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| Programme Title:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MSc Entrepreneurship and Innovation Management        |
| Dissertation Title:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Study On Adoption Of Sustainability by MSMEs in India |
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| Standard research <input checked="" type="checkbox"/> Project <input type="checkbox"/> Internship <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                       |
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# Study On Adoption of Sustainability by MSMEs in India

M. Sc. Entrepreneurship and Innovation Management.

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5 September 2023

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# **1. Introduction**

## **1.1 Background**

Small and medium sized enterprises (SMEs) are widely recognized as being crucial, for establishing businesses around the world. These SMEs play a role in a nations development by contributing significantly to job creation, wealth accumulation, income generation and poverty reduction. They are instrumental in driving competitiveness generating wealth promoting dynamism and improving people's lives. Moreover, they have the potential to contribute significantly to progress of the country.

Compared to enterprises at the level SMEs have a more direct impact on reducing poverty. When SMEs are effectively integrated and thrive within a controlled economy there is increased utilization of both material and human resources in the country's system (Leo, 2011). The significance of SMEs in developing areas and countries remains substantial. Has gained prominence among entities. However, there is still limited research specifically focusing on SMEs in developing countries (Savlovschi & Robu 2011).

Research indicates that the medium sized enterprises (SMEs) sector contributes 70% of overall waste emissions. In response to growing awareness, about consequences the government has expanded its responsibilities towards SMEs to mitigate these impacts. Currently businesses are, under pressure to embrace sustainable practices or develop sustainable products due to the growing awareness among governments worldwide (Arimura et al., 2011).

Major ecological issues like resource depletion, environmental pollution and global warming are largely attributed to manufacturing organizations as highlighted in the IPCC report (IPCC, 2013). This has led both nongovernmental

organizations to place a stronger emphasis on the need for transitioning from conventional practices to more eco-friendly technologies.

Small and Medium Enterprises (SMEs) are the main contributors to greenhouse gas emissions across all regions. However due to lack resources SMEs often struggle to participate in emission reduction efforts as expected. As a result, organizations prioritize developing friendly approaches and gaining knowledge about creative green concepts with the aim of helping SMEs mitigate their greenhouse gas emissions (Atsuyoshi & Francisco 2014).

Policy makers and academics propose strategies for mitigating pollution by promoting innovation and creating an environment conducive to sustainability. These strategies involve implementing eco approaches, managing resources dynamically and monitoring pollution levels and waste generation (Ebrahimi & Mirbargkar 2017; Zhang & Walton 2017).

The SME's dynamic and positive roles are vital factors for building competitive regional economies in the global market. If we take example of South Korea, by government support in innovation technology for SMEs, they achieved amazing performances and implemented sustainable practices (Doh and Kim, 2014).

Small and Medium Enterprises (SMEs) play an important role in driving economic growth in India. India has a total of 63.39 million SMEs, out of which 19.67 million are involved in manufacturing. This means that 31% of all SMEs in India are engaged in manufacturing activities as stated in the MSME Annual Report for 2022.

Several scholarly studies have focused on exploring aspects of SMEs (Kandasamy et al., Citation2015; Kongolo, 2010). However there is still a need

for research specifically dedicated to understanding the challenges faced by SMEs when it comes to adopting innovation and identifying potential solutions. It is crucial to examine the state of the SME sector in developing countries like India and identify the barriers that hinder the implementation of innovation, by these businesses.

## **1.2 Research aims and objectives**

Most of the existing studies focused on the activators for adoption of sustainability by SMEs. Very few studies are there for barriers of adopting them. The barriers identified in previous studies were technological difficulties, Market response, Economic difficulties, Lack of information, Legal difficulties. This research aims to evaluate other factors that act as barriers for SMEs in adopting sustainability practices. The expectation of this study is to gain a deeper understanding of the connections between these two subjects in the Indian context, as well as provide additional insights in this area for future study.

To achieve the aim of this research, the researcher has the following objectives:

- Why are MSMEs in the manufacturing industries are unable to adopt sustainability strategy?
- How will they put it into action using the resources they have?

## **1.3 Dissertation structure**

This dissertation is structured into six chapters, introduction, literature review, research methodology, research findings, discussion, and conclusion. Within the literature review chapter, we will thoroughly examine studies about SMEs not able to adopt sustainability practices. We will also delve into theories that will be

applied in our research methodology. In the research methodology chapter, we will explain why a qualitative research approach was chosen and specifically discuss how in-depth interviews were conducted as the method of data collection. Additionally, we will elaborate on the data analysis method used to analyze the collected data. The findings chapter will provide an explanation and analysis of the content obtained from these in-depth interviews while considering insights gained from the literature review to draw conclusions. The discussion chapter aims to analyze and connect the research findings with aspects discussed in the literature review section. Moreover, we will compare our interview findings with those of studies mentioned in the literature review portion. Finally, our conclusion will discuss both the extent of connection between feminism and Chinese female entrepreneurship. Offer perspectives for future studies, in this field.

## **2. Literature Review**

In this chapter we will discuss about different barriers discovered in the previous literature related to adoption of sustainability by different authors.

### **2.1 Technological difficulties**

Small and medium sized businesses (SMEs) face challenges with the most significant one being technological difficulties. One major obstacle is the limited access, to advancements that can support their efforts towards sustainability. Many sustainable solutions, such as energy systems, energy efficient machinery and waste management systems require investments. The financial constraints of SMEs make it difficult for them to afford the costs associated with acquiring and integrating these technologies (Bocken et al., 2014).

