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ARAŞTIRMA MAKALESİ • RESEARCH ARTICLE

BRIDGING SUSTAINABILITY AND MANAGEMENT SYSTEM STANDARDS: A UNIFIED PERSPECTIVE

SÜRDÜRÜLEBİLİRLİK VE YÖNETİM SİSTEMİ STANDARTLARI ARASINDA KÖPRÜ KURMA: BİRLEŞIK BİR BAKIŞ AÇISI

Sinem BÜYÜKSAATÇI KİRİŞ[1]

Dilek YILMAZ[2]

Öz

Yönetim sistemi standartları, kurumsal başarıya ve yenilikçi yaklaşımların benimsenmesine ulaşmayı hedefleyen işletmeler için stratejik araçlar olarak hizmet eder. Bu standartlar işletmeleri, süreç kontrolünü optimize etmek ve hedeflere ulaşmayı artırmak için tasarlanmış bir yönetim felsefesiyle donatır. Hem yöneticiler hem de çalışanlar tarafından etkili bir şekilde içselleştirildiğinde, bu felsefe işletme için önemli faydalar sağlar. Yönetim sistemi standartlarının tutarlı, sistematik ve uzun vadeli uygulanması, bir işletmenin çevresel, sosyal ve yönetişim performansını olumlu yönde etkilerken, aynı zamanda Sürdürülebilir Kalkınma Hedeflerine (SKH) ulaşılmasına da önemli ölçüde katkıda bulunur. Bu standartları stratejik olarak benimseyen ve entegre eden işletmeler, hem operasyonel verimliliği hem de sosyal etkiyi artırabilir ve kendilerini sürdürülebilir kalkınmada lider olarak konumlandırabilirler. Ancak, bu standartların Sürdürülebilir Kalkınma Hedefleri'ne (SKH) ulaşmaya nasıl katkı sağladığına dair pratik mekanizmalar literatürde yeterince araştırılmamıştır. Bu bağlamda bu çalışma; stratejik bir şekilde uygulanan yönetim sistemi standartlarının, sürdürülebilirliğin çevresel, sosyal ve ekonomik boyutlarındaki hedeflerine ulaşmada nasıl bir köprü görevi göreceğine dair bütüncül bir bakış açısı sunarak literatürdeki eksikliği gidermeyi amaçlamaktadır. Vaka çalışması yaklaşımını benimseyen araştırma, önde gelen bir Türk perakende şirketinin benimsediği ISO yönetim sistem standartları ile operasyonlarını sürdürülebilirlik hedefleriyle nasıl uyumlu hale getirdiğini ortaya koymaktadır. Ayrıca vaka analizi, şirkette sera gazı emisyonlarının azaltılması, işyeri güvenliğinin artırılması ve ekonomik dayanıklılığın güçlendirilmesi gibi sürdürülebilirlik ile doğrudan bağlantılı alanlarda ölçülebilir iyileştirmelerin yönetim sistem standartları sayesinde nasıl elde edildiğini ortaya koymaktadır. Bu çalışma, uygulanabilir içgörüler sunarak, yönetim sistem standartlarının yalnızca operasyonel çerçeveler olarak değil, aynı zamanda sürdürülebilirliğin stratejik kolaylaştırıcıları olarak ele alınmasının önemini vurgulamaktadır.

Anahtar Kelimeler: Sürdürülebilirlik, Sürdürülebilirlik Yönetimi, Yönetim Sistem Standartları, Uyumlandırma, Bütünleştirme

JEL Sınıflandırılması: M10, Q01

Abstract

Management system standards serve as strategic instruments for organizations aspiring toward corporate success and the adoption of innovative approaches. These standards equip businesses with a management philosophy designed to optimize process control and enhance goal attainment. When effectively internalized by both managers and employees, this philosophy yields substantial benefits for the organization. Consistent, systematic, and long-term implementation of management system standards positively influences an organization's environmental, social, and governance performance, while also contributing significantly to the achievement of Sustainable Development Goals (SDGs). Organizations that strategically adopt and integrate these standards can thus enhance both operational efficiency and social impact, positioning themselves as leaders in sustainable development. However, the practical mechanisms through which these standards contribute to achieving the Sustainable Development Goals (SDGs) remain insufficiently explored in the literature. This study addresses this gap by offering an integrated perspective on how strategically implemented management system standards can serve as a bridge to achieving the environmental, social and economic dimensions of sustainability. Utilizing a case study approach, the research examines how a leading Turkish retail company leveraged ISO management system standards to align its operations with sustainability objectives. The study further highlights measurable improvements achieved in key sustainability areas, including reductions in greenhouse gas emissions, enhancements in workplace safety, and the strengthening of economic resilience through the effective implementation of management system standards. By

[1]**Sorumlu Yazar:** Assistant Professor, Istanbul University-Cerrahpasa, Engineering Faculty, Industrial Engineering Department, s.buyuksaatcikiris@iuc.edu.tr, 0000-0001-7697-3018.

[2] Assistant Professor, Istanbul University-Cerrahpasa, Engineering Faculty, Industrial Engineering Department, dborekci@iuc.edu.tr, 0000-0002-0055-4869.

