms of interaction that are identified in the interview data.

4.4.1 Pressure-Triggered Capability Development: Crisis, Revelation, and Legitimation

A recurring conclusion in all of the stories is that contacts with institutional forces that highlight gaps between existing capabilities and market demands are what lead to considerable capability growth. These triggering events can occur in three ways: crisis (pressure that requires a rapid response); revelation (discovery of requirements not previously known); legitimation (pressure that justifies investments in capabilities that were previously difficult to prioritize).

The example of the respondent's interaction with the Dutch buyers at an Italian trade show is a paradigmatic revelation mechanism: an event involving a boundary crossing that simultaneously revealed a capability gap (dutch buyers' lack of knowledge about the certification requirements)

and provided the relational resources and motivational energy needed for rapid sensing and seizing responses. His immediate response to the meeting – including a visit to the organization in the Netherlands on the same trip and an application for provisional membership within days of the meeting – demonstrates how revelation events can initiate compressed capability development sequences when combined with good entrepreneurial alertness.

The relocation of LTH-01's factory is a case in point of the crisis mechanism: the Department of Environment's regulatory pressure led to an immediate compliance requirement with a need for physical infrastructure rearrangement. Although disruptive, these capability assets were created due to this pressure, and they have proven to be long lasting, such as training in ISO 14001, Environmental Clearance Certification, and the location in a designated industrial zone, and provide the foundation for continued capability development. Going through that training was a great help for us to know more about it," said LTH-01 Managing Director.

The legitimation mechanism for LTH-04 is illustrated by a multi-year partnership with the SME Foundation, Kaizen training funded by JICA and the implementation of 5S which led to greater institutional legitimation for investment in the ISO, which could not have been achieved at the beginning. The owner's comment on the possibility of this early exposure to capability building paths, that would allow for sustainable transformation trajectories to be accelerated, suggests that this is the case.

4.4.2 Co-evolutionary Dynamics: Feedback Loops and Path Dependencies

The interview data shows important co-evolutionary dynamics over time, such as path-dependencies, in which early capability decisions have consequences for later development, and positive feedbacks, where effective responses to pressures lead to increased confidence and drive further investment in capability.

The trajectory of LTH-02 is a positive feedback loop, as the initial provisional membership resulted in the first order from a Dutch buyer, which provided the revenue to invest in additional capability (factory restructuring, elimination of child labour, structured working hours) which in turn led to WFTO full membership and more buyer relationships. the respondent said: "while getting the membership, there were many compliances that I had to meet, I had to just restructure small parts in the factory... that was a good part. Each successful compliance response enhanced the competency of the organisation, enabling it to progress to the next compliance level.

Path dependency is observed in LTH-04 scenario where the location of the enterprise in Hazaribagh is a path dependent constraint that does not allow the enterprise to acquire environmental certification without other capabilities investments. The owner said that he was "stuck" and that he cannot change overnight, even though he has demonstrated in social compliance and manufacturing quality. The path dependency highlights how location decisions made early, based on the availability of the workforce and proximity to leather cluster in Hazaribagh, can create enduring constraints on the trajectory of sustainability transformation even if there is managerial will and operational competence.

The development of LTH-05 from fabric upcycling to jute handicrafts to natural dye experimentation provides an example of path-dependency in capability accumulation: the ability, connections, and market knowledge gained in the previous stage was transferred to the next stage of the product development, and together, they created a sustainable, cumulative diversification path that would not have been achievable if LTH-05 had started directly from its original focus on fabric jewelry to its current natural dye experimentation.

Negative feedbacks (where lack of capability led to unsuccessful pressure reactions) are also documented. Although the factory tour was satisfactory, the respondent did report that he lost one Polish CCC brand buyer, "There was only one problem that I was not certified. But they didn't have anything to do with their first rule, as it was their policy. This negative feedback, due to the lack of capability to certify, further motivated investment in certification and further raised

awareness of the capability gap, thus paradoxically showing that ineffective feedbacks can lead to higher motivation for capability investment.

4.5 Sustainability Transformation Outcomes

In the fourth sub-question of the study, we explore the outcomes of the interaction between institutional pressures and dynamic capacities in terms of how the transformation results are expressed as organizational change, strategic change and environmental performance improvement. The outcomes range from basic compliance achievements to innovative sustainability embedded business model innovations, and reveal a diverse but nevertheless positive sustainability progress across the case studies.

4.5.1 Environmental Performance Improvements

While there is limited quantitative data because the environmental measuring and reporting systems of the SMEs are still in their infancy, measurable improvements in environmental performance are reported in several situations. The qualitative data consistently shows there are significant reductions in energy, chemicals and material waste.

Improvements in energy efficiency are shown in three different scenarios. LTH-01's solar panel installation, conversion of machine motors to energy-efficient servo models and the judicious application of natural light all contribute to a multifaceted reconfiguration of energy. The Managing Directorof LTH-01 said that the operational logic was that "we try to use more daylight than electricity coming through grid" but admitted that she was not able to give more specifics at this time. Similarly, LTH-03 highlighted the use of natural light and solar energy as key sustainable solutions. LTH-02 is working on a shared solar energy system with the local factory association, which is an example of an environmental performance improvement that could not be achieved by any one business.