In contrast to firms SMEs typically have capacity for research and development (R&D). This limitation creates challenges when it comes to implementing technologies. Due to their R&D capabilities SMEs often struggle to keep up with

the breakthroughs in sustainability technologies (Mont, 2004). They heavily depend on sources of knowledge and expertise for production and improvement purposes. This reliance hinders their ability to adopt cutting edge sustainability solutions since they lack an in-house R&D team dedicated to experimenting with and customizing technologies according to their needs.

Implementing practices requires knowledge and experience. Medium sized businesses often face difficulties due to a lack of expertise needed for successful implementation of sustainable practices (Barnes et al., 2016).

To summarize when it comes to embracing sustainability initiatives SMEs encounter obstacles. Problems occur when people don't have access, to technology, when research and development capabilities are limited when processes become complicated and when there is a shortage of tools. SMEs are ready to implement sustainable practices if it promises them, return of their investments. Investing is something gets difficult if it's not promising any benefit.

## **2.2 Market Response**

It can be quite challenging, for Medium Enterprises (SMEs) to gain customer support for their sustainability efforts. This is because attracting a client base that values sustainable practices and is willing to pay higher prices for sustainable products poses a real challenge (Ramus & Montiel 2005). As a result, SMEs often struggle to see a return on investment when it comes to their sustainability initiatives, which then hampers investments in this crucial aspect of their business.

In today's market scenario there is an increasing awareness among consumers about products. However, the size of this industry remains relatively small

making it difficult for SMEs to reach out to a customer base that truly appreciates sustainability. Consequently, SMEs might find it hard to justify allocating funds and resources towards implementing practices especially when they perceive a lack of demand for products or services.

Several studies have demonstrated how customer demand significantly influences the sustainability behavior of SMEs. Customers exert their influence on SMEs approach towards sustainability through channels, like demand, compliance driven demand and buyer organizations. Environmental practices have been found to be motivated by the desire, for friendly products, processes, and services among small and medium sized enterprises (Battisti & Perry 2011; Lee, 2009; Saez Martinez et al., 2016; Shields & Shelleman 2015; Studer et al., 2006).

In essence if there is a lack of customer response or demand for sustainable products so, SMEs might be hesitant to invest in sustainability initiatives. This hesitation arises from concerns that the resources allocated to these practices may not yield returns due, to their market reach. Consequently, SMEs may choose not to pursue sustainability enhancements and instead stick with approaches that could have adverse environmental impacts.

To summarize, the market demand is majorly responsible for the investment in sustainable practices. If market is not demanding any change, then companies will resist introducing sustainable products. Market has a dynamic demand; you can't predict if they will accept company's sustainable initiative or not. This is the reason sustainable practices are mostly implemented by large industries and their benefits are also only enjoyed by them.

## **2.3 Economic Difficulties**

The limited availability of funds creates a challenge, for small and medium

Enterprises (SMEs) when it comes to implementing sustainable practices. As highlighted by Shashank and Rakesh (2023) implementing sustainable approaches often requires investments in new technologies, machinery, and infrastructure. But given their capabilities SMEs may struggle to allocate funds for such investments especially when their immediate focus lies on operational demands and profitability.

For SMEs the cost associated with adopting eco technologies and processes can be a major deterrent. The initial investment required for energy systems energy efficient technology and waste management infrastructure tends to be quite substantial. According to Shashank and Rakesh (2023) these expenses can discourage medium enterprises from embracing sustainability initiatives due to concerns about return on investment and financial risks.

Accessing the resources and funding to participate in sustainability initiatives remains a challenge, for small and medium sized enterprises (SMEs). Traditional banks and financial institutions often perceive sustainability projects as higher risk endeavors. Consequently, they may offer terms and conditions to small and medium sized businesses (SMEs). The limited availability of affordable financing options makes it challenging for SMEs to fund investments, in practices (Future Readiness of SMEs 2021).

In summary, economic difficulties are the most common challenge faced by SMEs. To implement sustainable practices funds are required as sustainable solutions are usually expensive and the SMEs don't have enough funds to invest in sustainability. Technologies required to implement sustainability are much expensive. Funds and loans are not available to SMEs to implement sustainability. Sustainable practices are considered as high-risk investment by both bank and SMEs.

## **2.4 Lack of information**

When it comes to embracing practices, medium sized businesses often face a significant hurdle in the form of limited access, to relevant information. Many smaller enterprises lack awareness and knowledge about the benefits, strategies and implementation processes associated with sustainability.

The knowledge related to new technologies is usually difficult for SMEs to obtain, because these enterprises do not operate within the main flows of information on these topics. There are difficulties faced by SMEs in understanding and satisfying some of the regulatory requirements, is due to scarce of information they are given regarding the adopting of sustainability (Biondi & Vittorio, 2002).

For managers of small and medium enterprises (SMEs) prioritizing commercial pressures takes precedence over the technological and managerial aspects of sustainable practices. Sustainable practices are seen as valuable only if they have the potential to boost sales improve profit margins and contribute to meeting requirements. This is because effectively addressing concerns, in a manner demands specialized technical and managerial skills that are not commonly found within SMEs. Often SMEs need to seek assistance to integrate expertise and technical capabilities, which incurs additional costs and requires coordination, between the company and external support (Biondi & Vittorio, 2002).

Numerous smaller businesses have an understanding of the advantages that come with adopting sustainable practices. They may not fully grasp the cost savings, improvements in brand reputation and enhanced market competitiveness that can be achieved through sustainability initiatives. This lack of awareness hampers

their willingness to invest in the solutions (Shashank & Rakesh 2023; Purwandani, J.A. And Michaud 2021).

Small and medium sized enterprises (SMEs) may struggle to obtain pertinent information concerning business practices. According to Purwandani, J.A. And Michaud (2021) valuable information on the technologies, best practices, regulatory requirements and available resources is often not easily accessible for SMEs.