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providing actionable insights, this study underscores the critical role of management system standards as not merely operational tools but also as strategic enablers of sustainability.

K**eywords:** Sustainability, sustainability management, management system standards, harmonization, integration

JEL Classification: M10, Q01

Extended Summary

Sustainability has become a vital global concept due to challenges like resource depletion, climate change, and social inequality. This study highlights the need for measurable, structured practices to address these challenges effectively. ISO management system standards offer comprehensive frameworks that enable consistent improvement in sustainability performance. The primary aim of the research is to explore how these standards, when systematically implemented, create a bridge between corporate operations and sustainability goals. By integrating various ISO management system standards, the study demonstrates how organizations can align their activities with sustainability principles under the Triple Bottom Line (TBL) framework.

The research employs a qualitative case study approach, focusing on a pioneering Turkish retail company operating across diverse product categories. Data was collected through semi-structured questionnaires addressing environmental, social, and economic sustainability criteria, supplemented by organizational documents and sustainability reports. The findings indicate that the company employs ISO 14001 and ISO 14064 to enhance environmental sustainability. These standards have been instrumental in reducing greenhouse gas emissions, managing energy consumption, and implementing effective waste management practices, including a zero-waste policy. The company has achieved notable milestones, such as a 74% reduction in plastic bag usage and obtaining the Basic Level Zero Waste Certificate.

In the realm of social sustainability, the company's efforts are guided by ISO 45001, ISO 10002, and ISO 22000 standards. These include comprehensive employee training programs, regular assessments to improve skills and satisfaction, and robust workplace safety measures. Additionally, the company ensures equitable wage policies and promotes inclusivity, as evidenced by the employment of 797 disabled individuals. These efforts reflect a strong commitment to workforce development and social responsibility.

Economic sustainability is supported by ISO 9001, which drives operational efficiency and process improvement. The company's strategies include strengthening supplier partnerships through ethical contracts, investing in research and development, and focusing on digital transformation to enhance online sales channels. These initiatives have contributed to sustainable financial growth and increased retained economic value, further strengthening the company's economic resilience.

A significant finding of the study is that ISO standards are not limited to individual sustainability dimensions but are applicable across multiple areas. For example, ISO 14001 supports both environmental and social sustainability, while ISO 9001 enhances economic performance and supplier relations. This integrative approach fosters organizational cohesion, cross-departmental collaboration, and continuous improvement, enabling the company to address sustainability challenges comprehensively.

In conclusion, the study highlights the strategic importance of ISO management system standards as tools that bridge sustainability practices with corporate objectives. By integrating these frameworks, organizations can achieve measurable progress in sustainability across environmental, social, and economic domains. This research contributes to the literature by exploring the interplay between management system standards and sustainability practices, offering practical insights for businesses seeking to enhance their sustainability efforts.

While the study provides valuable findings, it is limited to a single case study, which may affect its generalizability. Future research could expand on this work by exploring diverse industries and regions to understand how cultural, economic, and regulatory factors influence the implementation of ISO management system standards. Additionally, examining the integration of more recent frameworks, such as circular economy principles, with existing ISO management system standards could offer further insights into sustainable management practices.

Introduction

The concept of sustainability, which gained significant global attention towards the late 1980s, continues to grow in importance. The depletion of energy resources, the accelerating effects of global warming, rising occupational accidents, environmental pollution, and a range of negative social impacts serve as compelling evidence that organizations and businesses must prioritize

sustainability in their operations. To effectively implement sustainability, it is essential that the concept be quantifiable, allowing businesses to internalize and operationalize it. In this regard, sustainability reporting plays a crucial role. Over time, reporting has become increasingly vital, enabling organizations to comprehensively communicate and assess their sustainability performance.

Various reporting frameworks are recognized globally, as well as within Turkey, to enable companies to prepare sustainability reports in a transparent and comprehensible manner. Prominent international frameworks include the G4 Guidelines, published by the Global Reporting Initiative (GRI), the Communication on Progress (COP) reports issued by the United Nations Global Compact (UNGC), the Integrated Reporting (IR) framework developed by the International Integrated Reporting Council (IIRC), and the Carbon Disclosure Project (CDP). These frameworks are dynamic and are subject to periodic revisions to address emerging needs and demands in the field of sustainability reporting.

In Turkey, the BIST Sustainability Index serves as a benchmark for businesses listed on Borsa Istanbul that demonstrate strong sustainability performance. Its primary objective is to foster the gradual enhancement of sustainability knowledge and practices among Turkish companies. Another strategic tool increasingly adopted by businesses to maintain competitiveness is the set of management standards developed by the International Organization for Standardization (ISO). These management system standards, often referred to as meta-standards, are being embraced by a growing number of companies worldwide (Heras-Saizarbitoria and Boiral, 2013). Headquartered in Geneva, Switzerland, the International Organization for Standardization (ISO) operates as an independent, non-governmental international entity, comprising 167 national standards bodies as its members. Through this global network, ISO brings together experts to develop voluntary international standards that foster innovation and address pressing global challenges (ISO, 2023a). ISO management standards promote structural compatibility among organizations by incorporating common features. These standards establish consistent requirements across key areas such as document control, management policies, operational control, training, auditing, monitoring, and evaluation.

