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## **Sustainability transition dynamics of SMEs in a volatile emerging economy: A qualitative exploration**

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### **ABSTRACT**

This chapter is one of the pioneering studies to specifically analyze sustainability transition dynamics in the volatile emerging economies context by undertaking a qualitative exploration of four case firms from Pakistan. Our findings highlight the criticality of supply chain partners (international buyers) and international NGOs for the sustainability transition of SMEs operating in volatile emerging economies. Resource efficiency and the role of intermediaries were also found vital, though peculiarities of volatile and emerging economy contexts were visible in both. We also found the owner's (manager's) interest in sustainability to be important in this regard. Finally, the resilience and agility of firms, used to facing issues like high risk, exchange rate vulnerability, and lack of government support was visible as the case firms were able to overcome some of these hurdles by collaborating with international partners and receiving financing from unexpected international sources for this process.

**Key Words:** Emerging economy, Sustainability, SMEs, Transition and Volatile

## 1. Introduction

There is an increasing recognition in the extant literature that to achieve sustainable development goals (SDGs) set by the UN, a major transition needs to take place towards sustainability at all societal levels (e.g., Brauch *et al.*, 2018; Kivimaa *et al.*, 2021). This significant shift due to increasingly visible environmental challenges has resulted in a transition process in many organizations as it increasingly becomes a source of legitimacy and competitiveness (e.g., Laurent, 2020; Aagard *et al.*, 2021; Arslan *et al.*, 2021). It needs to be stressed that even though sustainability has become a buzzword in academic and policy circles in recent years, the transition to sustainability remains a less understood phenomenon at both micro and macro levels (Beck *et al.*, 2021). Hence, there is a visible gap in the extant literature that needs to be filled by more academic endeavors.

What is sustainability transition? This question is significant in understanding the actions of scientists, policymakers, doctors, business actors, and social groups in transitioning society toward sustainability. Silva and Stocker (2018) divided all actors into two transition networks to obtain significant insights into the rooted meaning the term transition represents for those who use and apply it. When new information and knowledge develops, it often goes through an intricate process of meaning-making, in which stakeholders argue, contest, and compete for the dominance of their interpretations (Boschma, 2005). The same stands true for the sustainability transition; thereby leading to several definitions and interpretations of this phenomenon. For example, Grin *et al.*, (2010) define sustainability transition as a "radical transformation towards a sustainable society, as a response to a number of persistence problems confronting contemporary modern societies". Our chapter attempts to follow the multi-level view (Van Bree *et al.*, 2010), which theorizes sustainability transitions as green niche-innovations striving against unsustainable systems, and possibly replacing or updating these systems (Geels and Schot, 2007).

It is also vital to stress that sustainability transition can be challenging for small and medium-sized enterprises (SMEs) operating in emerging economies, which lack resources and operate in the context with significant institutional voids (Adomako *et al.*, 2019; Sharma *et al.*, 2021). In case of relatively volatile emerging economies like Pakistan, which are characterized by currency rate fluctuations (e.g., Rashid and Waqar, 2017; Mumtaz and Ali, 2022), abrupt policy changes (e.g., Khattak *et al.*, 2021), infrastructure (including financing) challenges (e.g., Khan, 2022) and high (political and economic) uncertainty (e.g., Javed, 2021), the difficulties surrounding sustainability transition for SMEs tend to be further compounded. Like most global economies, SMEs are a vital player in the Pakistani economy and contribute about 40% to GDP, 40% to exports, 80% to non-agricultural employment, and 35% in total value additions (Javed and Ayaz, 2020). At the same time, Pakistan is one of the worst affected countries due to climate change (as evidenced by recent unexpected devastating floods (Devi, 2022)). Hence, sustainability transition in Pakistan is the need of time (e.g., Hussain *et al.*, 2020) and keeping in view the criticality of SMEs in Pakistani economy, a particular focus on them in this concern is justified. In this context, it is important to stress that prior research has shown that SMEs and entrepreneurial firms operating in volatile contexts tend to have characteristics of both resilience and agility due to continuous exposure to risks and uncertainties (Golgeci *et al.*, 2020, 2021). However, how SMEs use this resilience and agility in sustainability transitions in such volatile and politically unstable contexts remains relatively unexplored. It should be stressed that so far, prior research focusing on sustainability in Pakistan has taken a rather generic approach, and specificities of the challenges faced by SMEs in their sustainability transition have largely been ignored. Hence, our chapter aims to fill this gap in the extant literature. By doing so, we offer three critical contributions. Firstly, our chapter is a pioneering study to bring in the “process (transition)” element in sustainability research focusing on Pakistan. Many studies have been made in recent years highlighting different aspects related to