Chemical replacement (using water-based adhesives instead of solvent-based) is discussed in LTH-01 and in Jolson. This directly impacts environmental discharge, occupational health and international chemical management regulations. LTH-01's Managing Directorsays, “We do our best to use water-based chemical for adhesive; some technologies provide us the opportunity to use less chemical. There are some known problems with color persistence, however, LTH-05's pioneering use of natural plant-based dyes is the most radical chemical substitution ever recorded, eliminating synthetic colouring ingredients altogether.

The third pillar of environmental performance is to improve material efficiency by lean cutting and valorization of waste. The planned reduction in waste in the cutting department of LTH-01 – “our cutting section is more efficient, they know how to cut our leathers in more efficient ways so we produce less wastage” directly reduces the environmental impact and material costs. The company's waste-to-product project – which has seen it make small leather accessories from waste and secured an export order from Norway's Bargain Literature Festival – is particularly impressive as an example of a circular economy product that also generates commercial value and sells to the wider market.

4.5.2 Organizational Changes and Institutional Legitimacy

The pressure-capability interaction creates organizational changes, such as production system changes, adoption of management systems, workforce development, and better compliance documentation, that are documented.

LTH-04 has implemented the 5S methodology (workplace organization) and Kaizen (continuous improvement) which has transitioned from informal management to formalized management and can be directly linked to SME Foundation engagement and aspirations to international certification. The owner explained that the impact was being done in the factory on an ongoing basis, and that it was a continuous improvement.

Workforce development outcomes have been documented, such as the elimination of child labor, provision of PPE, structured working hours (eight hours a day, breaks, overtime rules), and improved workplace health and safety conditions, as well as maternity leave. The respondent said these changes were "revolutionary" because he gave working hours, such as one hour break, proper 8 to 5 work. I don't follow these before. After gaining more knowledge about the industry insights, I began doing those activities. These developments in social compliance are an important part of sustainability transformation, not only in terms of environmental performance but also the social sustainability of labour practices.

The enhancement of compliance documentation – such as gathering regulatory certificates, audit reports, buyer verification documents, and sustainability disclosures – is an essential organizational output that not only demonstrates change but also is a valuable tool for future market access. The paper work for the building is kept in order, according to LTH-04's owner: "We keep records as much as we can. We are sure that there is no child labour here. I am able to screen the documentary. LTH-01's Managing Directorsays: "We communicate about our sustainability practices and this gives us always better position in the market – sustainable is a market positioning asset. The relationship between organizational sustainability and strategic market outcomes was explained by the owner of LTH-04 as follows: "Organizational sustainability and strategic market outcomes are in close relationship, when my business is sustainable, less or more my product will definitely be in demand in the market.

4.5.3 Strategic Positioning Changes and Future Trajectories

The development of plausible medium-term sustainability plans and the strategic shift of sustainability from a marginal compliance cost to a core competitive advantage are probably the most important transformation outcomes.

The examples include the owner of LTH-04, who explained the most detailed strategy, which is to achieve social compliance, establish a compliance factory (with a 2027 target) and pursue

accreditation by LWG, as well as to enter new markets. This sequential logic, adding each capability layer on top of the previous one, with exact investment milestones and deadlines is a characteristic of the evolution of sustainability transformation from reactive compliance to strategic sustainability integration, as described by Johnson & Schaltegger (2016).

LTH-02's journey from a three-person micro business in 2018 to an 85-person exporter to four foreign markets in 2026 is a testament to the power of sustainability-oriented positioning and how it can help accelerate growth in the face of growing market demand for verified sustainable products. The respondent's comment “it's all about the initiative and the approach” is a perfect summary of the agency element of sustainable transformation: it is the very same institutional context that makes it difficult for less initiative-rich firms that makes it easier for others with greater sensing and grabbing skills.

The five-year plan of LTH-05, which involves training entrepreneurs in all 64 districts of Bangladesh and establishing a physical showroom and direct selling online channel, shows how sustainability transformation benefits will create a foundation for scaled social impact beyond the initial enterprise. Shahnaz Begum's model is a model of sustainability-oriented innovation, which Schaltegger & Wagner (2011) describe as a model that prioritizes the generation of environmental and social value over merely implementing sustainability as an add-on to the business model. It has the added advantage of providing livelihood for the women of the rural areas while simultaneously valorizing waste materials, eliminating chemical inputs and harnessing solar energy.

4.6 Cross-Case Synthesis: Integrative Analysis of Findings

Based on the thematic findings of the four research areas, this section integrates the findings into an integrative analysis, in order to answer the main research question, "How does the interaction between organizational dynamic capabilities and multi-level institutional pressures impact the sustainable transformation of SMEs in developing countries?".