To obtain certification for compliance with ISO management standards, businesses must meet a series of specific requirements. Independent third-party auditors assess whether these standards are fulfilled and, if so, issue a certificate of conformity to the business (Su et al., 2015). ISO standards encourage a certain degree of uniformity among organizations. By establishing consistent criteria, ISO management standards help reduce performance variability across suppliers, thereby facilitating more efficient global trade.

A pertinent question arises regarding the integration of management system standards, which are often examined and applied independently, within the context of sustainability management. According to ISO, these management standards possess significant potential to positively influence the environmental, social, and governance (ESG) performance of businesses, thereby contributing to the achievement of the Sustainable Development Goals (ISO, 2023b). In response to this question, the present study investigates how the implementation of management system standards can serve as a bridge to achieving sustainability goals. To explore this, a case study was conducted at a leading retail company operating in Turkey.

This study is outlined as follows: First, the concepts of sustainability and the Triple Bottom Line (TBL) are introduced and discussed. Next, management standards relevant to sustainability are examined in detail. The materials and methods section provides an in-depth description of the case study. In the Analysis section, evaluations are presented based on the three fundamental dimensions of sustainability, as defined by the TBL approach. Finally, the study concludes with a discussion of the findings and offers recommendations for future research.

1. Sustainability and Triple Bottom Line (TBL)

The concept of "sustainability," derived from the Latin word *sustenare*, meaning "to sustain" or "to support," has its roots in early environmental thought. The first documented definition of sustainability in the literature dates back to 1713. In his book Sylvicultura Oeconomica, Hans Carl von Carlowitz, a German forestry engineer, defined sustainability as "the balance between the cutting down of old trees and the availability of sufficient trees to replace them" (Kiriş & Börekçi, 2018; Wühle, 2023). This early definition laid the groundwork for the modern understanding of sustainability, which has since evolved into a broader concept with global significance. The

widespread popularization of the concept of sustainability can be attributed to the 1987 report *Our Common Future*, published by Gro Harlem Brundtland, the President of the World Commission on Environment and Development. In this seminal report, sustainable development is defined as "meeting today's needs without compromising the ability of future generations to meet their own needs" (Brundtland, 1987).

Another key concept in sustainability literature is the "Triple Bottom Line" (TBL), introduced by John Elkington in 1994. Building upon the foundation of sustainability, the TBL framework provides a comprehensive approach to assessing a business's performance across three critical dimensions: economic, social, and environmental. According to Elkington (1999), "Sustainable development involves the simultaneous pursuit of economic prosperity, environmental quality, and social equity. Companies committed to sustainability should be evaluated based on a triple bottom line, not solely on financial outcomes." As this statement suggests, sustainability encompasses not only economic success but also a company's impact on society and the environment. Since all aspects of sustainability are interconnected, they all require equal attention (Vijerathne et al., 2025).

The economic dimension of the TBL framework pertains to the impact of business practices on the broader economic system. It emphasizes the economic value that businesses generate for their surrounding environment in ways that foster enrichment and enhance the capacity to sustain future generations. In some studies, this dimension is also referred to as the "financial" dimension. The environmental dimension of TBL focuses on adopting practices that ensure the preservation of environmental resources, aiming to prevent their depletion or degradation for the benefit of future generations. This dimension includes criteria such as the efficient use of energy resources, reduction of greenhouse gas emissions, minimization of waste, avoidance of hazardous or toxic substances, reduction of ecological footprint, development of green products, promotion of recycling and reuse, and consideration of end-of-life. The social dimension of the TBL framework relates to business practices that promote fairness and benefit labor, human capital, and society at large. It highlights the relationship between the organization and the community, addressing issues such as community engagement, participation in local development initiatives, employee relations, fair compensation, access to health insurance, education, and equal opportunities. It also encompasses the promotion of diversity, enhancement of quality of life, support for democratic

processes, and the establishment of accountable governance structures (Elkington, 1997; Gimenez et al., 2012; Savitz, 2013; Sahoo and Upadhyay, 2024; Cantele et al., 2024). Business success is realized when economic, environmental, and social dimensions are strategically integrated and maintained in equilibrium, aligning with the principles of the Triple TBL framework. This holistic approach ensures sustainable growth, long-term profitability, and positive societal impact (Nogueira et al., 2025)

By encompassing economic, social, and environmental dimensions, the Triple Bottom Line (TBL) framework aligns closely with the United Nations Sustainable Development Goals (SDGs). Organizations that adopt the TBL approach can directly contribute to the achievement of these globally recognized goals. Moreover, the TBL framework's alignment with international sustainability initiatives—such as the Paris Agreement and the 2030 Agenda for Sustainable Development—further enhances its applicability and relevance (Nica et al, 2025).

2. Management System Standards Related to Sustainability

There are several widely recognized standards that businesses adopt to ensure long-term success and promote sustainability practices. These standards incorporate numerous features aligned with sustainability principles, thereby enabling organizations to more effectively pursue and achieve their sustainability goals. This section examines the content of these standards and the specific sustainability criteria they address.

