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## Sustainable Turkish SMEs: challenges and opportunities in adopting green competitive strategies

### Sürdürülebilir Türk KOBİ'leri: Yeşil Rekabet Stratejilerinin Benimsenmesindeki Zorluklar ve Fırsatlar

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#### Abstract

This study investigates the necessity for Turkish small and medium-sized enterprises (SMEs) to develop green competitive advantages and the challenges they face in this process. It examines how SMEs adopt and implement green competition strategies in light of proactive and reactive environmental strategies. The research was conducted using a case study approach, with data collected through interviews and observations with six SMEs from various sectors in Türkiye. The findings reveal that while most SMEs are willing to adopt green competition strategies, they face difficulties such as lack of financial and technical resources, integrating green strategies into their core business, and complying with local and global legislation. This study provides valuable insights for policymakers, academics, and practitioners interested in promoting sustainable practices among SMEs.

**Keywords:** Green strategies, green competitive advantages, green policies, management, SMEs.


#### Introduction


Competition determines a company's success or failure (Porter, 1985). To attain competitive goals and benefits, a corporation needs to employ a certain strategy. This approach places more emphasis on achieving success than competing in the business world with different rivals. Moreover, a competitive advantage

#### ÖZ

Bu çalışma, Türkiye'deki Küçük ve Orta ölçekli İşletmelerin (KOBİ) yeşil rekabet avantajlarını geliştirmelerinin gerekliliğini ve bu süreçte karşılaştıkları zorlukları ve bu bağlamda, KOBİ'lerin yeşil rekabet stratejilerini, proaktif ve reaktif çevre stratejileri ışığında nasıl benimseyip uyguladıklarını incelemektedir. Bu araştırma, Türkiye'deki çeşitli sektörlerden altı KOBİ ile yapılan görüşmeler ve gözlemler yoluyla toplanan verilerle durum çalışması yaklaşımı kullanılarak gerçekleştirilmiştir. Elde edilen bulgular, çoğu KOBİ'nin yeşil rekabet stratejilerini benimsemeye istekli olmasına rağmen, finansal ve teknik kaynak eksikliği, yeşil stratejileri ana işlerine entegre etme ile yerel ve küresel mevzuata uyum gibi zorluklarla karşılaştıklarını ortaya koymaktadır. Bu çalışma, KOBİ'ler arasında sürdürülebilir uygulamaları teşvik etmekle ilgilenen politika yapımcılara, akademisyenlere ve uygulayıcılara değerli bilgiler sunmaktadır.

**Anahtar Kelimeler:** Yeşil Stratejiler, Yeşil Rekabet Avantajları, Yeşil Politikalar, Yönetim, KOBİ'ler.

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highlights the situation in which other companies are unable to replicate the audacious approach taken to accomplish objectives and advantages (Barney, 1991). According to Barney (1991), this advantage is the main source of a company's capabilities. Hart (1995) notes that environmental and social responsibility is a key capability that ensures appropriate organizational sustainability. Therefore, from the RBV (resource based view) perspective, environmental management should be viewed as a specialty and is a crucial component of company strategy (Hart, 1995). A companies' success or failure is shaped by the influence of its competitors, which requires a specific strategy to achieve its goals and reap its rewards. Among these strategies is Green Competitive Advantage (GCA), first introduced in 2011 and recognized as an important management concept (Bintara et al., 2023).

As global concerns surrounding environmental sustainability and corporate responsibility intensify, SMEs play a pivotal role in contributing to green initiatives and fostering sustainable practices. This paper aims to provide a comprehensive framework for Turkish SMEs seeking to improve their green competitive advantages, thereby positioning themselves as leaders in sustainable business practices. The study examining the current state of environmental consciousness in the global business environment, emphasizing the growing significance of green competitiveness as a key determinant of success. It then delves into what extend SMEs in Türkiye have adopted or prepared to adapt as resource constraints, regulatory environments, and market dynamics.

In the study, initially, the green strategies will be explored by focusing on the importance of environmental management, green competition, green markets and products. In addition, advantages and challenges of adopting green strategies by the Turkish SMEs will be discussed. In the results and discussion parts, the current status of the Turkish SMEs in the context of green competition will be reflected and in the conclusion part, from the data obtained in the study, possible actions to be taken by the SMEs for the sake of efficient adoption of green strategies will be discussed.

## Literature Review

### Ecological Footprint and Environmental Management

According to William E. Rees, one of the first to introduce the concept of ecological footprint, the strategy of business as usual will harm future generations by perpetuating today's destructive way of life. Ecological footprinting is about demonstrating human dependence on nature and what can be done to ensure that the earth has the capacity to sustain humanity in the future. The ecological footprint approach recognizes that humanity is in a difficult situation, and after revealing these difficulties, it directs human beings towards sustainable living (Wackernagel, & Rees, 1998: 3).