The cross-case study uncovers five main integrative findings-

First, the outcomes of the transformation are based on the ability configuration, not the intensity of institutional pressures. While each scenario takes place within the same national institutional context, characterised by inadequate environmental infrastructure, a weak national enforcement regime and restrictive financial systems, the outcomes of sustainability transformation are clearly distinct. Better reconfiguration capabilities (LTH-04, LTH-05) result in deeper organizational integration, while better sensing capabilities (LTH-01) result in more proactive change. Second, the institutional dichotomy of great demand by foreign consumers and easy local regulation creates a special opportunity. This dichotomy is a business instrument that is employed by the most successful companies. They come up with competitive advantages that cannot be easily matched by rivals who may not focus on the international market as they do. Jolson's WFTO membership, Shabab Leather's ISO/Kaizen practices, and Leatherina's optional ISO 14001 training are examples of voluntary international standards that lead to competitive positioning advantages beyond compliance. Third, to somewhat compensate for the absence of government support, intermediary support organisations play a vital role in capability development.The technical expertise, normative guidance and financial assistance that government agencies cannot offer to the Bangladesh leather industry are provided through the SME Foundation, training sponsored by JICA, WFTO, as well as international development organizations. This finding adds to Mair et al.'s (2012) notion of institutional voids by demonstrating how the role of specific intermediary organisations adds to national institutional infrastructure to enable capability development that would otherwise be economically or technically impossible for resource-limited SMEs.

Fourth, progressive development of competence as an alternative to leapfrog compliance is a process of sustainable transformation in these SMEs. The temporal aspect is important because successful transformation trajectories are characterised by a series of episodes where each stage of capability development provides the institutional legitimacy, organisational infrastructure and confidence for subsequent steps. Attempts to jump steps, such as going for LWG certification without first achieving DOE compliance or getting ISO certified without first building basic

management systems are examples of fragile or ritualistic outcomes. The best ones demonstrate patience in building up capability stacks, instead of rushing for certs.

Fifth, owner-manager values, dedication and entrepreneurial identity are important in sustaining capability growth throughout the long and resource-consuming journey of sustainable transformation. In each of the five cases, sustainability motivation is not a purely utilitarian (market access, risk mitigation) construct, but rather a combination of core values for environmental responsibility, employee wellbeing, and intergenerational stewardship. The Managing Directorof LTH-01 said, "if I damage the environment to take my business forward today, my children will suffer", while Managing Directorstated that sustainability is "having been inside me since childhood" and that it is a way of life that is a vital part of their personal values, which in turn provide the motivational foundations that sustain capability development investments despite the sacrifices of resources required.

Dimension	**LTH-01**	**LTH-02**	**LTH-03**	**LTH-04**	**LTH-05**
Sensing Strength	Medium-High (buyer, digital, DON networks)	High (trade fair, proactive BD-spanning)	Medium (digital, peer)	Medium-High (SME Foundation-guided)	High (organic observation, SME Foundation)
Seizing Strength	Medium (profit reinvestment, ISO training)	Medium-High (WFTO membership, collective solar)	Medium (working capital constrained)	Medium (ISO in process, Kaizen implemented)	High (zero-capital waste model)
Reconfiguring Strength	High (factory relocation, solar, adhesive)	High (factory restructure, child labour, WFTO)	Medium (planning compliance factory)	High (5S, Kaizen, ISO, cultural change)	Very High (business model upcycling,

					natural dyes)
Transformation Stage	Intermediate	Intermediate-Advanced	Early-Intermediate	Intermediate-Advanced	Advanced (ethos-embedded)
Key Pressure Driver	DOE regulation, buyer requirements	International buyer (WFTO, LWG)	UK buyer, export certification	ISO, social compliance, Hazaribagh constraints	Intrinsic values, SME Foundation guidance

Table 4.2: Cross-Case Dynamic Capability and Transformation Summary

5: DISCUSSION AND CONCLUDING REMARK

The central argument of this chapter is that the experience of Bangladeshi leather SMEs indicates a distinct empirical pattern that cannot be satisfactorily explained by either dynamic capabilities perspectives or institutional theory: sustainability transformation in developing-country SMEs can be described as an institutionally embedded capability journey, which is a progressively deepening process of capability development that is both triggered and constrained by multi-level institutional pressures, mediated by owner-manager agency and This synthesized insight contributes to the scholarship in three ways: it complements dynamic capabilities theory by revealing the institutional antecedents and constraints of capability building; it complements sustainability transformation research by illuminating the unique strategies employed by resource-constrained developing-country SMEs to respond to environmental demands.

5.1 Multi-Level Institutional Pressures: Theoretical Interpretation

5.1.1 Confirming Multi-Level Institutional Pressures and Their Coexistence with Institutional Voids

The empirical findings are much in favor of the multi-level structure of institutional pressures as postulated by Kostova et al. (2008) and generalized to sustainability contexts by Delmas and Toffel (2008). The coercive, normative, and mimetic demands that each level produces are unique and interact in complex and even contradictory ways. The five scenarios depict the simultaneous operation of industry-level, national, and international forces. This finding generalizes the basic tripartite taxonomy of isomorphic pressures suggested by DiMaggio and Powell (1983) to a multi-level context, which was not theorized comprehensively in their initial formulation.