2.1. ISO 9001 Quality Management System Standard

The ISO 9000 Quality Standards Series comprises a set of standards published by the International Organization for Standardization (ISO) to establish and enhance quality management systems within organizations. These standards aim to improve operational efficiency and increase customer satisfaction by following the PDCA (Plan-Develop-Check-Act) model (Jacob et al., 2025). Among this series, ISO 9001 delineates the specific requirements for implementing a quality management system and is recognized as one of the most widely adopted quality management standards worldwide. ISO 9001 standards can be implemented by any organization, regardless of its size, nature, or industry (Camango and Cândido, C. 2023). The latest version, ISO 9001:2015, serves as the current benchmark for certification within the ISO 9000 series (Medić et al., 2016). Due to its

emphasis on leadership, strategic planning, operational processes, and risk management, this version incorporates significant revisions to the standard's structure and focus (Gyekye et al., 2024).

The implementation of the ISO 9001 quality management system aims to enhance organizational performance while establishing a robust foundation for sustainable development initiatives. Effective organizational performance is typically characterized by four primary factors: improvement in product or service quality, increased workforce efficiency and effectiveness, cost optimization alongside performance gains, and elevated employee satisfaction (Bakhtiar et al., 2023). As a strategic decision adopted by organizations, the potential advantages of this standard have been extensively examined in the literature and are commonly categorized into two main groups: internal and external benefits. According to Fonseca and Domingues (2017), the internal benefits of implementing the ISO 9001 quality management system include the following:

- Improvements in operational management, such as increased efficiency, cost reductions, decreased rates of rejections and complaints, and the elimination of non-value-added activities.
- Enhancement in service and product quality, ensuring greater consistency and reliability.
- Increased organizational effectiveness, achieved through strengthened internal controls, improved training, and more effective communication processes.
- Greater confidence in quality standards and heightened quality awareness throughout the organization.
- Enhanced employee participation, fostering higher levels of engagement and collaboration.
- Improvements in the work environment, contributing to overall job satisfaction and productivity.

Collectively, these benefits support organizations in achieving sustainable operational excellence and long-term strategic goals.

The external benefits of adopting the ISO 9001 quality management system are outlined as follows (Fonseca and Domingues, 2017; Cândido and Ferreira, 2023):

- Enhanced customer service, resulting in more effective responsiveness to customer needs.
- Increased customer satisfaction, fostering long-term loyalty and trust.

- Marketing advantages, including access to new markets, an improved corporate image, and growth in sales and market share.
- Stronger relationships with customers, contributing to better communication and collaboration.
- Reduction in customer complaints, demonstrating improved service and product quality.
- Improvement in supplier quality, leading to reduced need for inspections and greater supply chain efficiency.
- Enhanced company image, making the company more attractive to customers, partners, and investors.
- Increase in market share, can gain a competitive advantage, allowing them to capture a larger share of the market.

The ISO 9001 standard is founded on the quality management system principles outlined in ISO 9000. These principles, often regarded as integral components of sustainability criteria, are critical for fostering long-term organizational success. As identified by Wilson and Campbell (2016), the core principles include:

- Customer focus
- Leadership
- Participation of people
- Process approach
- Improvement
- Evidence-based decision making
- Relationship management

2.2. ISO 14001 Environmental Management System Standard

The ISO 14000 family of environmental management standards offers tools for organizations of all types to effectively manage their environmental responsibilities. Key standards within this family — most notably ISO 14001:2015 —, focus on the establishment and maintenance of environmental management systems, while others address specific environmental challenges.

These include standards for auditing, communication, labeling, and life cycle analysis, providing a comprehensive framework for promoting environmental sustainability.

ISO 14001:2015 outlines the requirements for an environmental management system that organizations can adopt to enhance their environmental performance. The primary goal of ISO 14001:2015 is to provide a structured framework that enables organizations to respond effectively to changing environmental conditions, addressing both environmental protection and socio-economic needs. Additionally, it supports the environmental dimension of sustainability by ensuring that environmental responsibilities are managed through a systematic and proactive approach.

For a company or organization to achieve the intended outcomes in improving its environmental performance, it must establish, implement, maintain, and continuously improve an environmental management system in accordance with the requirements of the ISO 14001:2015 standard (Da Fonseca, 2015). The ISO 14001:2015 standard can be implemented, either in part or as a whole, to improve processes and environmental performance (Neves et al., 2024)

The systematic approach established through the ISO 14001:2015 environmental management system standard incorporates the following criteria to ensure long-term success and contribute to sustainable development:

- Protecting the environment by preventing or mitigating adverse environmental impacts,
- Reducing the potential negative effects of environmental conditions on the organization,
- Enhancing overall environmental performance,
- Managing the manufacturing, consumption, and disposal of the organization's products and services through a life cycle approach, thereby preventing unintended increases in environmental impacts throughout the product life cycle,
- Achieving planned financial and operational benefits by implementing environmentally sound alternatives that strengthen the organization’s market position,
- Communicating environmental information to relevant stakeholders (Pesce et al., 2018).