environmental degradation and sustainability in Pakistan, both at macro and micro levels. However, the critical element of the transition to sustainability remains largely missing; an aspect that our chapter aims to specifically focus on. Secondly, along with resource efficiency, agility, and resilience, our chapter focuses on the role of intermediaries and connections in this regard. Hence, our study goes beyond the narrow field-specific focus while analyzing a complex topic, bringing insights from multiple literature streams.

The rest of this chapter is organized so that the next section presents a brief literature review followed by a discussion on methodology and presentation of case firms. After that, the study findings are presented. The chapter concludes by presenting implications, limitations, and future research directions.

## **2. Literature review**

### **2.1. Sustainability transition of SMEs: Barriers and benefits**

The main barriers to the sustainability transition of SMEs highlighted in the prior studies include lack of financial resources, lack of public awareness and pressure, the conflict between environmentally related practices and other business objectives, and weak regulatory environment (Shi *et al.*, 2008; Fernandez-Vine *et al.*, 2013; Triguero *et al.*, 2014; Hasan, 2016; Bhanot *et al.*, 2017). It has further been argued that in many SMEs, owner himself work as the manager and take strategic decisions, resulting in their attitude toward sustainability manifesting in organizational strategies (Bradford and Fraser, 2007; Fernandez and Gomez *et al.*, 2020). Hence, owner/manager's risk-taking ability can hinder the enactment of sustainability by influencing the evaluation of the benefits and risks associated with its

implementation (Williams and Schaefer, 2013; Dekoninck *et al.*, 2016). Moreover, SMEs keen to adopt sustainable business practices may motivate employees toward this transition. However, the transition towards green practices can be viewed negatively by some employees as being an additional workload for themselves (Chan *et al.*, 2014).

The lack of government support has also been referred to as a significant barrier hindering SMEs' sustainability transition (Parker and Redmond, 2009). This lack of support becomes further visible in emerging economies where institutions are also weak, and there is a lack of governance mechanisms (Shahzad and Elenurm, 2020). Political ties and their influences on SMEs access to government support have also been highlighted in prior studies focusing on emerging economies and sustainability transition (e.g., Adae *et al.*, 2021). In order to implement green practices needed for sustainability transition, SMEs need to invest in production and processes as needed. In simple words, the level of upfront costs, the indirect costs, and ROI period are significant elements that influence SMEs more than large firms (Rademaekers and Asaad, 2011). Hence, support from the government or other outside resources is critical for SMEs' sustainability transition, especially in relatively volatile emerging economies.

In recent years, several studies have tried to analyze the benefits of sustainability transition for firms by specifying the interlinkage between performance and adoption of green practices (e.g., Bassi and Dias, 2019; Gusmerotti *et al.*, 2019). According to Tsekouras *et al.*, (2017), sustainability transition is linked to macro and micro-level competitiveness. It has further been argued that SMEs can enhance efficiency and make sustainability a value instead of cost by structural and process changes (Martinez Leon and Calvo-Amodio, 2017). In this concern, Verrier *et al.*, (2014) developed a green matrix to help SMEs to understand the benefits of sustainable practices in their sector of operation. The lean and green approach has further been recommended to assist and enable sustainable manufacturing practices in SMEs in their sustainability transition process (e.g., Miller *et al.*, 2010; Alayon *et al.*, 2017). Caldera *et al.*, (2019) developed a novel model of strategic enablers of sustainable business practices to guide SMEs