For SMEs seeking guidance, on sustainability matters finding readily available information can be challenging. Small and medium sized enterprises (SMEs) often struggle to find practical information tailored to their specific industry, size and operational environment. Having access, to information that addresses their distinct challenges and offers actionable solutions can greatly assist SMEs in embracing sustainability (Purwandani, J.A. And Michaud, 2021).

In summary, lack of information is also one of the major issues faced by SMEs while adopting sustainability. Most of the time SMEs are not aware about the solutions they can implement in their product to make them more sustainable. It's difficult for SMEs to get required expertise and knowledge to implement them. They can't afford to have their own research and development team to explore sustainable solutions. They are usually dependent on external sources for knowledge that is expensive too.

## **2.5 Legal difficulties**

When it comes to embracing practices, small and medium sized enterprises (SMEs) often encounter significant challenges due to legal complexities. The integration of practices into day-to-day business operations can be hindered by

various legal obstacles and complexities.

To ensure the prosperity of their companies SMEs must adhere to a set of environmental regulations and standards. These laws may involve requirements for energy efficiency, emissions control, waste management and environmental permitting. For SMEs without a compliance team, understanding and navigating these regulations can be particularly challenging (Kumudinei Dissanayake, 2021).

In cases the regulations surrounding sustainability may lack clarity. Allow for interpretation. This ambiguity can make it difficult for SMEs to grasp the criteria and ensure compliance. Additionally, there is a lack of criteria for sustainability reporting and metrics which poses challenges, for SMEs in monitoring and reporting their sustainability performance.

Small and Medium sized businesses often face limitations in terms of their human resources. This can make it challenging for them to access support or hire legal experts who are well versed in sustainability and environmental law. Seeking advice and ensuring compliance, with regulations can be costly posing difficulties, for these enterprises in navigating the complexities of the law (Kumudinei Dissanayeke, 2021).

When it comes to maintaining sustainability throughout their supply chain networks, medium sized businesses involved in supply chains may encounter legal obstacles. Meeting sustainability requirements may involve fulfilling obligations imposed by countries. Consequently, managing the supply chain and ensuring that all participants adhere to the regulations becomes more complex.

In summary, legal difficulties are also one the major issues faced by SMEs in

implementing sustainability. Legal compliances are difficult to be met by an SME as it requires legal experts and other important information which they don't have access to. The regulations related to sustainability are usually complex because they contain technical information that SMEs fail to understand and are prone to make mistakes while implementing sustainability. This makes them resistant to adopt sustainable practices.

The literature review concluded few major barriers faced by SMEs while adopting sustainability. Those barriers are technological difficulties, market response, economic difficulties, lack of information, and legal difficulties. Most of the authors concluded these difficulties in one way or other. The research gap that was discovered during literature review that there can be barriers that no author focused on that is the Traditional practices and Age of SMEs. In previous studies authors discussed about how SMEs stick to their usual practices and don't move to sustainable practices, even if they have all the resources. This study will focus on collecting data around this and barriers concluded in the literature review.

### **3. Methodology**

In this chapter, method and approach used in this study will be discussed in detail. Details about collection of data, interview approach and the credibility of the study will be discussed.

#### **3.1 Rationale of qualitative research methodology**

In conducting this study, we conducted a review of existing literature. Noticed a common trend, among previous investigations into how Small, Micro and Medium Sized Enterprises (SMEs) are embracing sustainability. It was found that qualitative research methods were preferred over approaches in these studies. The reason behind this preference lies in the nature of the topic, which requires an

exploration through interviews. Given the challenge of selecting a number of SMEs to participate in research on this specific topic the limitations associated with sample size also necessitate the use of qualitative research.

Typically, quantitative analysis studies recommend a sample size of 50 individuals for effective statistical analysis (Delice, 2010). However, finding willing SME participants for our research poses difficulties. Previous studies have predominantly focused on conducting, in depth interviews with a few entrepreneurs. This indicates that conducting large scale surveys or extensive quantitative analyses is not essential since the valuable data collected from these conversations is sufficient to address our research objectives.

The decision to employ data gathering techniques aligns perfectly with the purpose of our study. Given the complexity surrounding sustainability adoption it is crucial to gather information from SMEs themselves.

While quantitative approaches may generate opinions, they often lack the authenticity and depth provided by interviews. In the business world, where practicality is highly valued it becomes essential to understand the experiences and perspectives of entrepreneurs. Through, in depth interviews we can gain insights into the challenges faced in adopting sustainability practices and conduct research that would otherwise be impossible.

A recent study conducted in Korea serves as an example. The focus of this study was on the implementation of greenhouse practices in manufacturing businesses. Three selected firms participated in interviews to uncover valuable information. Similarly, our research aims to engage with manufacturing firms to gain a deeper understanding of their experiences with sustainability adoption.

The use of in-depth interviews offers advantages when exploring opinions and

practical knowledge within the realm of sustainability adoption. The ended nature of interview questions creates an environment where respondents can freely express their thoughts enabling researchers to delve into their findings. Furthermore, this method enhances comfort levels encouraging open minded and comprehensive responses.

In conclusion it is not justifiable but crucial to employ qualitative research methodology, for this study.

By centering our attention on the experiences and perspectives of entrepreneurs we can extract the essence of embracing sustainability, in medium sized enterprises (SMEs). Through conducting interviews our aim is to uncover insights and potentially uncover unexpected findings that contribute to the existing knowledge in this area. These interviews are designed to be open ended fostering discussions, among participants and ensuring an exploration of this significant topic.

### **3.2 Sample selection**

The research design requires a detailed data collection technique in order to achieve a thorough understanding of sustainability adoption among Indian Micro, Small, and Medium Enterprises (MSMEs). The focus of this inquiry is MSMEs, which span a wide range of industries and sizes and hence reflect the depth and complexity of the Indian business scene.