2.3. ISO 45001 Occupational Health and Safety Management System Standard

ISO 45001:2018 is an international standard for occupational health and safety management systems, introduced as a replacement for OHSAS 18001. A primary objective of this transition is to streamline the integration process with other widely recognized international management standards, particularly the ISO 9001:2015 quality management system and the ISO 14001:2015 environmental management system (Jannah et al., 2020).

The ISO 45001:2018 Occupational Health and Safety Management System Standard outlines a comprehensive set of activities aimed at preventing work-related injuries and health issues among employees while ensuring the provision of safe and healthy workplaces. The responsibility for health and safety extends across the entire organization, encompassing not only the well-being of employees but also that of other individuals impacted by the organization's activities. This responsibility entails the promotion and protection of physical, psychological, and mental health (Morgado et al., 2019). The ISO 45001 standard is universally applicable to organizations of all types, industries, and sizes (Johanes et al., 2023).

Achieving ISO 45001:2018 certification offers several potential benefits for organizations, including increased productivity, reduced costs associated with downtime, production losses, and defects, as well as lower insurance premiums and fewer lost workdays. Additionally, it leads to decreased costs related to accidents, reduced absenteeism, and lower employee turnover. Other advantages include enhanced employee morale, motivation, and satisfaction, improved product quality and service delivery, a positive corporate image, and increased stakeholders' satisfaction (Fahmi et al., 2021).

The ISO 45001 also aligns with the United Nations Sustainable Development Goals (SDGs), specifically reinforcing Goal 3, which focuses on ensuring healthy lives and promoting well-being for all ages, and Goal 8, which advocates for sustained, inclusive, and sustainable economic growth, along with full, productive employment and decent work for all (Podrecca et al., 2024). The sustainable criteria outlined within the framework of the ISO 45001:2018 standard are as follows:

- Implementing and assessing the compliance of the organization's occupational health and safety management system,
- Continuously improving occupational health and safety performance,
- Reducing workplace risks,
- Ensuring employee participation in the development, planning, and ongoing improvement of the occupational health and safety management system, under the leadership of senior management,
- Understanding and addressing the needs of employees.

2.4. ISO 22000 Food Safety Management Standard

Access to reliable products and the efficient use of resources are fundamental factors influencing competitiveness. Global trends indicate that food will become one of the most strategically critical products in the future. In this context, consumer demand is increasingly significant, as consumers seek assurances regarding the safety and reliability of the products they purchase. The ISO 22000 Food Safety Management System Standard addresses the prevention, elimination, and control of food safety hazards from production through to consumption. Given that food safety risks can emerge at every stage of the food production process; it is essential for companies across the food supply chain to implement appropriate measures to ensure food safety.

The ISO 22000 Food Safety Management System provides comprehensive guidelines for businesses to plan, design, operate, maintain, and continuously improve their food safety management systems to enhance overall effectiveness. By adopting ISO 22000, businesses can foster greater customer confidence in the safety of their products, leading to increased customer satisfaction. Organizations with an ISO 22000-certified management system can assure their recipients that products are manufactured, transported, and stored in strict compliance with the highest safety standards (Granja et al., 2021). Furthermore, compliance with the ISO 22000 standard signals to all relevant stakeholders in the food supply chain that the business adheres to food safety requirements in accordance with applicable laws and regulations (Agus et al., 2020).

The sustainability-related criteria outlined in the ISO 22000 standard can be categorized under the following headings:

- Establishing and communicating a food safety policy,
- Ongoing updates to the food safety management system as part of a continuous improvement process,
- Management of product and process nonconformities,
- Identification and determination of critical control points,
- Conducting hazard analysis to identify and mitigate potential risks.

2.5. ISO 10002 Customer Satisfaction Management Standard

As competition has intensified over time, the concept of the customer has become increasingly critical for businesses. Growing customer expectations — often varying from one individual to another — have made it more challenging to manage these expectations effectively. The inability to meet such demands through traditional methods has underscored the need for a more systematic approach. To address this, the ISO 10002 Customer Satisfaction Management System Standard was developed.

ISO 10002 provides documented guidance for the design and implementation of an effective complaint handling process. The standard emphasizes that one of the key benefits of effective complaint management is the maintenance or enhancement of customer loyalty. Although ISO 10002 was developed to be compatible with the ISO 9000 quality management system, it can also be implemented independently (Ang and Buttle, 2006).

An ISO 10002:2004-based complaints handling system can serve two key objectives within an organization. First, the satisfactory resolution of individual complaints helps restore customer satisfaction. Second, feedback derived from complaints can be utilized to enhance both the complaints handling system and the product and/or service themselves (Hughes and Karapetrovic, 2006). Moreover, when complaints are managed effectively, organizations —regardless of their size, location, or sector—can enhance their reputation.

When considering the ISO 10002 standard within the framework of sustainability, the following key aspects can be identified:

- Establishing a process that is transparent and responsive to customer complaints,
- Adopting a customer-centric approach to effectively resolve complaints,

- Analyzing and evaluating complaints to enhance the quality of products and services, including customer service,
- Allocating sufficient resources, including staff training, and ensuring the active participation and commitment of top management.