From the perspective of businesses today, the concept of ecological footprint affects the way businesses function. Consumers prefer to be able to track the ecological footprint of products in order to minimize the damage they cause to the environment, and this situation triggers the emergence of green businesses. Another reason for the emergence of green strategies is that green business activities contribute to the competitive advantage of the business. Green businesses successfully manage environmental risks. Businesses that successfully manage environmental risks also reduce their operating costs, reduce the cost of capital, increase their value in the stock market and keep insurance premiums at favorable conditions (Esty, & Winston, 2009: 102).

Azzone et al., (1996) explain the strategic behaviors of enterprises in environmental management by dividing them into three general categories: adaptation, acting in advance and innovative attitude. Businesses that apply the adaptation strategy in environmental management act according to the behavior of competitors or the conditions of the market in which they compete. Businesses that apply the strategy of acting in advance, on the other hand, try to be prepared for changes in environmental conditions with a proactive approach while responding to external pressures (Hart & Ahuja, 1996). The pro-active environmental management approach can be explained through the examples of "pollution control" and "clean production".

A wide range of tools and approaches can be used to realize these strategies. Some of these tools and approaches include source reduction, using less harmful raw materials, reducing energy use, and environmentally sensitive design (Potrich, Cortimiglia & de Medeiros, 2019). Businesses that apply innovative strategies in environmental management develop new products or new process technologies that

will lead to changes in management procedures (Hart & Ahuja, 1996). Hart & Ahuja divide the strategic behaviors of businesses in green management into two as pro-active or reactive. With pro-active green strategies, businesses invest in the environment voluntarily and systematically, apart from legal requirements. Reducing waste and preventing pollution at source are examples of these investments. There are different approaches to defining an organization's green strategy as pro-active.

Businesses that go a little above the legal requirements and businesses that are leaders with their sensitivity and investments in environmental issues are also classified as pro-active businesses (Aragón-Correa & Rubio-Lopez, 2007). Reactive environmental strategies, represent a response to environmental pressures that is largely negative in nature. Enterprises that employ such strategies typically implement end-of-pipe technologies to comply with the minimal requirements set by environmental regulatory bodies. This approach aims to minimize the financial investment in environmental protection, thereby reducing the risk of environmental pollution at the lowest possible cost. When addressing stakeholder pressures, reactive environmental strategies primarily focus on meeting regulatory demands imposed by government entities and regulatory agencies (Wang et al., 2020).

### **Green Competitive Strategies**

The concept of green competitive advantage is defined as the conditions that the company has in ecological management or sustainable innovation and can not be imitated by others. It is assumed that green capability has a dynamic structure within the organization and business processes. Building green dynamic capabilities is expected to be reliable and permanent in firms, and smart firms use ecological strategies to shape their green competitiveness (Alam & Islam, 2021). Businesses try to gain competitive advantage with the help of green competitive strategies (Bekk et al., 2016: 1728). Since environmental and sustainability-related promises provide a green competitive advantage, even businesses that do not offer truly environmentally friendly products today are trying to develop a green corporate image and position themselves in this direction. It is thought that Porter's competitive strategies, when applied with a green dimension, will make significant contributions to the competitive advantage of businesses. Porter's competitive strategies of cost leadership, differentiation and focusing will be considered as green competitive strategies in this study, inspired by İlkus (2012).

### **Green Cost Leadership Strategy**

There are certain businesses that compete more successfully in specific industries when they employ the green cost leadership strategy. "Preliminary empirical evidence suggests that eco-efficiency strategies have greater potential to generate competitive advantage in firms that supply industrial markets, face relatively high levels of processing costs, and generate wastes and/or by-products" The majority of businesses in the food and beverage sectors fit into this group. Recycling products is the second way that a green business strategy may be used to accomplish cost leadership. Recycling reduces the amount of raw materials used, which benefits enterprises financially. For instance, in the textile industry, a well-known promotional strategy is to offer clients a discount off the original price when they return worn goods (Orsato, 2006: p. 133).

By cutting expenses as a result of proactive environmental management, a business might obtain a competitive edge. Reducing production inefficiencies, enhancing product design, and avoiding pollution all contribute to lower corporate expenses. A company must reduce waste in its system before putting its cost leadership strategy into action.

Preventing waste and ensuring that the world's resources are used effectively are the goals of green management. By reducing pollutants, expenses can be lowered and efficiency raised. It is believed that pollution is a sign of inefficient use of resources (Molina-Azorín et al., 2009).

According to Christmann (2000), businesses can implement a green cost leadership strategy by increasing their productivity. The reasons for the increase in productivity are the reduction in input costs through better use of inputs or substitutes, savings from recycling and reusing raw materials, and the reduction in waste disposal costs.

According to the research conducted by Christmann in 2000, in the context of green strategies, supporting assets are defined as the assets necessary to implement the best green management activities and to achieve

competitive advantage as a result. In the study, supporting assets are defined as new production technology, equipment and the ability to make technological innovation. are listed. As a result of the research, it was revealed that businesses' ability to create cost superiority through green management practices only depends on the supporting assets of the businesses (Christmann, 2000).

According to Nguyen (2023), a green cost leadership strategy means reducing costs by controlling carbon-intensive raw materials and increasing the cost of "poor environmental performance".