In order to properly define the scope of our research, we must first identify the target demographic, which is MSMEs in India. This all-encompassing strategy includes micro, small, and medium-sized businesses from a range of industries. As a result, a diverse range of businesses will make up our sample, each of which will represent a different aspect of the Indian business landscape. The businesses included for this study span a wide spectrum, from the production of electronics

to the creation of plastic components, sheet metal processing, and the building industry. We hope to highlight the complexities and variances in sustainability adoption practices that emerge in response to a rapidly changing industrial context by embracing this variety of industries.

Polkinghorne's (2005) argument is supported by our approach to sample selection, which is quite particular and geared towards the study's goals. We decided to conduct in-depth interviews with a carefully chosen sample of six businesses because this study is qualitative. This sample size is consistent with the qualitative research paradigm, which emphasizes the value of specific insights gleaned from unique experiences and places a premium on depth over breadth.

There are two reasons why six businesses were chosen. First, it enables a concentrated and in-depth analysis of each participating company, allowing us to delve deeply into their adoption of sustainability. It also recognizes the dynamic nature of the Indian industrial landscape, which is characterized by quick adjustments brought on by laws and regulations. Due to the particular operating circumstances and difficulties that each industry faces, they all react to these developments in different ways. By interacting with a small but diverse group of businesses, we hope to document the complex reactions and unique difficulties experienced by MSMEs across a range of industries.

The chosen samples are:

| Participant No. | Designation   | Industry type            | Size of industry | Year of establishment | Location  |
|-----------------|---------------|--------------------------|------------------|-----------------------|-----------|
| Participant 1   | Manager       | Construction and fire    | Medium           | 2000                  | New Delhi |
| Participant 2   | Founder & CEO | Electronic Manufacturing | Small            | 2006                  | New Delhi |
| Participant 3   | Founder & CEO | Electronic Manufacturing | Micro            | 2016                  | New Delhi |

|               |               |                             |       |      |               |
|---------------|---------------|-----------------------------|-------|------|---------------|
| Participant 4 | Founder & CEO | Plastic Parts Manufacturing | Small | 2000 | Uttar Pradesh |
| Participant 5 | Founder & CEO | Plastic Parts Manufacturing | Small | 1996 | New Delhi     |
| Participant 6 | Founder & CEO | Steel Parts Manufacturing   | Micro | 1998 | New delhi     |

### 3.3 Data collection

Qualitative research often relies on interviews, as the method of collecting data (Yin, 1994). For this study we conducted in depth telephone interviews. These interviews offered a private space for participants to freely express their opinions. By conducting the interviews over the phone participants were able to choose an environment that suited them best ultimately resulting in discussions. Since our goal was to explore reasons why MSMEs struggle with adopting practices that have been less discussed in studies we opted for a qualitative approach. This approach allowed us to gain an understanding of the phenomenon and gather initial data from MSME officials. Then testing theories our aim was to uncover theories that aligned with our study through research and inductive methods (Gasson, 2003). This approach proved suitable as it enabled us to obtain data from a small number of individuals (Crouch et al., 2006). The format of conducting, in depth interviews also offered flexibility, which was especially beneficial when studying MSME officials across industries. During these interviews we focused on exploring challenges encountered by interviewees when implementing principles. Participants had the freedom to share their perspectives and any other relevant information they deemed important for our research topic.

Before conducting the interviews, we interviewed the selected participants to make sure they met the requirements. After that we scheduled interview times with officials, from MSMEs. All the interviews took place over a period of ten days. Were conducted via telephone calls. We kept the interviews short lasting around thirty minutes. Of recording them on a phone I took written notes during

the interviews to ensure a comfortable and relaxed interaction with the interviewees. This approach also protected their privacy as there was a possibility of sensitive information being discussed. Since this study focuses on sustainability adoption in India all the officials interviewed were Hindi speakers. To allow them to freely express their opinions we conducted the interviews in Hindi. Later translated them into English in note form with care for accuracy. At the beginning of each interview participants signed an Adult Participation Information Sheet from our university to clarify which parts of their interview data could be used for this study. Due to using written notes, for recording purposes it wasn't possible to capture all interview data.

After each interview I made sure to review and rewrite my notes. My goal was to highlight the points and ensure that all relevant information was included. To analyze the data, I used an general inductive approach as described by (Thomas, 2006). This approach helped me condense the data into concise summaries that aligned with the study's purpose. By following this method, I was able to create a structure, for analysis and uncover findings that directly addressed the research questions. Additionally, this process allowed me to eliminate any data from consideration.

### **3.4 Ethical considerations**

Privacy is a challenge for this study. In-depth interviews will be taken for this study and there is a chance that interviewee discloses some confidential information. The researcher will only disclose each interviewee's designation in the company, company's size, and establishment year. All interviewees are required not to disclose any personal or confidential information during the interview but ensure their privacy interviews are recorded in form of notes. The raw notes will not be disclosed in the finding and the discussion parts; therefore, acquaintances of interviewees are unable to identify the name of each six interviewee by detail of notes of the interview. Some transcripts will be quoted in

the findings and discussion parts, but the interviewee's information will be hidden from those quotes. All interviewees will be free to end the interview at any time during the whole study, before the dissertation is finished.

#### **4. Findings:**

Participant 1:

The first participant is the manager of a company that specializes in the construction of buildings and the installation of fire protection systems. He has been employed by the organization for the past twelve years. His organization is involved in all aspects of building as well as the installation of safety equipment. They focus most of their efforts on dealing with government tenders and providing their services to projects funded by the government. They have been active in initiatives for the government for decades, and they continue to offer their services to those projects.