The finding that what Mair et al. (2012) describe as institutional duality, i.e., the presence of lax domestic enforcement and strong international buyer pressure, is the institutional characteristic of the leather industry in Bangladesh is of particular interest. Both simply domestic institutional

systems in which national norms are dominant and simply globalized environments in which international norms are the agenda-setters are qualitatively different than the strategic framework of this duality. Along with compliance requirements on the part of foreign purchasers, which exceed domestic regulatory requirements, the case enterprises also encounter regulatory requirements on the part of the Department of Environment, which they cannot meet wholly due to infrastructural failures (the non-functional ETP, the Hazaribagh red-zone designation). To negotiate this dual institutional framework, organizational attributes beyond following any single institutional authority are required.

The findings also support and extend the concept of institutional voids by Khanna and Palepu (2010) to financial facilitation, technical support systems and environmental infrastructure, in addition to the market-supporting institutions that they emphasize. The non-functional Savar ETP, irrespective of personal enterprise abilities or wishes, is a physical institutional gap the absence of environmental infrastructure, which industrial districts and governments in developing nations ought to offer, that does not allow the progress of sustainability in a whole sector. Equally, the misalignment of installment schedules with the export income cycles by the banking system creates a financial institutional gap that continues to limit the sustainability investment capability of SMEs. These holes at the infrastructure level have not been given much consideration by the literature on institutional voids which has largely focused on regulatory and market-supporting institutions.

5.1.2 Intermediary Organizations as Institutional Void Fillers and Normative Pressure Transmitters

The fact that intermediary organizations, including the SME Foundation, JICA-funded training programs, WFTO, and international development organizations, play a vital role in both transmitting normative institutional pressures and bridging important gaps in the development of capabilities is a theoretically important discovery. This dual role has not been given a lot of focus in the present uses of the institutional theory to sustainability in developing countries.

In addition to the mechanism of transmission of normative pressure identified in the study, the SME Foundation is involved in the cases (DiMaggio and Powell, 1983; Hoffman, 1999). The Foundation does not just spread the standards of acceptable practices in sustainability, but it forms the capacity, which enables businesses to respond to the standards. This involves provision of Kaizen training, facilitating of ISO certification processes, linking businesses to global technical assistance schemes and actively notifying businesses of relevant training opportunities as their potential increases. With this active capability-building role, the SME Foundation is placed as a co-evolutionary player in the sustainable transformation journey and not merely as a source of external pressure.

This finding builds upon the institutional voids framework of Mair et al. (2012) by introducing the concept of void-filling intermediaries, i.e., organizations that strategically position themselves in the intersection between the local lack of capability and the international normative pressure and translate the global sustainability standards into the locally available paths of capability development. The effectiveness of these intermediaries in the Bangladesh context suggests that their presence or absence could be a pivotal contingency factor in the cross-national heterogeneity in the sustainability transformation pathways of SMEs in developing countries.

5.2 Dynamic Capabilities Development: Theoretical Interpretation

5.2.1 Institutional Antecedents of Dynamic Capability Development

There has been a criticism of the literature on dynamic capacities as not sufficiently describing the external environmental forces that shape and trigger development of capabilities (Eisenhardt and Martin, 2000). This gap is promptly filled by the empirical findings of this paper, which provide rich evidence of the institutional precursors of sensing, grasping and reconfiguring capability development in the context of SMEs in developing countries.

There are three institutional triggering mechanisms that are identified by the data. To begin with, revelation events, which are experiences of previously unrecognized institutional demands at trade shows, during buyer visits or by engaging with intermediary organization, lead to the quick development of sensing ability. The archetypal revelation trigger is Managing Directorwhen he met with the Dutch customers in the Italian trade show and this led to an immediate and complete sensing-seizing-reconfiguring response cycle. Second, the emergence of grabbing capacity is also initiated by crisis events, which are immediate compliance demands that are backed by repercussions of accessing the market. The case of Leatherina shifting production in response to the implementation of red-zone by DOE is an illustration of crisis-induced seizing response which also had positive reconfiguration outcomes. Third, gradual institutional legitimation, or the accretion of compliance credentials that warrant increasingly ambitious capability investments, causes reconfiguration of capability development in the form of a step-by-step logic of developing each layer of capability on the basis of the last one.

These findings contribute to the literature on dynamic capabilities by demonstrating that the development of capabilities is not merely an organizational process, which is facilitated by managerial cognition and the availability of resources (as the framework proposed by Teece (2007) suggests), but that the institutional environment, in which firms are operating, shapes the development of capabilities. These institutional configurations have different capabilities development pathways: the high international pressure and intermediary support environment causes a rapid externally-directed capability development (Jolson, Shabab Leather); the regulatory gaps and infrastructure failures environment causes a slower internally-driven capability development constrained by the absence of institutional scaffolding (Shan Leather).

5.2.2 Resource-Constrained Capability Development: Improvisation and Collective Strategies

The framework of dynamic capacities developed by Teece (2007) was primarily developed in relation to resource-rich and technology-intensive companies. When this strategy is implemented on resource constrained SMEs in developing countries, substantial modifications have to be made to consider the special capability building strategies that these companies employ.