According to Orsato (2006), green cost leadership strategy can be implemented more successfully by some businesses in some sectors. "Preliminary empirical evidence suggests that businesses in industrial markets have more potential to achieve competitive advantage with the help of eco-efficient strategies. This is because they have higher production costs and generate more waste." Many food and beverage businesses fall into this category. Food and beverage businesses can increase their efficiency if they focus on the production process. According to Doyle & Stern (2006); Green cost leadership refers to the abundance of opportunities for cost reduction through source reduction.

For businesses, although green investments are costly, some businesses have to use a green cost leadership strategy instead of green product differentiation. In some sectors, customers prefer both green and affordable products. For example, customers of businesses operating in the packaging business prefer both affordable and environmentally friendly products. The reason for this situation is that businesses have to reduce their prices due to the high competition in the packaging business. On the other hand, there are legal pressures for packaging materials to be green (Orsato, 2006).

### **Green Product Differentiation**

Green product differentiation refers to offering a wide range of green products based on customers' different levels of green demands. In the banking system, for example, green product differentiation can reduce transition risks while enabling green transformation (Nguyen, 2023). According to Reinhardt (1998), in order for an enterprise to implement a green product differentiation strategy, its product should have green benefits or less cost to the environment when compared to similar products. Alternatively, the business should produce its products or services with processes that cause less problems to the environment compared to the production processes of its competitors.

Changes in production processes and the necessity to develop new technologies to produce a new product or service will increase the production costs of the enterprise and this will be reflected in consumer prices. In this case, the business will be able to charge additional fees for its differentiated products. Through the green product differentiation strategy, the business will be able to sell its products at higher prices and gain additional market share. The reason for this situation is the demand of consumers for green products.

Environmentally conscious customers may bear additional costs to protect the earth. Doyle & Stern (2006), green differentiation refers to product differentiation based on superior eco performance. Moreover businesses use eco-labels to increase their market share by adopting a green product differentiation strategy. Eco-labels are a tool adopted by businesses and government bodies to emphasize the ecological quality of products. Since the production and consumption processes of products cannot generally be understood from their external appearance, consumers resort to eco-labels to obtain this information. These labels provide consumers with information about the environmental impacts and ecological performance of products, allowing them to make more informed choices (Brécard et al., 2009).

### **Focus on Green Markets**

According to Nguyen (2023), focusing on green markets is a strategy built on a combination of green cost leadership and green differentiation. It involves pairing a specific green product with a specific product (Nguyen, 2023). Businesses can reach niche markets by focusing on either cost leadership or green product differentiation provided by green competitive strategy. Today, businesses offer environmentally friendly products and services to consumers in niche markets. This is because most green products or services are newly developed and appeal to consumers from the green consumer segment. To exemplify, the segment of both green and economical cars is called "eco-niche". In the automotive sector, the eco-niche market is developing and competition is increasing. According to Andrews and DeVault, the ability of environmentally friendly products to create a niche market depends on the support of green customers.

These green customers constitute the minority of consumers who are willing to buy environmentally friendly products. In addition to being early adopters of green products, green consumers are willing to pay additional fees for these products (Yılmaz & Düren, 2010).

### Advantages of implementing Green strategies by SMEs

SMEs constantly struggle with a lack of funding, resources, and technology. In order to support sustainable growth, a green competitive advantage is essential. A company's distinct set of circumstances that enable it to take a stand on topics like ecological management or sustainable innovation has been identified as a "green competitive advantage". A successful environmental and sustainability strategy that is uncopyable by rivals is another definition of a "green competitive advantage".

If companies wish to gain a green competitive advantage:

- They must engage in imaginative, creative, and ecologically responsible ventures (Prasanna et al., 2019). Creativity requires creating something new by producing new and original products/services. Also called green creativity, this is a green idea to produce products and services that are still original and pro-environment. It requires a strong will to achieve this. When an organization is creative, the organization will be successful, thus improving company performance and competitive advantage in the long run. Sustainable SME performance is the result of serious and genuine efforts produced by SMEs in a sustainable way that includes business, environmental and social performance. Meanwhile, when a company has above-average competitiveness from a pro-environmental perspective, it indicates that the company already has a green competitive advantage (Setyaningrum et al., 2023).
- These days, businesses and society as a whole are focusing more intently on environmental challenges and attempting to improve waste management and productivity. The growing population has given rise to a number of problems, one of which is garbage management. Waste management has become necessary as resource sustainability has gained popularity (Kerdpitak, Mekkhom & Girdwichai, 2019). There is a claim that firms will often be more competitive when they manage their wastes well and redesign their production processes. Companies' emphasis on waste management can have important consequences for SMEs, such as improved financial performance, economic growth, competitive advantage and sustainable development (Derhab, & Elkhwesky, 2023; Kerdpitak, Mekkhom & Girdwichai, 2019).

### Challenges of implementing Green Strategies by SMEs

Implementing green strategies requires additional resources and skills that are not available to SMEs, and management must allocate significant financial resources (new equipment, training, creation of new skills, etc.) without a specific return in the short/medium term, that is, for economic reasons (Dowie, 1993) is difficult.