to use their lean and green strategies effectively to achieve sustainable business outcomes. They also identify barriers that create hurdles in the sustainability transition process. When integrated with green thinking, lean thinking emerges as a targeted approach to reduce waste. The present tendencies show a unified lean and green approach as a potential tactic to use in SMEs to contribute to a circular economy (Bocken *et al.*, 2016). Finally, an increasing number have highlighted the critical role of supply chain relationships both as enablers and barriers to sustainability transition in SMEs (Ammenberg and Hjelm, 2003; Mathiyazhagan *et al.*, 2013; Centobelli *et al.*, 2021).

## 2.2 Sustainability transition of SMEs: resource efficiency, intermediaries, and resilience

Several scholars have addressed sustainability transition, particularly of SMEs, in recent years (Burch *et al.*, 2016; Loorbach *et al.*, 2010; Gliedt *et al.*, 2018). It has further been argued in this concern that transition is continuing development of essential and organizational change of the aggregation level, for example firm, industry, sector, or country (Grin *et al.* 2010). According to Garrido-Prada *et al.* (2021), reducing energy use, minimizing waste, and re-using raw materials represent some aspects of resource efficiency linked to the sustainability transition of SMEs. In a large-scale study analyzing 37,438 European SMEs in the EU-28, Chatzistamoulou and Tyllianakis (2022) found financial support, specialized consultant, and a general attitude towards sustainability transition (eco-innovation, and renewable energy consumption) critical in this process. Some other facts linked to resource efficiency in sustainability transition identified by extant literature are self-assessment tools (e.g., Schleich and Fleiter, 2019), knowledge transfer (e.g., Demirel and Danisman, 2019), the collaboration between private and public organizations (Montalvo, 2008) and stable institutional and economic environments of the country (e.g., Moreno-Mondejar *et al.*, 2021). Most of these studies have taken place in developed (primarily western and European) economies' context, and there is a lack of research on sustainability transition in emerging and developing economies.

Along with resource efficiency, the role of intermediaries is also crucial in assisting SMEs at various stages of the sustainability transition process and its implementation. According to Hoppe (2018), sustainability transition is the result of several other micro and macro factors, and in this context, the support from intermediaries to address capacity, resources, and knowledge limitations is vital for SMEs. Furthermore, intermediaries can also support networking skills and possibilities of SMEs in their sustainability transition efforts (Klewitz *et al.*, 2012; Klewitz and Hansen, 2014). Intermediaries are individuals, organizations and institutions which support the development, design, or implementation of a new process, product, or practice (e.g., Fischer and Newig, 2016; Mignon and Kanda, 2018). These intermediaries tend to include public institutions, government agencies, business networks, suppliers, universities and academics, experts, civil society, and consultancy firms (Howells, 2006; Kivimaa, 2014; Mignon and Kanda, 2018; Warbroek and Hoppe, 2018). Prior studies have found four specific forms of support offered by SMEs including facilitation of learning and knowledge exchange (Johnson, 2017); resource access and guidance (Overholm, 2017; Warbroek and Hoppe, 2018); brokering (Intarakumnerd & Chaoroenporn, 2013), and supporting accountability and transparency (e.g., Zahoor *et al.*, 2023). Further, it has been argued that intermediaries help SMES steer through dense and fragmented multi-actor, multi-level procedures and requirements during their sustainability transition process (Kivimaa *et al.*, 2019).