When discussing problems faced by them in implementing sustainable practices, he stated following points:

*“We have worked in many projects funded by the Government, but they never asked us for any sustainability or ESG check on the products we are using. To get these government tender we must give our best price as other companies compete with us. So, to keep the cost low we are resistant to introduce new technology that is sustainable. If something is supported by government then definitely it can be implemented, like you know they are building roads made with plastic waste that lasts longer. It is fully supported by the Government and even technology is also provided by them.”*

He stated that his company does not face any difficulties in applying sustainability practices if the backing of the government is provided for the initiative. He expressed it specifically with regard to public works projects. They have to deal with a lot of competition, and in order to maintain respectable profit margins while keeping their costs low, they are particularly resistant to implementing

sustainable practices because such practices are costly to execute, and this makes it more difficult for them to compete with the other businesses in their industry. He provided examples of sustainable projects that the government was supporting. He made it quite obvious that the government ought to take an active role in ensuring that sustainability is maintained by conducting checks. The creation of competition is essential with regard to the utilization of sustainable practices. If businesses are not required to employ sustainable products, then they will stick to the methods they have always done business with.

#### Participant 2:

The second participant is the Founder and CEO of his company. They manufacture electronic devices like transformers for large manufacturers. Most of their products are used by companies who export their products. They have been working with these companies for a more than a decade.

When asked about the influence of market demand on adoption of sustainability, he said:

*“The market demands apply even without sustainability. If there is no demand in the market no one will ever implement sustainability in their products and if there is demand, you will see it everywhere. The market demand was the only reason we switched to more sustainable electric wires in our products. The country that we are supplying our products to banned lead in their country and we had to switch to sustainable option even though they are way more expensive than the normal wires.”*

He explained how market demand influence improvement in the products of the company. With high market demand we will be able to see sustainability everywhere. His company switched to more sustainable options when the market demanded. He gave example of more sustainable wires that they used to comply with government regulations. This also explains that how government rules and regulations are important in promoting sustainability. These kind of regulations forces companies to move to better sustainable options.

When asked about the problem with company's traditional practices in adoption of sustainable practices, he responded:

*“Well, I have an experience related to that. I have worked with a large company; they manufacture public address systems. We got an order from them for a type of a transformer, but we saw it can be improved, as our products get exported, we use led-free raw material but it's expensive than the locally produced product. We suggested this change to their R&D team. They responded very quickly that they have accepted our suggestion and will work on it, but it's been three years and never heard back on that and they keep ordering with same old design. When this type of things happens it feels like their employees don't want to work on things that are not assigned to them. They just follow what their seniors ask them to do. This company is very old, established right after India's independence. But they are still following old methods and seems like don't want to change for the future.”*

He shared his experience of working with a large company that is facing this problem. They gave a suggestion to a large company that manufactures public address system about the product they have ordered. They suggested them a more sustainable option for their product, but they never got a positive response from them. He claims that their research and development team was not interested in making any kind of improvement in their existing product that doesn't improve its performance. They wanted to stick to their old design. He said they never got a call back regarding that and kept ordering the same old design. He said because it's an old company, employee only do things that are assigned to them by their seniors and follow old tradition and methods.

Participant 3:

The third participant is the founder and CEO of his company. They manufacture electronic PCB for public address system. They are in business from last seven years. They manufacture PCBs for both exporting companies and for the local market.

When asked about adoption of sustainability in long term, he responded:

*“I think in long run sustainability can be helpful in gaining market but for that we need funds. It’s difficult to invest in something that doesn’t guarantee future benefits. We don’t have enough funds to invest on something new which is not well tested already. We try to follow large companies, like what are they doing and will this be profitable for us or not.”*

He said that sustainability is a good way to capture a part of market as it is getting popular among youngsters and there is an increase in awareness about it. But he also said that investing in sustainability does not promise them any return. They lack funds to do such investments. He said that they try to follow practices that are tested and tried in the market rather than trying to do something new.

On asking about traditional practices of his company and its effect in adoption of sustainability, he stated:

*“Yeah, every company develops some traditional practices in their work, we do have them, and I agree it does get difficult to upgrade to more sustainable options as every employee gets used to traditional methods.”*

He said, with time every company develops its own traditional practices and his company also have its traditional practices. He said that he agrees that it gets difficult to implement sustainability practices in the company as all employees feel comfortable with traditional practices and don’t want to move to new one.

When asked about access to information in adoption of sustainability, he stated:

*“When it comes to adopting sustainability in our workspace, its not difficult. We have upgraded most of our devices with more sustainable options but when we try to improve our manufactured products it gets difficult to acquire knowledge for that. Our product manufacturing is complex and requires electronics parts to run perfectly and for designing new parts we don’t have research and development team and creating one will be expensive for us.”*

He said, adoption of sustainability is not difficult at workspace as it doesn’t require many resources to be implemented. But when upgrading their manufactured products, they face problem in acquiring knowledge regarding that.

He said manufacturing electronics products is complex and implementing is even more difficult, and they don't have a research and development team and enough funds for implementing sustainability.

When asked how this can be improved, he said:

*“If government acts in providing technology and funds to MSMEs, it can be helpful. Government already provides funds to MSMEs, but they are business loans and are not enough to start your own Research and Development.”*

He said, Government can help MSMEs by providing them with technology and with funds to promote sustainability. He said, government is helping MSMEs with funds, but they are business loan and very short term and are funds are not enough to support research and development.

Participant 4:

The fourth participant is the Manger of the company and the Son of the Founder of his company. They manufacture plastic parts and auto industry parts for large manufacturers. They are in business since last 23 years. Most of the parts they manufacture are plastic based only.