SMEs have difficulty in announcing their environmental efforts to external stakeholders, and therefore the company must take a serious investment to implement "green" strategies. In addition, companies may avoid green strategies because most customers are not yet willing to pay a high price for environmentally friendly products/processes (because they are not conscious), but governments expect companies to constantly improve their environmental performance, it is inevitable to attach importance to this issue (Dewhurst, 1993). Töepfer's law can be given as an example. It is the law implemented by the German Government, which stipulates that companies should give importance to environmental protection and recycling. At the same time, thanks to this law, companies established in Germany gain a competitive advantage over those who want to enter the German market. Namely, companies that are willing to enter the German market must attach importance to green strategies and environmental protection. This forces them to invest in these areas in order to enter the market.

Large international businesses, non-governmental organizations and environmentally conscious consumers are working to minimize environmental damage, and for this purpose, practices called green supply chain management come to the fore. Such green strategies enable businesses to make efforts to reduce environmental impacts in their supply chain processes. The general view of companies regarding the concept of green supply chain management is that green strategies will have a cost-increasing effect. At the same time, there is a lack of knowledge and experience in green supply chain management in businesses (Coşkun & Bozyiğit, 2017: 2).

## Methodology

### Research Scope and Importance

The study is limited to SMEs based on the main question of how SMEs in Türkiye can develop green competition strategies. A case study was conducted with 6 SMEs from different sectors. Research data was collected by case study method. Case studies focus on a person, group, structure, organization or a case of interest. The findings obtained can be used to understand similar situations (Creswell, 2016).

### Population-Sample

A qualitative research focuses on different aspects of the phenomenon under investigation and aims to reach its various members (Merriam, 2018). Sample selection is also carried out to obtain a more holistic picture by including the diversity, richness, differences and anomalies that may exist in a universe (Yin, 2003). For this purpose, maximum diversity sampling was performed. Thus, it was aimed to include different events in the sample by determining the basic dimensions of diversity. This sampling method makes it easier to access a wide range of data (Suri, 2011). SMEs operating in Türkiye were taken into account in the selection of the interviewer sample of the research. Participants are denoted with the abbreviation "SME" and coded as (SME1), (SME 2), (SME 3), (SME 4), (SME 5) and (SME 6).

### Data collection and Analysis

Qualitative research uses methods such as interviews, observation and document analysis in which perceptions and events are examined realistically and holistically in their natural environments. Interviewing is an effective method used in qualitative research to understand people's perspectives, experiences, feelings and perceptions. Observation, on the other hand, is based on the assumption that events can be understood by observing (Yıldırım & Şimşek, 2013). Two data collection methods were used in this research: interview and observation. A semi-structured form containing open-ended questions was used in the interviews. Opinions were taken from two experts in arranging the questions and the research questions were prepared in the light of the literature review. The research design was determined as a nested multiple case study among qualitative research methods. Data were collected by semi-structured interview method. The analysis method of the research is descriptive content analysis. In order to check the clarity of the research questions, a pilot application was carried out by face-to-face interviews in two enterprises, and the questionnaire was revised as a result of this application. Meetings are limited to 80 minutes. Observations were carried out in the participants' work environments.

### Validity and Reliability

In a qualitative study, validity refers to the ability of the test to measure what it is supposed to measure. Reliability refers to whether the same results are obtained in each case the test is performed. Validity includes reliability, but the reverse is not true in all cases (Goldstein et al., 2011). For validity in research; Strategies of (i) data triangulation, (ii) expert review and (iii) obtaining participant opinion were followed. Data triangulation is the process of verifying data obtained from data sources by at least two different sources. Thus, the weaknesses of the data are compensated by strong data sources (Mays & Pope, 2000). Expert review is one of the ways to ensure the validity and reliability of qualitative research. Review allows reviewing the data and checking whether the findings based on them are valid (Merriam, 2018). Opinions of two experts (Expert 1 and Expert 2) were taken both in coding and theme naming and in evaluating the findings. Participant opinion verification ensures that the comments made by the researcher are checked by reaching the participants and is used to ensure the validity and reliability of the research (Merriam, 2018). In qualitative data analysis, verification of codes refers to examining the findings to confirm them (Miles et al., 2014). Verification ensures that the coding done can be interpreted by different people. It is known as the reliability rate and is calculated with the formula  $[(\text{Number of codes with consensus} / \text{Total number of codes}) \times 100]$  (Özsirkinti & Akay, 2019). According to this coding audit, which reflects internal consistency, consensus among coders must be at least 80% (Patton, 2002). Coding audit was conducted by two participants and showed that consensus was over 85%.

Below is the semi-structured questions used in the study:

- What is your company's attitude towards the adoption of sustainable practices?