Sustainability and resilience are strongly interlinked despite being different concepts. According to Elmqvist *et al.* (2019), sustainability has a normative objective of societal transformation, where resilience is the capability of the organization to sustain functionality in reply to challenging situations. Dibella *et al.* (2022) argued that resilience exists at community, organizational, and individual levels. Earlier studies have further referred to that resilience has adaptive and transformative characteristics (e.g., Folke, 2006; Walker and Salt, 2006; Ali *et al.*, 2022; Dibella *et al.*, 2022). As sustainability requires a rather extensive transition in business practices (Westman *et al.*, 2019), both

adaptive and transformative aspects are critical. Resilience has often been viewed to interlink with agility in the case of emerging economy SMEs as their limited resources make them quick learner and agile to adapt changes (Branicki *et al.*, 2017; Golgeci *et al.*, 2020).

SMEs can reach their potential as change agents by promoting sustainability transition processes (e.g., Burch *et al.*, 2016; DiBella *et al.*, 2022). In order to achieve it, SMEs should integrate multiple practices across the triple bottom line (social, environmental, and economic) instead of adopting one or more activities in isolation (Schaltegger *et al.*, 2012). Such an approach based on a mission and proactive strategic approach help address sustainability-related challenges (Dyllick and Muff, 2016). Compared to large firms, SMEs tend to be flexible and innovative in implementing changes because of their size, structure, and frequent involvement of the owners in their operations (Burch *et al.*, 2016; Westman *et al.*, 2019; Shahzad and Elenurm, 2020). However, the extant literature still needs to explore how SME resilience helps in sustainability transition, particularly in emerging and relatively volatile economies. Hence, we are trying to fill this visible gap in extant literature.

### **3. Research methodology**

The current chapter uses qualitative research methodology. Qualitative research aims to provide insights rather than measuring influences or relationship strengths (De Ruyter and Scholl, 1998). A case study approach is ideal for creating theoretical and pragmatic understandings from empirical observations when little is known about a phenomenon and when there are dissimilarities within the literature (Eisenhardt and Graebner, 2007). The sample of this study was theory-driven, and thus purposeful sampling was applied. According to Patton (2002), purposeful sampling involves selecting firms supporting the study's purpose, i.e., cases that are information rich and reflect the phenomena of interest. Hence, we selected four case firms using this logic, as summarized in Table 1.

Authors have chosen the SME sector purposefully to explore sustainability transition due to several reasons. First, the level of SMEs engagement into sustainability transition is not clear in extant literature, specifically in the context of emerging economies. Second, there is not much evidence on how SMEs perceive this phenomenon in volatile emerging economy settings such as Pakistan. Third, most prior studies have investigated sustainability transition in the context of large firms and the sustainability transition process in SMEs required more attention. Four case companies were selected from Punjab, the country's largest province. These four SMEs were selected due to their engagement in sustainable business processes and self-initiatives related to sustainability from top management, as well as their willingness to be part of our academic study.

**Table 1. Overview of Case Firms**

<i>Case Firm</i>	<i>Interviewee Position and Education</i>	<i>Industry</i>
Firm A	Managing Director (MBA, Pakistan)	Manufacturing (Auto rubber parts and Plastic bottles)
Firm B	Head of Sales and Marketing (MBA, Pakistan)	Manufacturing (Shoes, bags)
Firm C	Country Manager (MBA, Pakistan and Quality training from Japan)	Manufacturing (Apparel)
Firm D	General Manager (BBA, UK)	Printing House (Manufacturing)

Our unit of analysis is the sustainability transition phenomenon, where internal company reports, company profiles, product catalogs, and other published reports were also used to understand it in that context. The case study investigation comprises semi-structured, personal, in-depth interviews with key decision-makers in the case firms. The scope and determination of the interview were explained

beforehand to the interviewees in order to give them a chance to prepare for it. Qualitative semi-structured interviews were undertaken from October 2022- December 2022 with case firms' personnel. The interviews were recorded and later transcribed for the thematic analysis. One of the authors conducted in-depth interviews from key people of the selected SMEs using English and Urdu language as per the suitability of the interviewee. The duration of the interview ranged from 30 to 45 minutes.