2.6. ISO 26000 Corporate Social Responsibility Standard

The importance of socially responsible behavior and its associated benefits are increasingly acknowledged by companies and their stakeholders worldwide. Social responsibility primarily aims to contribute to sustainable development by addressing the social and environmental impacts of organizational activities. Over the long term, it becomes evident that the viability of all organizations is intrinsically tied to the health and resilience of the global ecosystem.

An organization's performance in social responsibility significantly influences various aspects of its operations and relationships. As highlighted by Saeidi et al. (2015), these effects include:

- Enhancing competitive advantage, positioning the organization favorably in its industry.
- Improving reputation, fostering trust and credibility among stakeholders.
- Strengthening employee, member, and customer retention, ensuring stability within the organization.
- Promoting employee loyalty, which contributes to higher engagement and productivity.
- Shaping the perceptions of investors, owners, and sponsors, influencing their continued support and confidence.
- Fostering positive relationships with the media, suppliers, customers, and the broader society in which the organization operates.

The ISO 26000 standard offers comprehensive guidance on how companies and organizations can operate in a socially responsible manner. This standard evaluates the key characteristics of social responsibility and its connection to sustainable development, while also recommending a thorough review of the social responsibility principles it outlines.

The key issues related to sustainable development within the framework of the ISO 26000:2010 standard are outlined as follows:

- Corporate governance
- Human rights
- Labor practices
- Environmental sustainability
- Fair business practices
- Consumer issues
- Community involvement and development (Valmohammadi, 2014; Zhao et al., 2022).

2.7. ISO 31000 Risk Management System Standard

The ISO 31000 Risk Management System Standard is used to guide risk management, decision-making, goal-setting, the achievement of objectives, and performance improvement for individuals who create and protect value within companies or organizations. The latest version, ISO 31000:2018, is not intended for certification purposes but offers valuable guidance for conducting internal or external audits (Dali and Lajtha, 2012). Organizations that implement this standard are assessed according to internationally recognized risk management criteria, ensuring a structured and consistent approach to identifying, evaluating, and mitigating risks.

While the ISO 31000:2018 outlines general principles and guidelines for managing organizational risks, its application may vary based on the specific context and needs of each organization. This standard offers a common framework for risk management but is not tailored to any particular sector or industry (Gjerdrum and Peter, 2011). Its flexibility enables organizations from a wide range of fields to adapt the guidelines to their unique challenges, promoting a standardized yet customizable approach to effective risk management.

The ISO 31000 has been widely adopted across various sectors, including construction, agroindustry, supply chain management, public services, transportation, education, logistics, research and development (R&D), information technology (IT), and healthcare (Widianti, 2024).

3. Material and Method

In this study, a detailed examination was conducted through a case study approach. A case study is defined in the literature as a multifaceted qualitative research method that is particularly suited for comprehensive, holistic, and in-depth investigation of complex subjects, where the boundary

between content and context is often unclear and multiple variables are involved. These complex subjects can include phenomena, events, situations, organizations, individuals, or groups (Harrison et al., 2017). Case studies are widely recognized as a powerful research method employed to achieve various objectives, such as providing explanations, testing theories, and exploring relationships (Yin, 2009; Welch et al., 2020).

For the case study, a leading retail company in Turkey — known for its pioneering role in the retail sector — was selected. The company operates in the food and consumer goods sector, offering a diverse range of products including cosmetics, stationery, glassware, electronics, books, and textiles in its stores. Furthermore, the company has established a sustainability committee tasked with managing, monitoring, and implementing sustainability initiatives. This committee includes the participation of managers from all key functional areas of the organization. The company's sustainability report is developed based on the inputs provided by the sustainability committee and its affiliated working groups, and is subsequently approved by senior management. The report is prepared in accordance with the GRI Standards: Core option. Additionally, the company annually reports its efforts to combat climate change and manage water consumption to the Carbon Disclosure Project (CDP).

The retail sector was chosen for this study due to its significant role in shaping economic activity and its extensive influence on consumer behavior. As one of the largest contributors to environmental and social impacts, the retail sector represents a critical domain for the implementation of sustainability practices. Moreover, the sector's diverse and multifaceted operations provide a rich context for analyzing the practical application and integration of management system standards in addressing sustainability challenges across environmental, social, and economic dimensions.

Semi-structured questions were developed for the case analysis and subsequently sent to relevant company representatives via email. Careful attention was paid to the selection and sequencing of the questions and to ensure that the semi-structured format would provide the necessary data for the analysis of this study. Table 1 presents the questions used in the case analysis:

Table 1: Case Study Questions

Basic Questions	1. Do you have a current standard/management system for sustainability management? 2. Which management system standards do you apply? 3. Do you have a management system standard that you apply for business continuity and risk management?
What are your current works/improvements regarding the topics listed below?	
Questions About Environmental Sustainability	1. Greenhouse gas emissions (NO_2, CO_2 etc.) 2. Energy consumption (electricity, natural gas etc.) 3. Recycled waste (Total amount of recycled waste) 4. Water use 5. Amount of hazardous waste 6. Global warming/climate change 7. Do you have projects carried out within the framework of environmental sustainability? 8. Do you have a management system standard in the field of environmental sustainability? 9. Do you effectively use the management system standard you use for the environmental sustainability dimension in all sustainability studies? 10. Which department(s) are involved in your studies related to environmental sustainability?
Questions About Social Sustainability	1. Total number of employees 2. Blue-collar/white-collar ratio among total employees 3. Female/male ratio among total employees 4. Your practices regarding the development of employee skills 5. Total number/hours of training provided to employees 6. Work accident frequency rate 7. Number of employees under 30, between 31-50, and over 50 8. Number of disabled employees 9. Your work on protecting the health and safety of your employees 10. Implementation of a fair wage policy for employees 11. What are the efforts made for employee satisfaction? 12. Do you have a management system standard in the field of social sustainability? 13. Do you effectively use the management system standard you use for the social sustainability dimension in all sustainability studies? 14. Which department(s) are involved in your studies related to social sustainability?

Questions About Economic Sustainability	1. R&D investments 2. Improvement of economic conditions 3. Is there progress in market presence? 4. Do you have a management system standard in the field of economic sustainability? 5. Do you effectively use the management system standard you use for the economic sustainability dimension in all sustainability studies? 6. Which department(s) are involved in your studies related to economic sustainability?

4. Analysis and Findings

In this section of the study, the responses received from the retail company within the scope of the case study are analysed in detail under the three core dimensions of sustainability—economic, environmental, and social—according to the Triple Bottom Line (TBL) approach.

4.1. Environmental Sustainability Dimension

In analyzing the environmental sustainability dimension of the company, the environmental sustainability criteria outlined in the previous sections of this study were considered. First, greenhouse gas emissions for the years 2017, 2018, and 2019 were examined, and the results are presented in Table 2:

Table 2: Greenhouse gas emissions

Resource	2017	2018	2019
Scope 1 (mt CO^2e)	223.339	225.129	265.117
Scope 2 (mt CO^2e)	195.841	228.067	243.558
Scope 3 (mt CO^2e)	76.814	84.984	103.923
TOTAL (mt CO^2e)	495.994	538.180	612.597

The 2019 emission values for Scope 1, Scope 2, and Scope 3 have been verified and documented following inspections conducted by the British Standards Institution (BSI).

Energy consumption, including electricity and natural gas, has been assessed within the context of environmental sustainability. The findings related to this criterion are presented in Table 3:

Table 3: Energy Consumption

Resource	2016	2017	2018	2019
Electricity	417.362	421.617	490.994	565.249
Natural Gas	8.159	6.104	7.182	7.956
Diesel	13.999	14.629	15.459	15.025

Gasoline	21	55	43,6	788
TOTAL	439.541	442.405	513.679	589.018

Waste management holds a significant position within the framework of environmental sustainability. Tables 4 and 5 provide detailed insights into this aspect, with Table 4 presenting the quantities of recycled waste, and Table 5 outlining the disposal methods and corresponding amounts categorized by waste types.

Table 4: Recycled Waste

Waste Type	2017	2018	2019
Packaging Waste Amounts	12.600	16.813	17.173
Amount of Electronic Waste Collected from Customers	95	211	92
Amount of Waste Batteries Collected	3	3,5	4,5
Amount of Plant Waste Collected	23	28	30

Table 5: Hazardous/Non-Hazardous Recyclable Wastes

Resource	Disposal Type	AMOUNT (TONS)		
		2017	2018	2019
Non-Hazardous	Recycling/ Recovery	12.695,05	17.024	17.264,24
	Reuse/ Animal Feed	193	327	550
	Biogas/ Compost	4.728	5.281	5.200
	Delivered to Municipality	22.766	24.420	29.360
	Donation to Stray Animals	281	641,1	894
	Donation to Food Banks	58	528	1.424
Hazardous	Recycling/ Recovery	24	6,1	5.494
	Biodiesel	23	28	30
	Incineration	1,23	0,735	4,46

An analysis of Tables 4 and 5 reveals an upward trend in the amount of recycled waste over the years, culminating in a notable increase in the most recent year. Additionally, Table 6 provides data on water consumption, which constitutes another critical criterion of environmental sustainability.

Table 6: Water Consumption

Water consumption	2017	2018	2019
Sales Area Daily water consumption amount per m2	0,0017	0,0016	0,0021
Water Consumption Amount by Source (Trend Water m3)	747.246	859.014	1.235.162
Water Consumption Amount by Source (Well Water m3)	13.906	25.776	47.375

The final data set analyzed within the scope of environmental sustainability pertains to performance metrics associated with the goal of mitigating climate change, a factor that holds one of the most

significant roles among environmental sustainability criteria. To address global warming and climate change, electricity consumption and greenhouse gas emissions were evaluated. Additionally, the company submits annual reports to the Carbon Disclosure Project (CDP) to monitor its performance and progress in combating climate change.

Table 7: Global Warming/Climate Change Studies

Performance Table by Target					
	KPI	**Target Year**	**2019 Performance**	**Performance According to Target Year**	**Base Year**
Electricity Consumption	KWh/m^2.day	2024	16,30%	In progress	2013
Greenhouse Gas Emissions	$MtCO_2e/m^2$.day	2023	26,60%	Completed	2015

Zero waste represents a fundamental objective within the waste management philosophy, emphasizing the prevention of waste generation, efficient resource utilization, identification and minimization of waste causes, and the segregation and recovery of waste at its source. Companies embarking on the Zero Waste journey are certified across four levels: Basic, Silver, Gold, and Platinum.