When asked about traditional practices and its influence on adoption of sustainability, He said:

*“Yeah, I can relate to this completely. As you know my father started this company and I joined this company right after my graduation. When I joined my dad's company, it was clear that everything was managed and controlled perfectly. I wanted to improve something in the product, basically was working with research and development team. I found out they were not ready for the changes to products. They were more focused on maintaining current products. So according to me it's true that traditional practices influence adoption of sustainability.”*

To answer this question, he shared his experience of joining his father's company. He joined his father company after graduation. By following traditional practices

of the company, everything was running smoothly but when he tried making changes to those practices, he failed. He said his employees were not ready for any kind of change in their work pattern. At last he said he believes that traditional practices influence adoption of sustainability in a company.

He also stated *“I think the major problem in adoption of sustainability is work culture and traditional practices that a company holds. We have worked with many companies, and I feel this is the problem every company faces. Our employees get used to traditional practices and only move to new one when we force them to.”*

According to him, work culture and traditional practices is one of the major problems in adoption of sustainability. This is the problem that every company face in his experience of working with many companies. Company’s employees get used to traditional practices and only practice sustainable practices when enforced.

When asked “what can be the solution for this”, He said:

*“This can be changed if companies hire young employees with open mind-set and should them chance to express their ideas. We usually prefer hiring experienced employees as they provide excellent service, but we forget that the young employees think differently and give new ideas as they are not following any traditional practices of the company.”*

According to him, hiring young employees with open views can be the solution to this problem. He believes that young employees can efficiently express their ideas and can work on new ideas better than old, experienced employees.

Participant 5:

The fifth participant is the Founder and CEO of his company. He is responsible for all manufacturing and management of the company. They manufacture plastic products for different use cases. They are in this business since 1996. The plastic manufacturing industry faced most regulations and bans during last decade. They manufacture plastic products like mobile phone accessories, hangers, electrical

based products. They manufacture plastic products for many large companies.

When asked how traditional practices influence adoption of sustainability, he Said:

*“As I said while implementing new technology, we face a lot of problems and one of them is the traditional practices used in that industry. With bans of different kind of plastic raw material, we must switch to more sustainable and expensive options, but our customers wanted the same previous quality at cheaper price which was not possible. Everyone must change their designs to be compatible with the new one, this transition is difficult for most of the companies as they have well tried and tested their previous designs and products.”*

According to him, traditional practices followed by a company is one of the problems in the industry. He gave example of the ban on plastic that they used to use in their manufacturing and how their customers wanted that same previous quality and prices as they were not ready to implement sustainability because they were using same technique and design for a long time.

When asked about the influence of market on adoption of sustainable practices, He said:

*“The market response is one of the main reason companies are not adopting sustainability. Our customers want cheaper prices and durability of the product, and all companies tries to focus on that until they are forced to make changes. Like I said that plastic ban forced us and the market to move to more sustainable options. We didn't face much problem in that as everyone has to change their way to adopt it.”*

According to him, market response is one of the main reason companies are resistant to adopt sustainability practices. He said users want cheap prices and durability, which is not possible with sustainable options as they are more expensive to manufacture, and they don't last long.

He also added solution to problem. He said government banned single use plastic from the market that forced everyone to switch to sustainable options. Which was

not possible before, as every company was trying to compete in providing cheaper and durable products. With this ban everyone switched to more sustainable solution.

Participant 6:

The sixth participant is the Founder and CEO of his company. They work with sheet metal. They work for other local manufacturers. They are in business since 1998.

When asked about economic challenge he faced while adoption of sustainable technology, He said:

*“We have tried introducing laser cutting machine to decrease our wastage of raw material. We went to an exhibition to get information about the machine and decided to buy one. With this machine we could have saved a lot of money as this saves wastage. But as we reached there, we found out it was too expensive for us. We simply couldn’t afford it. Having this kind of machine can increase overall production and reduce cost. I also tried contacting bank for loan, but they were asking for purchase order proof and all, we didn’t have that yet. We also get loan from government under MSME scheme, but it was not enough to buy that machine.”*

He also added: *“The loans provided by banks are difficult to get and at same time they are expensive too. Sometimes they even ask for collateral against Loan, which is not possible for us.”*

He shared about his experience of adopting a machine that promotes sustainability by saving wastage during production. He shares how he tried to buy that machine, but that machine was too expensive for him. Even banks couldn’t provide him with loans as he doesn’t have a proof of return from that machine. He shared hoe this machine can increase their production and productivity. He also shared information about a scheme that government runs to provide funds to MSMEs but said that amount was not enough to buy that machine. He again added that the loans are difficult to get from the bank and high interest rate and they ask for

collateral against the requested loan.

When asked about traditional practices, He Said:

*“When I announced about the machine in my factory, the response of labor of our company was not good. They had a fear in that they will lose their job because of this machine as they don’t have knowledge about it. But to be honest it didn’t stop me from taking the decision to get one for the company.”*

*“It can affect this type of decision sometimes. We don’t have any other choice as this machine is already used by one of our competitors. This machine increases production and accuracy in the product. We couldn’t buy it because of financial issue or else it would have been a different situation.”*

He said traditional practices have an impact on his company’s employees. His employees didn’t want to switch to an advance machine. According to him its because they think this machine will replace them as they didn’t have skills to operate them but said this didn’t affect his decision of buying that machine anyway. But he also said that traditional practices can affect his decisions but because of competition he had to take decision to buy it. But still, he couldn’t do that because they didn’t have funds for that.

## **5. Discussion:**

In this study, the different MSMEs discussed different challenges faced by them in adoption of sustainable practices. All the interviewee shared their experiences and opinions on adoption of sustainability. Number of conclusions can be made by studying the responses we got during interviews.