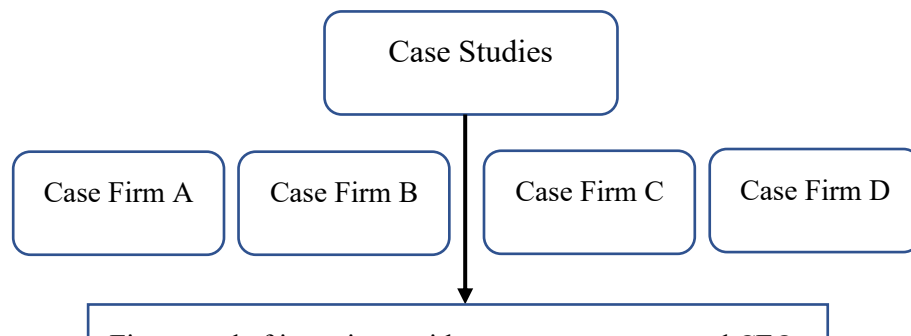
After analyzing the outcomes of the first research stage, follow-up interviews were conducted to receive more detailed descriptions of statements that needed additional interpretations. A total of five themes emerged as a result of a systematic process to identify themes and quotes for the reliability of thematic analysis.

**Table 2. Background Information of the Case Firms**

Case Firm	Year of Inception	Industry	Number of Employees	Turnover in 2021-2022
A	1978	Manufacturing (Packaging Products)	245	6.3 billion PKR
B	1974	Manufacturing (Apparel)	175	4.9 billion PKR
C	1985	Manufacturing (Footwear, Apparel)	165	8.2 billion PKR
D	1987	Manufacturing (Packaging)	145	3 billion PKR

Figure 1 below summarizes the research design of our study, followed by a 'a description of the case firms.

**Figure 1. Research Design**





### Implications

#### 3.1. Case Firm A

Firm A is one of the leading manufacturers of Technology Intensive Engineering Plastic and Packaging Products in Pakistan. The company has been in business since 1978 and has a large client base, both in domestic and international markets. It has grown rapidly over the years. The average growth rate in the last 10 years has been around 20% per annum. They import products in EU and USA which generates 20% of the whole turnover. It is listed in Pakistan Stock Exchange since 2015 with annual turnover of 6.3 billion PKR in 2021.

With its three plants, one in Kotlakhpat two in Pandoki, Lahore, the main products of this case firm are as follows:

- Automotive Parts
- Plastic Packaging

- Caps and Closures
- Plastic Crates
- Jars and Bottles

It is a supplier for assemblers and manufacturers of cars, tractors, motorcycles, electronic equipment and road construction equipment, to name a few. The company also provides plastic packaging for food, hair care, and skin care products. Mainly its clients are large multinationals firms like Unilever, Pizza Hut, Nestle, KFC, Pepsi co.

### **3.2. Case Firm B**

Case firm B was formed in 1974 and main line of business is apparel and home furnishing. In order to fulfill customers demand, the equipment has been streamlined, and many operations have been fully automated. They have full in-house operations from spinning to stitching and designing. They have divided their operations in five major units which are home textile, filled products, towel, apparel, and fabric. They export products into different continents like EU., USA, Australia etc. Company is listed in Pakistan Stock Exchange since 1974.

### **3.3. Case Firm C**

Case firm C was formed in 1985 and has operations in 8 countries, including Pakistan. Main products are footwear, Apparel and hand bag in leather and artificial leather as well. Company is listed in Pakistan Stock Exchange since 2020. It has 250 employees in Pakistan. They export products to US and EU which generates 45% sales to overall turnover. They have three main units of business 1) Footwear 2) Apparel 3) Women Handbags. They have three manufacturing plants in Lahore, Raheem Yar Khan, and Faisalabad.