- Are You Investing in Green Technology?
- Does your company hold certifications such as ISO 14001 (Environmental Management Systems) or LEED (Leadership in Energy and Environmental Design) to demonstrate commitment to environmental responsibility?
- Are we working with suppliers and partners who share similar sustainability goals? Do they cooperate with environmentally friendly organizations? Have they created a network that promotes common values and practices?
- Do you inform your consumers about the environmentally friendly aspects of your products or services?
- Do you invest in R&D to develop environmentally friendly products or services that meet market demands?
- Are you exploring government programs, grants or incentives designed to support and encourage sustainable practices in your business?
- Do you promote a culture of sustainability among employees? Are employees encouraged to suggest and implement green practices within the organization?
- Do you evaluate the environmental impacts of products throughout their life cycle? Are strategies implemented to minimize this impact, including sustainable sourcing and efficient logistics to reduce carbon footprint?

**Results and Discussion**

In the table below, the available data about the SMEs’ green strategies has been analyzed from various points.

**Table 1.**  
*Analysis of Green Strategies in SMEs*

	SME 1	SME 2	SME 3	SME 4	SME 5	SME 6
<b>Sustainability practices</b>	Yes, investment on hardware for energy efficiency	Yes, production of textile goods from recycled materials	Yes, renewable energy is used in the production plants	Yes, investment is made on hardware for this purpose	No	Yes, included in the vision and mission statements
<b>Investment on green technologies</b>	Yes, investment on green technologies in alignment with the vision statement	No, only recycling practices	Yes, specifically on water saving systems	Yes, recycled metals and environmentally friendly packaging	No	Yes, continuous improvement and investment
<b>International Green Certificates/ Accreditation</b>	Yes, ISO 14001 Environmental Management System	No	Yes, ISO 14001 Environmental Management System	No	No	No, but included in the strategic plan
<b>Partnership with stakeholders with relevant green strategies</b>	Yes	Yes	Yes	No, it is not easy to allocate investment on sustainable processes	No	Yes, joint projects with relevant institutions
<b>Customer notification about green strategies</b>	Yes, regular notifications via interviews	Yes, social media and product labels	Yes, but not to a great extent	Yes, very sensitive about the origin of diamonds	No	Yes, website and product labels
<b>Research &amp; Development for green strategies</b>	Yes, green innovation is company strategy	Yes, there is design center for this purpose	Yes, there is fierce competition for this purpose	Yes, but very recently	No	Yes, R&D on more efficient production and green packaging techniques

<b>Awareness about government incentives for green strategies</b>	Yes, there are numerous projects of the company	No	Yes, but not obtained any yet	Yes, but not obtained any yet	No	Yes, made various incentive applications
<b>In-house training for green strategies/sustainability culture</b>	Yes, it is requirement within the company and stated in the strategic plan	Yes, email notifications and use of labels in the headquarters	Yes, through competitions such as essay competitions	No	No	Yes, there is a training program for this purpose
<b>Awareness of carbon footprint of products</b>	Yes, all through the life cycle of products	No	No	Yes	Yes, very sensitive about government's rules and regulations	Yes, all through the life cycle of products

<b>SME</b>	<b>Sector</b>
<b>SME 1</b>	Automotive
<b>SME 2</b>	Fashion
<b>SME 3</b>	Food
<b>SME 4</b>	Jewelry
<b>SME 5</b>	Clothing
<b>SME 6</b>	Catering

The table has been prepared by the authors.

SMEs are recommended to adopt green competition strategies since in the ever-changing world, the importance of having strategies and solid, decent policies in such a crucial topic as environmental sustainability has become a requirement.

In the interviews with the six SMEs in Türkiye together with the observation process four main themes have been specified regarding the development of green competition requirements, the first of which is the Green Competition Strategies and Competitive Advantage in the implementation process of Green Strategies. SMEs have been adopting green competition strategies such as eco-friendly production processes, use of renewable resources, and energy-efficient machinery. In order for the SMEs to stand out in the market, the strategies are expected to differentiate and have a focus. The strategic benefits are expected to be observed when SMEs invest in sustainable technologies and practices.

In addition, when they can differentiate themselves, attract environmentally-conscious customers, and build a strong brand reputation. This leads to increased customer loyalty, expanded market share, and long-term competitive advantage. However, there is concern of extra costs in the application of green strategies in the case of which governments are expected to implement financial and taxation policies to motivate and lead all institutions in all sectors to internalize green consciousness.

#### SME 1 (Automotive)

*"We can say that we are having a hard time since the competition in the automotive market is very intense and many of the competitors attach importance to green competition strategies."*

Energy efficiency and economic efficiency are two key points regarding the use and development of green competition and strategies. With the reduction of operational costs through energy efficiency and waste management, SMEs obtain competitive advantage and achieve environmental sustainability. Differentiation of products provide companies with a strategic competitive advantage, increase customer loyalty in the long term, expand the market share. However, intensity of competition in different sectors vary. In a sector where both corporations and SMEs exist together, it is not easy for the latter to adopt effective and efficient integration of green strategies.

The awareness of green competition and the process of developing strategies is beneficial for the will of SMEs to differentiate themselves among their rivals in the market by offering niche products that are realized by the commitment to the strategies.