First, the findings shows that the problem faced by MSMEs were based on the type of product they are manufacturing. Different industry requires different type of knowledge and expertise to implement sustainability practices. Some

industries are highly regulated by government some have free will to do some changes. Like participant 1 own a construction and fire company and he claim that only government support and technology can be helpful in implementation of sustainability. Participant claim changing hiring technique can be helpful in adoption of sustainability by a company.

Second, most of the interviewee claims or agree that most of the MSMEs are resistant to change and try to only follow their traditional practices. The third participant like others claims the challenge of shifting from well-established traditional practices. Traditional Practices followed in the companies are real barriers to the adoption of sustainability. The second participant highlighted challenges associated with persuading well-established organization to take up new ideas. The sixth participant said that traditional practices can affect the decision of SMEs to adopt sustainable technology as employees get used to old technique. Most of the interviewees claim that their employees have hard time adopting new technology that supports sustainability. Employees and management most of the time resist changing well established methods and processes. This resistance is attributed to employees' comfort with the status quo and the hierarchical structure of some organization. This resistance affects the adoption of sustainability and makes the whole process slow. The potential benefit of adopting sustainability gets delayed.

Third, all most all the participant claims, the lack of funds for research and development is also a problem, they are not able to implement sustainable practices. All MSMEs said they are facing difficulties in investing in sustainability dues to limited funds. These businesses most of the time lack the financial resources required for advanced research and development efforts to adapt and implement sustainable solutions. The third participant said, the sustainability can be good way to capture a part of market, but the lack of

guaranteed returns makes investments difficult, particularly for smaller companies. The sixth interviewee also said that he couldn't buy the machine that was important for production and support sustainability because of lack of funds. This financial uncertainty can make business resist from taking the risk of implementing untested sustainable practices.

Fourth, market demand and customer expectations were one of the problems that interviewee stated during interview. The adoption of sustainability depends on customer preferences. If customer is interested in sustainable products or not and ready to pay a premium price for that or not. Participants claimed that their customers most of the time prioritize affordability and durability over products sustainability which creates challenges for businesses trying to introduce sustainability but potentially more expensive solution. Few participants said, external pressures like government rules can push companies towards adopting sustainability to meet new demands.

Fifth, cost and profit margin concerns emerged as a common challenge for participants considering sustainable practices. Many companies, particularly those doing business in competitive markets, expressed concerns about the high initial costs of the sustainable technologies and practices. They prioritize low costs and competitive prices over sustainability, as market demands for that. Anything that doesn't have demand in market, they resist implementing it. Few participants even gave examples for that. The first participant gave example of his industry and explained its competitive nature. The competitive nature of industry like construction, where companies are required offer best prices to secure tenders. This nature most often leads to resistance in implementing sustainable technologies due to their higher costs. The tension between maintaining profitability and adopting sustainability is a common problem in all industries.

Sixth, the Age of the company, one thing that can be observed from the interview is that the old companies are more resistant to change than compared to the new one. Even the first participant gave an example of an old company which is resistant to change to new sustainable technologies.

Participants discussed different barriers to adoption of sustainable practices. Participants have common opinion on few barriers, but solutions suggested by them were different. They gave different solution to same problem as they have their own experience of dealing with issues. The solutions that participants gave were:

First, need for a shift in work culture, participants stated that there is a need of shift in work culture in their companies to encourage the adoption of sustainable practices. Encouraging an open mind and hiring young employees, was suggested by participant to overcome resistance to change. Hiring individuals with fresh perspective and providing them with different opportunities where they can contribute their ideas can help company's transition to more sustainable practices.

Second, Government influence and support, most of the participant believed that government influence is important to promote adoption of sustainability. The first participant mentioned that when government project requires sustainable practices to be involved, the companies will adopt them. This also indicates that government's regulatory and incentive based government initiatives play an important role in encouraging sustainable practices. The fifth participant makes a point that government enforced bans can be helpful in driving sustainability. By eliminating non-sustainable material and different bans will push companies to seek for sustainable options, breaking the resistance of established practices.

## **6. Conclusion and Limitations:**

The aim of this paper has been to analyze the challenges that SMEs faces while adopting sustainable practices in India. Due to the richness of the interview material, a narrative approach was identified as being particularly suitable for understanding the topic under consideration (Parada & Dawson, 2017). This study adopted a narrative approach to explore the main challenges faced by SMEs by discussing their issues and experiences while adopting sustainability. The study examined and assessed acceptability of the content that was collected. This allowed the research to be focused on the key issues that were identified as needing further investigation.

The qualitative research methodology based in-depth interview were effective enough in generating data that answers the study's research question concerning the challenges faced by MSMEs in adopting sustainability practices in India. Study focused on collecting in-depth data from six MSMEs of different industry and sizes.

Most of the conclusion from the discussion verifies the literature review, except the effect of traditional practices and the Age of the company on adoption of sustainability.

Firstly, the traditional practices are one of the barriers discovered during this study. Almost all participant agreed that traditional practices stop them from adopting sustainability. When a company follows certain rules to complete some tasks everyone in the company gets used to it. SMEs are usually a proprietary company. They don't have many departments and there is usually only one person directing them. This is one of the reasons they keep following same traditions as there is no one to put inputs regarding new practices. The more company is in

traditional practices the more it gets difficult for them to adopt sustainability. Even if they have all resources and knowledge to implement sustainability, their employees resist to adopt sustainability because of traditional practices, as they are used to them.

Secondly, the Age of the company is also one of the barriers discovered during this study. It can be observed that newly established companies are more welcoming to sustainable practices than compared to old companies. Old companies usually have more traditional practices than the new one and their employees are also very experienced one and are used to old traditional practices but for newly established company's employees are young and express their ideas in the company.