The most modification has been experienced in the gripping capability cluster. Taking control in resource endowed firms involves resource orchestration processes and investment decisions that need money, expertise and organizational ability to implement. The seizing under constraint generates three distinct adaptive strategies that are generated in the cases of the Bangladeshi SMEs: collective seizing (pooling resources with industry peers to make joint sustainability investments that would be unaffordable individually), symbolic seizing (acquiring provisional or partial certifications that indicate commitment and allow market access before full compliance is reached), and progressive seizing (focusing on small, incremental investments which develop capabilities over time instead of full compliance investments).

The symbolic grabbing is illustrated by the WFTO temporary membership approach by Managing Directorwho received a plausible institutional cue of commitment to sustainability enough to get buyer relationships without full compliance at the entry point of market access. Such a strategy can only be possible in the case when institutional actors, in this case the WFTO are ready to accept progress, but not insist on full adherence at once. This finding has profound implications on the development of sustainability certification systems that seek to engage SMEs in developing countries.

The individual-firm capability framework developed by Teece fails to explain the institutionally embedded type of resource pooling that is embodied by collective seizing in the form of the local factory association, which involves the development of common solar energy systems, sharing of compliance expertise and cooperating to tackle regulatory issues. This aspect of collective capability development in industrial clusters of SMEs is more methodically theorized in the

literature on dynamic capabilities, although it is particularly important when applied to developing-country settings in which the collective action of individual firms is not only advantageous but essential due to resource limitations imposed by individual firms.

5.2.3 Values-Driven Reconfiguring: Beyond Strategic Rationality

The reconfiguring capability cluster, as defined in the approach by Teece (2007), is a strategically rational process of asset restructuring, knowledge integration, and business model renewal that is undertaken to maintain competitive fitness in dynamic situations. These empirical findings indicate an important addition to this model of strategic rationality: in owner-managed SMEs, reconfiguration is frequently driven by moral beliefs and internal values that initiate changes that cannot be fully explained by strategic rationality.

Managing Directorof LTH-05 explained that she has always been committed to sustainability, and that it is a natural part of her values, that it has been within her since her childhood. Her massive restructuring of the business, starting with the traditional fabric craft, to upcycled waste jewelry, to jute handicrafts, to experimenting with natural dyes, was inspired by an internal desire to reduce waste and take care of the environment, which preceded any external influence of foreign customers or governmental policies. Similarly, the intergenerational element in the explanation of environmental responsibility by Taslima Miji, where she says that, in the current generation, in order to advance my business, I will destroy the environment, so that my children will suffer, is also a transformative incentive, which is driven by values beyond strategic competitive positioning.

This study suggests that dynamic capabilities in owner-managed SMEs are not merely organizational or cognitive concepts, but also value-based dispositions that shape the manner in which the owners perceive the environmental signals, assess their alternatives in responding, and stay committed during the protracted and resource-consuming process of capability development. Further studies of SMEs and family firms on the capability dimension of values

should be more methodically oriented on this dynamic capability dimension of values that is theoretically underdeveloped within the Teece main strategic-rationality paradigm.

5.3 Pressure-Capability Interaction Mechanisms: Theoretical Synthesis

5.3.1 Confirming and Refining the Transformation Stage Model

The conceptualization of sustainability transformation as going through stages, offered by Johnson and Schaltegger (2016) is a broadly validated yet critically refined lens that helps interpret the findings of the case: reactive compliance, systematic management, strategic integration, and sustainability-oriented innovation. The first three stages are covered and LTH-05 might exhibit indications of the fourth stage.

Empirical evidence confirms the key finding of the stage model that change is typically slow and cumulative. Companies that attempt to progress in stages without acquiring the core competencies of previous stages have brittle or ritualistic sustainability results. The logic of clear planning, which is the characteristic of this stage-conscious strategy, is reflected in the fact that LTH-02 focuses on social compliance, compliance factory and LWG certification. This method shows an in-depth understanding of the capability requirements of every transformation step. The empirical findings, though, also indicate considerable deviations of the linear stage model which should be given theoretical attention.

To begin with, the examples demonstrate that the stages of transformation are not necessarily consecutive or mutually exclusive. Jolson Leather is both systematic (introducing structured working hours, documentation systems and waste minimization routines), strategic integration (positioning WFTO membership as a market differentiation asset) and reactive compliance (adaptation of factory practices to WFTO audit requirements). The co-occurrence of several

stages suggests that real world trajectories of transformation are more dynamic and non-linear than stage models imply.

Second, by subjecting companies to normative structures and skill-development resources that accelerate the phases of transition, the cases demonstrate how external institutional stimuli can shorten the periods of transition. The fact that Managing Director can become a fully-fledged WFTO member and a multi-market exporter within a span of four years (2022 to 2026) means that stage compression can be achieved when there are strong institutional triggers combined with strong entrepreneurial sensing and grabbing capabilities. This observation qualifies the conclusion of the stage model that transformation must always require longer periods of time.