### 3.4. Case Firm D

Firm D was established in 1987 and operates in the field of printing. It has a high-quality printing plant. It offers complete service in the form of artwork or digital media, or it may even be a print matter. It had six offset presses capable of printing from 1-5 color printing at a time. Following printing, products are prepared for B2B clients. Total turnover in the year 2021 was 3 billion PKR. The main products printed by the case firm are:

- Packaging / Cartons
- Annual Reports
- Posters
- Labels / Wrappers
- Brochures
- Mobiles
- Leaflets
- Literature Cards
- Buntings
- Pamphlets

Their clients are from diverse industries like telecom, FMCG, and pharmaceuticals including famous multinational firms such as KFC, PEPSI, Unilever. The case firm is planning to start exports to Gulf countries in the near future. The case firm has 200 employees working in 2 plants in Lahore.

## 4. Findings

The interviews were transcribed and manually analyzed using a thematic analysis approach in the data analysis phase. We used Eisenhardt's (1989) and Ragin's (1994) suggestions regarding the presentation of findings in a thematic way as well as the use of quotes.

#### 4.1. Barriers and benefits

All four case firms and our respondents acknowledged the importance of sustainability and sustainability transition, as visible from the following quotes.

“..... to my knowledge sustainability means not compromise on future and adopt sustainable practices.... Firm A”

"..... I understand sustainability as a lifestyle where you always think about the environment and economic aspect.... Firm D"

"..... sustainability means take care of our society and not compromise on our future and it should reflect through our business activities.... Firm C"

Regarding the barriers to sustainability transition, financial barriers which have been highlighted in prior research as well (e.g., Fernandez-Vine *et al.*, 2013; Triguero *et al.*, 2014; Hasan, 2016; Bhanot *et al.*, 2017; Khan, 2022) appear to be most visible. Also, currency depreciation and exchange rate fluctuation, visible characteristics of volatile economies (e.g., Golgeci *et al.*, 2020) were mentioned.

".....I must say large capital requirement is a huge barrier for our firm when we wanted to buy new machinery one of our plants, even if it will give us well justified return on investment. However, due to currency devaluation prices going up, we declined the offer..... Firm B".

"..... In Pakistan, government support and instability are two main barriers are the bottleneck that obstruct transition towards sustainability. We are facing challenges every day due to currency fluctuation and rising price of import goods..... Firm C".

Also, despite the cost concerns, the respondents appreciated the potential benefits of sustainability transition, showing a pragmatic attitude despite operating in a challenging environment.

".....I can see several benefits for adopting sustainable business practices and processes, such as an increase in productivity and less wastage of resources. We also observed that customer satisfaction increased after using carbon-neutral packaging for our products..... Firm A".

"..... As we are a small firm, and it is important to see the benefits of investing in new and advanced technology or buy sustainable raw material which always increases cost. However, having said that still we manage to make profits and our customers are more satisfied than before..... Firm C".

Owner/manager of SMEs' role and attitude were critical for two of our case firms in their transition to sustainability as visible from the following quotes. Hence, we received support for the argument that in case of SMEs, the role of owners (CEOs/managers) is vital for sustainability transition as this transition can be perceived either as an opportunity with some costs or a risky change by them (e.g., Bradford and Fraser, 2007; Dekoninck *et al.*, 2016; Fernandez and Gomez *et al.*, 2020).

"..... In our company, top management gives high importance to sustainable business practices and launched several initiatives for it, I don't see any hurdle from that side..... Firm D".

“..... Our CEO is a member of Sustainable Development Society which assist companies in adopting different green practices, we always received support for implementing positive steps..... Firm A”.

#### 4.2. Resource efficiency, intermediaries, and resilience

Resource efficiency emerged as a critical factor for the sustainability transition of all case firms. The respondents highlighted the vitality of adopting new technologies, collaboration, and networking in this concern. The following sample quotes from the interviews show this aspect as well.