**SME 2 (Fashion)**

*“We focus on niche products so that we can meet the expectations of the environmentally-conscious consumers.”*

Since improved corporate environmental performance brings financial benefits to SMEs as potential sources of competitive advantage, SMEs use proactive environmental management, therefore competition is fierce and most of the time challenging for small and medium-sized companies due to the availability of big corporations doing business in the same market. However, environmental practices that are reactive do not require skills or expertise in the application of new environmental processes. Complete presence in the field of environmental technologies by adopting a proactive management help SMEs to cultivate a culture, increase productivity and efficiency that results in financial benefits, being ahead of the possible changes regarding the environmental legislation. Although the participant states that the application of environmental strategies is challenging, in the long run, they provide the SMEs with more advantages.

**SME 3 (Food)**

*“We, definitely, invest in R&D. Since there is generally very intense competition in our industry, we try to act by seeing green strategies as an element that distinguishes us from our competitors. There are many big players in our industry because we are a supplier to them. Maybe we can do more, but this scope seems sufficient for us right now. After all, everything is cost and we are a commercial enterprise that aims for profit.”*

The second theme that is derived from the interviews and observations is the Challenges for the SMEs in Implementing Green Strategies. As expected, there are sector-specific challenges, different industries face unique challenges in adopting green practices. For example, the automotive sector experiences intense competition, while the jewelry sector struggles with integrating recycled materials and obtaining environmental certifications.

**SME 4 (Jewelry)**

*“We have started investing in Green Technology in the jewelry industry, but it is still very new. We are just discovering sustainable sourcing practices and technologies such as recycled metals and environmentally friendly packaging. After all, our industry is lagging behind. It is not easy to implement every development in our country.”*

The possibility of failure to fully implement green competitive strategies may cause SMEs to fall behind in both differentiation and cost leadership strategies. As a result of this, the SMEs' potential to increase sustainability and competitiveness in the long term is limited, which creates the risk of falling behind in the preferences of environmentally conscious customers in the market. Therefore, it is a necessity for SMEs to make more efforts to accelerate their investments in sustainable practices and effectively implement these strategies. As stated above, the awareness of a challenging situation and having the motive to change is highly linked with the importance of policy-making in handling all sorts of challenging issues. In this specific topic, the SMEs need to be backed by solid and decent green policies of governments, which should be easily-accessible and practical.

In the same context, companies face operational and financial barriers due to a lack of resources, insufficient investment in R&D, absence of certifications, and challenges in partnering with sustainable suppliers. These barriers can impede the full realization of green strategies and affect competitive positioning.

**SME 5 (Clothing)**

*“We are still oriented towards gaining a share in our market. but I think we need a little more time. Because it is not easy to survive in the market. We cannot make any investments for all sorts of green sustainability right now. All our investments are made to those who will take us one step further in terms of machinery and equipment. We are having a hard time, I am trying to do something without any support from anyone.”*

The third theme that is derived from the interviews with the participants from various sectors in the effective and efficient integration of Green Strategies with the SMEs core business. In this sense, the focus and differentiation are the two key paths that are expected to be taken by the SMEs and the participants confirm the fact with their statements. SMEs are leveraging green strategies to focus on specific market segments and differentiate their products.

#### SME 5 (Clothing)

*“We collect old denim that will be thrown away, and recycle it in production phase. I want to offer recycled denim products in the market as a second-hand product. In textile, trends change very frequently. You may have heard that it is now called fast fashion. However, we are actually a bit against it, we want to offer quality haute couture. We want to offer tailor-made denim products. Of course, we will announce this to our customers when we can convert our production fully environmentally friendly.”*

The fourth and the final theme is the compliance with the local and global legislation. Compliance of the green practices with the global and governmental legislation is a catalyst for SMEs to adopt green strategies.

#### SME 6 (Catering)

*“When we comply, we aim to gain advantages such as strengthening our supply chain and increasing our reputation, as well as becoming a more environmentally friendly business. Failure to comply may result in disadvantages such as losing customer trust and facing legal sanctions. That's why we work meticulously on compliance.”*

### Conclusions

This study examined the need for Turkish SMEs to develop green competitive advantages and the challenges of this process. In the light of proactive and reactive environmental strategies, how SMEs adopt and implement green competition strategies was evaluated. It was observed that the majority of SMEs in the interviewed sectors were willing to adopt green competition strategies, but they faced various difficulties such as lack of financial and technical resources. It is undeniable fact that SMEs must be proactive in addressing potential risks such as falling behind competitors in green innovations, missing out on government incentives, and failing to meet evolving consumer expectations. To overcome these challenges, firms should enhance their investment in green technologies, improve marketing and communication of their eco-friendly initiatives, foster collaborations with like-minded partners, and obtain relevant environmental certifications. This holistic approach will strengthen their competitive edge and ensure sustainable growth.

SMEs are adopting green competition strategies such as environmentally friendly production processes, use of renewable resources and energy efficient machinery. The adoption of these strategies is a topic frequently emphasized in the literature. To exemplify, Porter & Linde (1995) state that environmental innovations can provide competitive advantage for firms. Similarly, our research shows that SMEs have the potential to increase market share and strengthen customer loyalty by adopting green strategies. However, considering the additional costs of implementing these strategies, it is emphasized in the study that governments should support SMEs with financial and tax incentives.