5.3.2 The Critical Role of Physical Infrastructure in Sustainability Transformation

The essential position of the physical environmental infrastructure, and in particular the chemical management and wastewater treatment systems, as a condition and a limitation of the progress of transformation is a conclusion that is not adequately represented in the existing models of sustainable transformation. The non-functional ETP of the Savar Tannery Industrial Estate serves as a hard ceiling to the sustainability transformation of the leather tanning subsector. No matter how skillful the management of leather tanneries, how much the certification has been invested in, or how much strategic commitment exists, leather tanneries cannot receive LWG certification until the central ETP is operational.

The implications of this finding are significant to the sustainability transformation theory, which has mostly concentrated on organisational capabilities, institutional pressures, and managerial cognition as the most critical variables in transformation paths (Amui et al., 2017; Dangelico et al., 2017). The case of Bangladesh leather shows that in the industries that are characterised by collective environmental infrastructure dependencies, where individual firm sustainability performance is constrained by the quality of infrastructure as a collective infrastructure, transformation frameworks should include infrastructure availability as one of the basic

contingency variables. The constraints of change will be systematically projected on organizational failures through theoretical frameworks that lack understanding of the underlying differences between organizations in infrastructure-rich and infrastructure-deficient settings.

5.3.3 Circular Economy as Embedded Sustainability Strategy for Resource-Constrained SMEs

According to Klewitz and Hansen (2014), sustainability-oriented innovation in SMEs is the waste valorization strategies that have been reported in several cases: fabric offcut upcycling to jewelry and decorative products (LTH-05), leather scrap conversion to accessory products (Leatherina, Jolson), and zero-waste production aspirations in all cases. The data, however, indicates a theoretically important reframing: the strategies of the circular economy are not fundamentally sustainability idealism of resource-constrained SMEs in developing countries; they are economically rational reactions to material cost pressure that also have environmental positive outcomes.

Such a two-sided reasoning was concisely stated by Taslima Miji: When I can reuse my small wastes, the percentage of my wastes is less, the use of my leather is more perfect. In this case, pricing competitiveness is much easier. The circular economy model minimizes environmental impact and minimizes the costs of material waste, maximizes pricing margins, and allows the use of more product lines out of the materials that otherwise could be discarded.Efficiency in costs is being usurped and sustainability is being redesigned. Since the circular economy approaches align the sustainability criteria with business goals as opposed to necessitating sustainability investment which is incompatible with the financial requirements, they are particularly appropriate to resource-limited SMEs because of this combined economic-environmental logic.

5.4 Practical Implications

5.4.1 Implications for SME Owner-Managers

The findings offer several practical implications to SME owner-managers in developing countries seeking to continue their sustainable transformation paths despite the lack of resources.
Before taking infrastructure, invest in sensing infrastructure. The cases always demonstrate that those businesses that have superior sensing ability are more proactive and strategically beneficial to institutional constraints. Owner-managers must make building systematic sensing systems, including regular communication with buyers on the evolving standards, participation in trade shows, and communication with industry associations and development agencies, a priority even before they can act on what they learn. Lead time in strategic, as opposed to catastrophic, reactions is created by early knowledge.

Be stage-conscious in developing capabilities. The research supports sequential capability building well since each stage enhances the institutional legitimacy, organizational foundations, and financial resources needed in the next stage. The owner-managers must not be pressurised to skip steps, like getting LWG certification before social compliance is established or entering foreign markets before domestic compliance foundations are established, as this will often lead to poor performance that cannot withstand audit or buyer scrutiny. The planning logic of LTH-02provides a helpful model of the stage-conscious transformation planning as it consists of social compliance, compliance factory, LWG, and worldwide expansion.

Make combined investments in sustainability and economy through circular economy endeavors. Waste valorization can be achieved through upcycling, the replacement of natural materials, and investment in energy efficiency, which reduces the cost of operation and environmental impact at the same time. These expenses should be re-positioned by the owner-managers as two-way efficiency investments, which enhance their financial competitiveness and environmental claims instead of sustainability expenses. The Norwegian book festival order that Leatherina acquired

with the help of leftover leather goods and the earnings of Jolson as an accessory to leather offcuts can be used as an example of how the redesign of the circular economy can lead to profits and sustainability goals.

Symbolic seizure should be used to penetrate markets prior to full compliance. Buyer connections with startup brands and value-similar buyers who are critical and do not impose strict policies can be established in situations where full compliance with the difficult certification requirements is not yet possible by demonstrating plausible improvement, such as tentative membership applications, compliance roadmap reports, and independent audit launch. Because most customers in sustainability-focused markets are interested in both supplier progress and performance, owner-managers ought to be proactive in sharing their sustainability journey and path and not only their compliance status at the moment.

Make collective seizing agreements with industry colleagues. Shared solar energy systems, compliance information networks, group training programs, and cooperative certification preparation, in addition to reducing per-enterprise costs of sustainability investment, help create the interorganizational trust and cooperative culture needed to take collective action in the long term. The owner-managers may form local industrial associations, peer knowledge-sharing networks rather than wait until formal association structures are developed.

5.4.2 Implications for Policymakers and Government Agencies

The findings point out that the Bangladesh national institutional framework has a significant number of severe flaws that hinder the SME sustainability transformation, and recommendations on how to address them.