“.....We used FSC certified material as it was the requirement not only from the regulatory bodies but from our foreign-based client as well. In the beginning it was little bit difficult decision for us to use it as it will increase per unit cost of our products. However, few other customers also asked us to use FSC material when they came to know about it (we advertised about it) ..... Firm D”

“..... A few years back government took great initiative and passed the law to use only paper bags instead of plastic bags. We really support this idea and understand its benefits for our environment.

But unfortunately, with the passage of time government cannot regulate this law in whole country.....

Firm B”

“..... We are not a major player in industry, even though our firm continuedly work on upgradation of machinery in order to reduce waste and consume less energy. No doubt, it cost us at the time being, but our clients appreciate us and succeeded in securing some funding from the Government of Kuwait for it..... Firm C”.

An interesting aspect emerging here relates to the role of supply chain partners (buyers) in sustainability transition as referred to by the respondents. Hence, we receive support for the argument by Cantobelli *et al.* (2021) regarding the role of buyers in pushing the transition towards sustainability for SMEs. Another important aspect worth highlighting relates to sustainability transition’s reputational advantage (e.g.,

Kiefer *et al.*, 2019) as case firm D marketed it resulting in other customers also becoming aware and asking for that. Hence, even though, the cost may have increased somewhat, long term benefits and reputational advantages are expected to neutralize those short-term costs. The slow pace of regulations, like other emerging countries also emerged in our findings as visible with the selected quote from case firm B respondent. Finally, in the specific context of resource efficiency, agility and out of box thinking of emerging economy firms operating in the volatile environment was visible as case firm C was able to secure funding from the Kuwaiti government for their sustainability transition. Such peculiarities of emerging economy firms operating in volatile environments have been pointed out by prior studies such as Golgeci *et al.* (2020). Hence, a rather unconventional source of intermediaries appears in our findings.

Prior literature has significantly emphasized the critical role of intermediaries in sustainability transition (e.g., Klewitz *et al.*, 2012; Klewitz and Hansen, 2014; Mignon and Kanda, 2018). However, study informants highlighted the issues, especially in relation to government, which are similar to other emerging and volatile economies. The following sample quotes highlight the perceptions of study respondents in this concern.

“.....To be honest in Pakistan firms do not get much support from government bodies, in fact government has failed to provide us stable environment which is basic need to run business operations smoothly. However, our foreign clients and partner always support for adopting sustainable materials and products.....Firm A”.

“.....One of our foreign clients push us to manufacture leather products and help and guide us to get access to their network through which our firm received new connections to sell more sustainable products..... Firm D”.

“..... One of our major multinational clients asked us to use FSC material and promise to assist us in the transition phase which was huge favor for us, and it also motivated our whole team to implement sustainable business practices..... Firm C”.

"..... It is unfortunate in Pakistan public and regulatory bodies are not very active in the implementation of sustainable business practices, and uncertainty and instability could be one reason. Last few months price of the dollar is increasing every passing day and government does not have enough financial resources to release all import goods. It is quite a scary situation for us as we import our raw materials from outside of Pakistan..... Firm B”.

These findings support prior studies done in Pakistan focusing on similar topics (Bilal *et al.*, 2016; Javed and Ayaz, 2020). However, the role of and support offered in some cases by foreign buyers (supply chain partners, usually multinational enterprises) is visible in all cases, as stressed earlier as well. Also, resilience and agility of emerging economies' firms with exposure to unstable and volatile conditions were visible in all case firms. Along with securing funding from the Kuwaiti government, as discussed earlier, collaboration with international NGOs and technology firms also appeared as resilient strategies to overcome the multitude of barriers being faced by the case SMEs. The following sample quotes show these aspects as well.

“..... We signed MOU with one foreign NGO which guide and help to adopt green business practices, it proved quite good step for us as due to those steps we made several changes in our business model. We believe due to those practices we survived in COVID-19 enhanced our resilience.....Firm D's

“.....We always looking forward to adopting new technologies which reduce raw material and energy waste, recently UAE based organization brief us about new software which will increase 20% efficiency, I am sure these kinds of structural actions source of resilience at firm level..... Firm C”.