The possible solution these barriers as discussed with participants were, Firstly, need for shift in work culture of the company. MSMEs should focus on hiring young professional rather than experienced one and give them opportunity to express their ideas to the company. These young professionals are more flexible towards new practices and implementing sustainable practices. This shift will help company adopt sustainable practices with ease, as young employees bring new knowledge and idea to the company. Secondly, Government influence can be helpful in promoting sustainability. Companies has to deal with competition in the market and that effect their decision of adopting sustainability in the company but with the influence of government regulations and incentives can help them adopting sustainability at a faster pace. The government regulations push MSMEs to implement sustainability with healthy competition. The incentives provided by government specially to promote sustainability can be very helpful as it allows MSMEs to invest in sustainability without much hassle and opens doors for all companies doesn't matter you have resources or not.

This study has few limitations too, those limitations are Firstly, taking interview only of the managers and CEO of the company. In this study, responses were taken only from the manager and CEO but taking interview of the employees can be more helpful. It is because sustainability practices are generally followed by their employees only and getting their responses can give their perspective that how they see sustainability practices. Their response is as important as company's official. Unfortunately, getting permission from company's official to take responses from their employees is difficult. But it can be done in further studies. Secondly, this study mostly focused on manufacturing companies in India. Focusing on other sectors can help in analyzing Adoption of sustainability with more details. As discussed earlier, different types of industry faces different problems in adoption of sustainability, focusing on other sectors can help in discovering other barriers to adoption of sustainability.

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## **APPENDIX 1: Interview Questions**

I am Ritik Saini, a student enrolled at Loughborough University. The purpose of this interview is to gather data for the research dissertation component of my academic programme. The objective of this study is to identify the obstacles encountered by Micro, Small, and Medium Enterprises (MSMEs) in India when it comes to adopting sustainability practices. What measures may be implemented to enhance the adoption of sustainability practices among Micro, Small, and Medium Enterprises (MSMEs)?

The duration of this interview will not exceed 30 minutes. The identities of both the individual participant and the associated company will remain confidential during all stages of the study procedure. All responses provided will be treated with strict confidentiality.

Q1. Technology is crucial for sustainability. Sustainable technology like renewable energy systems, energy-efficient machinery and waste management systems are used by companies to adopt sustainability.

Have you adopted or thought of adopting any kind of sustainable technology? Did you face any difficulty?

Q2. Many companies follow their traditional practices for example like the product they manufacture is dependent on resources that are not sustainable or a practice they have been following for a long time that doesn't support sustainability.

Are there any traditional practices that your company follows? Do you think your company's traditional practices might be inhibiting the adoption of sustainability?

Q3. What do you think about the adoption of sustainability in the long term. Do you think it will be profitable for your company? Does this affect your decision to adopt sustainability in anyway?

Q4. The Market responds in different ways to different kind of products. For some product they support adoptability of sustainability and for others, they don't.

Does response from the market influence the adoption of sustainability for your products?

How this gap can be filled?

Q5. When it comes to access to cash, high initial costs, and other obstacles, businesses confront a variety of economic hurdles when attempting to adopt sustainable practise. Have you encountered any economic challenges when adopting sustainability?

Q6. When it comes to adopting sustainable practices, a big obstacle that enterprises confront is a lack of information. There are a lot of smaller businesses that don't have a strong awareness or knowledge about the benefits, strategies, or implementation process linked with sustainability.

Have you ever encountered obstacles in accessing information in the adoption of sustainability?

What strategies do you think could be effective in bridging this information gap?

Q7. SMEs often face substantial barriers posed by legal complications. The incorporation of environmentally conscious practices into day-to-day corporate operations can be hampered by the various legal hurdles and complications.

When it comes to implementing sustainability inside your organisation, have you run into any legal obstacles? If so, please describe them. In light of this, what sorts of measures should the government make?

All these questions were asked to all the participants and other questions were also asked according to the previous answers given by the participant.

## **Appendix 2: Participant Information Sheet**

### **Participant Information Sheet**

#### **Investigators Details:**

Dr Kun Fu (Responsible Investigator), k.fu@lboro.ac.uk  
Mr Ritik Saini (Student Investigator), r.saini-22@student.lboro.ac.uk

#### **School of IIE, Loughborough University, London**

We would like to invite you to take part in our study. Before you decide we would like you to understand why the research is being done and what it would involve for you. One of our team will go through the information sheet with you and answer any questions you have. Talk to others about the study before making a decision if you wish.

#### **What is the purpose of the study?**

The purpose of this study is to find reason why MSMEs are not able to adopt sustainability and how they can do it with existing resources.

#### **Who is doing this research and why?**

This study is part of a postgraduate taught student research project supported by Loughborough

University. The study will be undertaken by Ritik Saini and supervised by Dr Kun Fu.

The study is funded by NA.

**Are there any inclusion or exclusion criteria?**

You must be over the age of 18 and have the capacity to fully understand and consent to this research.

**What will I be asked to do?**

You will be asked to attend an interview to discuss about you companies policies and nature regarding sustainability.

**Will I be asked to attend any sessions and where will these be?**

You will be asked to attend an interview at a time arranged with the investigator.

The interview will take place online

**How long will it take?**

The interview will take no longer than 30 mins

**Once I take part, can I change my mind?**

After you have read this information, asked any questions you may have and decided that you are happy to participate we will ask you to complete an Informed Consent Form. However, if at any time, before, during or after the study you wish to withdraw from the study please just contact the main investigator. You can withdraw at any time, for any reason and you will not be asked to explain your reasons for withdrawing.

Once the results of the study have been analysed (expected to be by 5/09/2023), it may not be possible to withdraw your individual data from the research.

**Is there anything I need to do before the sessions?**

You do not need to do anything before the session.

**Is there anything I need to bring with me?**

You do not need to bring anything with you to the session.

**Are there any disadvantages or risks in participating?**

No disadvantages or risks have been identified.