Provide the highest priority to completing the physical environmental infrastructure. The non-operational Savar ETP is a hard limit to sustainability transformation of the entire leather tanning subsector, no matter its capacity or desire. The government funding of the completion and

operationalization of this infrastructure would open up LWG certification opportunities to multiple businesses simultaneously and the benefits of sector-wide transformation would be unparalleled by any single enterprise support initiative. When it comes to sustainability interventions in the leather industry, completing environmental infrastructure should be the first priority of policymakers.

Re-engineer the financial support mechanisms to investments in sustainability. The misalignment of the banking system in matching the installment schedules with the timescales of realising the export income is always a disadvantage to SMEs who want to finance sustainability investments. Policymakers are advised to design special SME sustainability finance products with grace periods that reflect export LC cycles (at least 90-120 days), equity-based financing packages that do not require immediate cash repayment, and risk sharing guarantees that enable banks to offer sustainability credit to businesses that have a proven capacity but limited collateral.

Crack the puzzle of Hazaribagh certification. The red-zone status denies lawful running of businesses in Hazaribagh the chance of getting Environmental Clearance Certificates, but they cannot move to the recognized zones due to lack of labor. As the government is also improving infrastructure and worker amenities in specified industrial areas to make them indeed viable relocation locations, it must establish interim certification systems to businesses in transition, which reward effort and direction instead of rewarding compliance success.

Extend and institutionalize interim support that bridges gaps. Examples of best-practice void-filling that have evidently hastened sustainability transformation in a few case firms include the Kaizen and ISO facilitation programs of the SME Foundation. The government will have to institutionalize co-evolutionary support models that would extend the programs to other industrial clusters outside of Dhaka and adapt to changing capability configurations of firms.
Design sustainable infrastructure programs which are cluster based. The government should establish cluster-based shared infrastructure initiatives, which include collective effluent treatment, collective chemical management facilities and cluster-based energy efficiency systems

that would allow SMEs to comply using shared infrastructure as opposed to individual investment and management of sustainability infrastructure. This approach particularly fits well in industrial clusters, where collective investment can be made, but the individual SME resources are not enough to comply.

5.4.3 Implications for International Buyers and Certification Bodies

The findings indicate that international purchasers and certification bodies need to enhance their engagement practices, which are essential in the sustainability transformation of the developing-country SME suppliers.

Recognize not only compliance status but also trends in progress. Not all case enterprises that are the most environmentally conscious are fully compatible with LWG or other stringent requirements, and they are at various levels of capability development. Rather than excluding promising companies in supply chains due to the presence of certification gaps, buyer engagement that recognizes and rewards progress made, including provisional certification pathways, trajectory-based supplier scorecards, and compliance roadmap co-development, can maintain and enhance supplier sustainability commitment during the capability building process. The concept of the WFTO temporary membership as a certification design best practice should be adopted by other standard-setting organizations.

In conjunction with the compliance requirements, provide technical support. Besides compliance requirements, several case businesses directly requested buyers to send technical knowledge: Taslima Miji asked customers to "own responsibility when we do something that is responsible to our environment" by placing orders or by giving financial donations. Buyers who frame the sustainability requirements as collective developmental goals instead of buyer-imposed conditions and provide technical assistance, training, and transfer of knowledge in addition to audit requirements are likely to have more profound and enduring supplier sustainability change than buyers who impose compliance criteria without developing capability.

Separate requirements based on the capability level and size of the enterprise. The certification standards are skewed against SMEs with little administrative, financial, and technical capacity to comply with them. Certification authorities must create SME-focused compliance routes that ensure the environmental and social integrity of standards and lessen the administrative load, scaling implementation needs to the size of the enterprise, and offer more extended compliance schedules and milestone-based progress.

Respond to the problem of infrastructure dependency on a sector level. The LWG certification gap in the Bangladesh leather industry is largely due to the non-functional ETP, which cannot be mitigated by any single business through its sustainability investment. To facilitate ETP completion, international purchasers and certifying bodies are to communicate with government stakeholders. This could be in the form of supply chain sustainability programs, which would necessitate state investment in infrastructure to sustain sourcing alliances. This is a supply chain diplomacy approach that addresses the root cause of certification gaps, rather than merely imposing certain rules of business compliance.

5.5 Limitations and Directions for Future Research

5.5.1 Limitations of the Study

This study should be considered within the framework of several limitations that affect the applicability and the breadth of the conclusions. This thesis is focused only on a single country and a single sector. The paper only examines the unique institutional features of the leather and related craft industry in Bangladesh, which might not be representative of other developing countries or industries, including the Hazaribagh red-zone designation, the Savar ETP failure, and the WFTO and LWG certification systems. The theoretical mechanisms hypothesized may operate differently when the export market demands, sectoral environmental profiles or domestic

regulatory enforcement are stricter. Subsequent studies should discuss the applicability of the integrated process model to other developing-country environments and industries.