The challenges that SMEs face when implementing green strategies are also widely discussed in the literature. For example, Revell, Stokes & Chen (2010) note that small businesses face barriers such as financial and lack of information when undertaking environmental initiatives. Similarly, our study found that SMEs face operational and financial obstacles due to lack of resources, inadequate investment in R&D, lack of certifications, and difficulties in partnering with sustainable suppliers. These findings are consistent with existing literature and suggest that SMEs need more support and guidance to fully implement green strategies. One of the significant necessities that has been observed in the context of green strategies is the policy-making of the governments. Although on paper, almost all governments have the ideal framework for all green issues, in practice, it is not as ideal as it seems. Therefore, whatever policy is developed for the sake of green practices by the governments, it should equally and easily accessible for all institutions, from SMEs to corporations. In the lack of this, unfair competition occurs in the market, which is undeniably more challenging for SMEs.

The integration of green strategies into the core business of SMEs is another important finding of the research. Baumann et al. (2002) emphasize that sustainable business models should be created and these models should be aligned with the strategic goals of businesses. In our study, it was found that SMEs tend to use green strategies to focus on specific market segments and differentiate their products. For instance, it has been observed that SMEs operating in the textile sector try to differentiate their products by using recycled materials. This is consistent with existing literature and highlights the importance of SMEs effectively integrating green strategies to gain competitive advantage in the long term.

The green competition strategies of SMEs in the interviewed sectors are shaped around cost leadership and product differentiation strategies. The findings obtained in the study show that proactive environmental strategies provide long-term competitive advantage to businesses, in line with studies such as Hart & Ahuja (1996) and Aragón-Correa & Rubio-Lopez (2007). The financial difficulties faced by SMEs when implementing green strategies, noted by Dewhurst (1993) and Simon & Dowie (1993), were similarly observed in this study. Studies in the literature generally assume that all sectors attach equal importance to green strategies, but the findings of this study reveal that sectoral differences should not be ignored. According to the study, sectoral differences play an important role in the adoption of green competition strategies. However, the study also has some limitations. For example, the number and diversity of SMEs interviewed may limit the generalizability of the overall results. These limitations can be overcome in future research with a larger sample and interviews with SMEs from different sectors. In addition, mixed method studies that combine both qualitative and quantitative research methods will be useful to academics who want to work in this field, in order to better understand the difficulties faced by SMEs and how they can overcome these difficulties. can be recommended as a facilitator.

### Bibliographic References

- Alam, S. S., & Islam, K. Z. (2021). Examining the role of environmental corporate social responsibility in building green corporate image and green competitive advantage. *International Journal of Corporate Social Responsibility*, 6(1), 8.
- Aragón-Correa, J. A., & Rubio-Lopez, E. A. (2007). Proactive corporate environmental strategies: myths and misunderstandings. *Long range planning*, 40(3), 357-381.
- Azzone, G., Noci, G., Manzini, R., Welford, R., & Young, C. W. (1996). Defining environmental performance indicators: an integrated framework. *Business strategy and the environment*, 5(2), 69-80
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Baumann, H., Boons, F., & Bragd, A. (2002). Mapping the green product development field: engineering, policy and business perspectives. *Journal of cleaner production*, 10(5), 409-425.
- Bekk, M., Spörrle, M., Hedjasie, R., & Kerschreiter, R. (2016). Greening the competitive advantage: antecedents and consequences of green brand equity. *Quality & Quantity*, 50, 1727-1746.
- Bintara, R., Yadiati, W., Zarkasyi, M. W., & Tanzil, N. D. (2023). Management of Green Competitive Advantage: A Systematic Literature Review and Research Agenda. *Economies*, 11(2), 66.
- Brécard, D., Hlaimi, B., Lucas, S., Perraudeau, Y., & Salladarré, F. (2009). Determinants of demand for green products: An application to eco-label demand for fish in Europe. *Ecological economics*, 69(1), 115-125.
- Chernadchuk, T., Kozachok, I., Maletov, D., Pankratova, V., & Steblianko, A. (2023). Organizational and legal provision of the control function of the local self-government body in conditions of sustainable development. *Amazonia Investiga*, 12(62), 258-272. <https://doi.org/10.34069/AI/2023.62.02.26>
- Christmann, P. (2000). Effects of "best practices" of environmental management on cost advantage: The role of complementary assets. *Academy of Management journal*, 43(4), 663-680.
- Coşkun, S., & Bozyiğit, S. (2019). A Field Research on Green Supply Chain Applications in the Chemical Industry. *Dokuz Eylul University Social Sciences Institute Journal*, 21(2), 605-637.
- Creswell, J. W. (2016). *Qualitative research methods: Qualitative research and research design according to five approaches*. Trans. M. Bütün, SB Demir. Ankara: Political Bookstore.
- Derhab, N., & Elkhwesky, Z. (2023). A systematic and critical review of waste management in micro, small and medium-sized enterprises: future directions for theory and practice. *Environmental Science and Pollution Research*, 30(6), 13920-13944.
- Dewhurst, P. (1993). Product Design for Manufacture-Design for Disassembly. *Industrial Engineering*, 25(9), 26-28.
- Dowie, J. (1993). Clinical decision analysis: background and introduction. *Analysing how we reach clinical decisions*, 7-26.
- Doyle, P., & Stern, P. (2006). *Marketing management and strategy*. Pearson Education.
- Esty, D. C., & Winston, A. (2009). *Green to gold: How smart companies use environmental strategy to innovate, create value, and build competitive advantage*. John Wiley & Sons. ISBN-13 978-0470393741
- Goldstein, B. D., Henifin, M. S., Kassirer, J. P., & Kessler, G. (2011). Reference Manual on Scientific Evidence. *Reference Guide on Toxicology*, 633, 685.
- Hart, S. L. (1995). A natural-resource-based view of the firm. *The Academy of Management Review*, 20(4), 986-1014.