**Table 3. Degree of Effectiveness of themes in cases**

Variables	Case 1	Case 2	Case 3	Case 4
<b>Barriers</b>				
Lack of financial resources	Positive High	Positive High	Positive High	Positive High

Owner/manager own's risk-taking ability	Positive High	Positive High	Positive Medium	Positive High
Employees attitude towards sustainability transition	Positive Medium	Positive High	Positive Medium	Positive High
Lack of effective legislation	Positive High	Positive High	Positive High	Positive High
Lack of government support	Positive High	Positive High	Positive High	Positive High
<b>Benefits</b>				
Sustainability as a value	Positive High	Positive High	Positive High	Positive High
Appreciation from stakeholders	Positive High	Positive High	Positive High	Positive High
Acquisition of foreign clients	Positive High	Positive Low	Positive Medium	Positive Medium
<b>Resource efficiency</b>				
<b>Role of Intermediaries</b>	Positive High	Positive High	Positive High	Positive High
<b>Resilience</b>	Positive High	Positive High	Positive Medium	Positive High

Table 3 summarizes the comparative impact of different factors in four analyzed case firms. It describes the level of different factors in sustainability transition. Based on the results, we have defined the degree of these factors effect as low, medium, and high.

## 5. Implications, limitations, and future research avenues

Our findings offer both theoretical and practical implications. From a theoretical perspective, a key takeaway concerns the criticality of supply chain partners (international buyers) and international NGOs while conceptualizing the sustainability transition of emerging economy SMEs. Even though the extant literature refers to the role of intermediaries in general, where the government's

role and subsidies appear as essential factors, these aspects are missing in emerging economies and especially in volatile emerging economies. However, sustainability transition for those SMEs can get a boost from their international buyers and environmental NGOs. Hence, these elements need to be incorporated in SMEs' sustainability transition theorization in emerging economies' context.

For the managerial audience in volatile emerging economies, a key implication relates to using their agility and resilience and looking beyond traditional funding sources for the sustainability transition. Keeping in view the direction of global value chains governance, sustainability is increasingly becoming a necessity rather than an option. Hence, they should actively look for funding opportunities from international sources including environmental NGOs and other third-sector organizations. Prior studies focusing on areas such as emergency relief and health have referred to the benefits of cross-sector partnerships in emerging economies (e.g., Arslan *et al.*, 2021). Emerging economy SME managers can also consider such partnerships and aim to address sustainability not only at the environmental level but explore the opportunities for their contribution to social sustainability as well. Social sustainability and associated dynamics such as labor conditions are increasingly becoming visible in multinational enterprises' supply chain governance mechanisms; hence, SME managers need to consider this aspect.

Our study also has limitations like any other academic work. Firstly, our empirical analysis is based on four cases from a volatile emerging economy Pakistan. Hence, the generalizability of the study findings is limited. Also, specificities of Pakistani context (especially in relation to high political uncertainty and economic issues such as exchange rate fluctuations and lack of SME financing possibilities for sustainability transition) make it somewhat different from other emerging economies as well, which further limits the generalizability of findings. Still, our paper is one of the few studies focusing specifically on such contexts and builds good bases for further exploration by other scholars in the future. Also, our analysis did not delve deep into industry and sector differences in SMEs' sustainability transition. However, future scholars can take a more industrial analysis approach and

specify the dynamics in different industries concerning this topic. Finally, our analysis is based on the views of managers/owners of Pakistan (volatile emerging economy) SMEs. As the role of international buyers (multinational enterprises), NGOs and other players emerged as being critical for sustainability transition of such SMEs, future studies should incorporate their views as well in the analysis. This would enhance the theoretical understanding and practical application of sustainability transition in volatile emerging economies' context.

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