Minimal purposive sampling. The five-case sample is appropriate to the study objectives of exploration and theory-building, but limits the statistical generalizability of the results. The findings are to be regarded as analytical generalizations to theoretical principles, and the cases were selected on the basis of theoretical variation instead of representativeness. The qualitative study under consideration could use significant improvements in the form of quantitative studies involving large samples that would elaborate on the theoretical ideas and hypotheses discussed in this paper.

Prejudice in cases due to one informant. In both cases, the main representative was the owner-manager who provided the dominant perspective on the institutional pressures, competence development, and the outcomes of transformation. The owner-managers can employ positive or well-chosen words to explain the sustainability journeys of their companies that might not reflect the experiences of the employees, views of buyers, or the realities of applying sustainability at the factory level. To triangulate and complement the owner-manager accounts, subsequent studies ought to incorporate the views of other informants, such as as employees, purchasers, auditors, and government authorities.

There is a lack of longitudinal data. The study provides a cross-sectional view of businesses at a specific point in their sustainable transformation. The co-evolutionary dynamics discovered, including positive feedback loops, path dependencies, and accumulation of competence trajectories, are inferred by retrospective descriptions, rather than being monitored longitudinally. True longitudinal observation would allow a more detailed study of the temporal processes proposed by the integrated process model.

Measures of environmental performance are limited. The extent of environmental benefits achieved through sustainable transformation is difficult to assess because there are no

quantitative data on environmental performance across the cases. All five businesses identified the absence of extensive environmental measuring and reporting systems, which is a weakness that underscores the institutionalization of sustainability in the sector at an early stage. Future research must develop measurement instruments that can fit the resource constraints of SMEs in developing countries and enable a more comprehensive assessment of environmental performance.

5.5.2 Directions for Future Research

The research limitations and theoretical implications imply several promising directions of further research. Research comparing the sustainability transformation of the SMEs in emerging countries across national borders. Systematic testing of the effect of national institutional environment differences, that is, the level of sophistication of government support programs, the quality of ETP infrastructure, and the capacity of local regulatory enforcement, on the sustainability transformation pathways of otherwise similar businesses could be done by comparing Bangladesh, Cambodia, Vietnam, Ethiopia, and other developing countries with successful leather or clothing export sectors.

Longitudinal studies are conducted on co-evolutionary processes between institutional forces and dynamic capabilities. The feedback loops, path dependencies, and capability accumulation trajectories that the integrated process model predicts can be directly observed in the feedback loops, path dependencies, and capability accumulation trajectories of a longitudinal research that follows the five case firms over a period of between five and 10 years.This would be a test of whether the mechanisms that occur in retrospective accounts would work as predicted in prospective observation.

Quantitative tests of capability-contingent institutional response propositions are made. The capability-contingent response propositions based on the results of the case study would be statistically tested with large sample survey research on the sensing, seizing, and reconfiguring

capabilities and institutional pressure exposure and sustainability outcome indicators. This may provide estimates of the effect sizes that can be used to rank the investments in capability development that provide the greatest returns in terms of transformation.

Investigating the effectiveness of void-filling intermediaries in different institutional contexts. Comparative research into the performance of different types of void-filling intermediaries, including government agencies, international development organizations, NGOs, industry associations, and buyer-led programs, across different institutional settings, would yield the best organizational designs and program models to facilitate the transformation of sustainability in SMEs under different combinations of institutional pressure and void conditions.

Research into the impact of owner-manager values on sustainable transition of SMEs. The personal dimension of the transformation of organizational sustainability in the owner-managed business would be understood with a comprehensive analysis of how the sustainability values of the owner-managers change over time through education, exposure to other countries, network interactions, and personal experience and how they interplay with institutional pressures and capability configurations to influence transformation paths.

Certifying body design analysis to include SMEs in developing countries. The LWG, WFTO, BSCI, and other certification organizations working in the leather and apparel supply chains would benefit from research that looks at how sustainability certification frameworks can be reorganized to include developing-country SMEs without compromising environmental and social integrity (via progressive compliance pathways, SME-specific assessment criteria, and integration of supply chain technical assistance).

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Appendices

Appendix 1. Overview of participants

Case Enterprise	Position	Employees	Product Focus	Export Markets	Sustainability Stage
LTH-01	Managing Director	(20–30)	Leather bags (B2B & B2C domestic brand Gutipa)	Europe, USA	Intermediate – DOE certified, solar installed, Fair Trade (lapsed)
LTH-02	Managing Director	85	Leather goods (executive bags, accessories)	Netherlands, Dubai, Saudi Arabia, Bangladesh	Intermediate – WFTO provisional member, LWG-sourced leather
LTH-03	Managing Director	Not specified	Finished leather goods, bags, shoes	UK, Africa, Malaysia, Australia	Early-intermediate – targeting compliance factory by 2027
LTH-04	Managing Director	55	Authentic leather bags, wallets, jackets, full range	Japan, Italy, Canada, Spain, Netherlands, Malaysia (9 countries)	Intermediate – 5S/Kaizen implemented, ISO in process, LWG planned
LTH-05	Managing Director	31	Upcycled fabric jewellery & jute handicrafts	Australia, Canada, Malaysia, Saudi Arabia, Netherlands	Advanced in ethos – zero-waste model, natural dyes, solar