- Hart, S. L., & Ahuja, G. (1996). Does it pay to be green? An empirical examination of the relationship between emission reduction and firm performance. *Business strategy and the Environment*, 5(1), 30-37.
- İlkus, Ş. (2012). *The role of green competitive strategies in the sustainability of competitive advantage*. (Unpublished doctoral dissertation), Istanbul University, Institute of Social Sciences. (In Turkey)
- Kerdpitak, C., Mekkhom, W., & Girdwichai, L. (2019). Effective waste management as a predictor of competitive advantage: Mediating role of green purchasing and logistic. *International Journal of Supply Chain Management*, 8(5), 830-841.
- Mays, N., & Pope, C. (2000). Assessing quality in qualitative research. *Bmj*, 320(7226), 50-52.
- Merriam, S.B. (2018). *Research on Nitel: A Guide for Design and Implementation*. Ankara: Atlas. ISBN-13 978-6051332505 (In Turkey)
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- Molina-Azorín, J. F., Claver-Cortés, E., López-Gamero, M. D., & Tarí, J. J. (2009). Green management and financial performance: a literature review. *Management decision*, 47(7), 1080-1100.
- Nguyen, A. (2023, May). Theoretical framework for the influence of crucial factors on green banking strategy implementation. In *International Conference on Emerging Challenges: Strategic Adaptation in The World of Uncertainties (ICECH 2022)* (pp. 253-269). Atlantis Press.
- Orsato, R. J. (2006). Competitive Environmental Strategies: When Does it Pay to be Green. *California Management Review*, 48(2), 127-145.
- Özsirkinti, D., & Akay, C. (2019). The Effectiveness of Pilot In-Service Training Program Developed on Inclusive Practices for Preschool Teachers. *Jass Studies- The Journal of Academic Social Science Studies*, 75, 17-33.
- Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative social work*, 1(3), 261-283.
- Porter, M.E. (1985). Competitive advantage creating and sustaining. *Journal of Business Strategy*, 6, 94.
- Porter, M. E., & Linde, C. V. D. (1995). Toward a new conception of the environment-competitiveness relationship. *Journal of economic perspectives*, 9(4), 97-118.
- Potrich, L., Cortimiglia, M. N., & de Medeiros, J. F. (2019). A systematic literature review on firm-level proactive environmental management. *Journal of environmental management*, 243, 273-286.
- Prasanna, S., Michau, A., Hassouni, K., & Longo, S. (2019). Effect of charge fluctuation on nanoparticle heating in dusty plasma. *Plasma Sources Science and Technology*, 28(3), 03LT03.
- Reinhardt, F. L. (1998). Environmental product differentiation: Implications for corporate strategy. *California management review*, 40(4), 43-73.
- Setyaningrum, R. P., Kholid, M. N., & Susilo, P. (2023). Sustainable SMEs Performance and Green Competitive Advantage: The Role of Green Creativity, Business Independence and Green IT Empowerment. *Sustainability*, 15(15), 12096.
- Revell, A., Stokes, D., & Chen, H. (2010). Small businesses and the environment: turning over a new leaf?. *Business strategy and the environment*, 19(5), 273-288.
- Simon, M., & Dowie, T. (1993). Disassembly process planning. In *Proceedings of the Thirtieth International MATADOR Conference: held in Manchester 31st March–1st April 1993* (pp. 543-549). Macmillan Education UK.
- Suri, H. (2011). Purposeful Sampling in Qualitative Research Synthesis. *Qualitative Research Journal*, 11(2), 63-75.
- Yılmaz, Ş. İ., & Düren, Z. (2010). The role of green business strategies on sustaining competitive advantage. *LAÜ Journal of Social Sciences*, 1(1), 87-96.
- Yin, R.K. (2003). *Case Study Research Design and Methods*. Sage Publications, California.
- Yıldırım, A., & Şimşek, H. (2013). *Qualitative research methods in the social sciences*. Ankara: Seçkin Publishing, 78.
- Wackernagel, M., & Rees, W. (1998). *Our ecological footprint: reducing human impact on the earth* (Vol. 9). New society publishers.
- Wang, L., Li, W., & Qi, L. (2020). Stakeholder pressures and corporate environmental strategies: A meta-analysis. *Sustainability*, 12(3), 1172.