The case company, committed to the principles of zero waste generation, achieved a significant milestone by obtaining the Basic Level Zero Waste Certificate in 2020. This accomplishment highlights the company's dedication to sustainable practices and marks an important step in its progression toward higher levels of certification. Building on this achievement, the company aims to secure Zero Waste Certification across all its facilities. Furthermore, significant progress has been made in reducing plastic waste, with the use of plastic bags decreasing by 74% compared to the previous year, reflecting the company's commitment to sustainable waste management practices.

The case company holds the ISO 14001 certification to enhance its environmental performance, uphold its environmental responsibilities, and provide management with a systematic framework that contributes to environmental protection. In addition to ISO 14001, the company also adheres to the ISO 14064 standard, which is specifically focused on the calculation and verification of greenhouse gas emissions. This standard, known as the Greenhouse Gas Calculation and Verification Management System, is crucial for accurately determining, monitoring, and reporting greenhouse gas emissions, which plays a key role in efforts to mitigate climate change (ISO, 2019). The company discussed in this study has implemented these standards to ensure a comprehensive

approach to environmental sustainability and to support its ongoing efforts to reduce its environmental impact.

In accordance with the information provided, the integration of sustainability criteria within the environmental dimension with the relevant management system standards is outlined in Table 8. This table presents the connection between specific sustainability goals, such as waste management, greenhouse gas emissions reduction, and energy consumption, and the corresponding management system standards, including ISO 14001 and ISO 14064, that support the company's environmental sustainability efforts. The table serves as a comprehensive overview of how each sustainability criterion aligns with the adopted standards to ensure systematic and measurable progress toward environmental objectives.

Table 8: Environmental Sustainability Criteria Considered in the Company and the Management System Standards They Integrate With

Environmental Sustainability Criteria	**Management System Standard**	
Global Warming/Climate Change	ISO 14001 Environmental Management System (Climate Change Mitigation)	ISO 14001 Environmental Management System (Protection of Biodiversity and Ecosystem)
Greenhouse Gas Emissions	ISO 14064 Greenhouse Gas Calculation and Verification Management System (Greenhouse Gas Calculation)	
Energy Consumption	ISO 14001 Environmental Management System (Sustainable Resource Use)	ISO 14001 Environmental Management System (Aim of Improving Environmental Performance)
Recycled Waste		
Water Use		
Amount of Hazardous Waste		

4.2. Social Sustainability Dimension

In analyzing the social sustainability dimension of the company, the specific questions related to this dimension, as outlined in the materials and methods section, were carefully followed. The analysis primarily focused on the employees, who play a crucial role in this dimension. Initially, the distribution of employees within the company was examined, and the results of this analysis are presented in Table 9. This table provides a detailed breakdown of the workforce, offering insights into various aspects such as employee demographics, roles, and other relevant factors that contribute to the social sustainability efforts of the company.

Table 9: Distribution of Employees in the Company

Feature	Number	Feature	Number
Female	18000 (%40)	**Under 30**	19350 (%43)
Male	27000 (%60)	**Between 30-55**	24750 (%55)
Total	45000	**Over 50**	900 (%2)
Administrative Units and Store Manager	7650 (%17)		
Store Employee	37350 (%83)		

In addition to the data presented in Table 9, the company also meets the disabled employee criterion, which is a key component of its social sustainability efforts. The company currently employs 797 disabled individuals, reflecting its commitment to promoting diversity, inclusion, and equal opportunities within the workforce.

To foster the development of its employees' skills, the company conducts a biennial, two-stage competency and potential assessment process known as "360° Feedback and Personal Assessment" for administrative unit employees and store managers. The objective of this assessment is to identify both the strengths and areas for development of employees, enabling the creation of tailored development plans. Furthermore, a total of 372 employees have successfully completed the Manager Development Program, highlighting the company's commitment to leadership development.

Table 10 presents a comprehensive overview of the training programs and investments made by the company to enhance employee skills, reflecting the company's ongoing commitment to workforce development and talent growth.

Table 10: Specific Studies for the Development of Employee Skills

	2019
Corporate Policies Training	44143 employee
Field, Classroom and Online Training	38426 employee
Total	1030000 (employee x day) training
Employee Investments	17 million ₺

Another important criterion within the social sustainability dimension is work accidents. Table 11 presents detailed information on work accidents within the case company, broken down by year. This data is essential for assessing the company's safety performance and its efforts to minimize workplace risks, ensuring a safe and healthy environment for all employees.

Table 11: Work Accidents

Work Accidents	2017	2018	2019
Work Accident Severity Rate (lost days)	27,9	19,7	19,4
Work Accident Severity Rate (lost hours)	0,022	0,015	0,015

Another key aspect analyzed within the framework of social sustainability is the company's wage policy. In alignment with its commitment to fairness, the company upholds a fair wage policy, ensuring that there are no discrepancies in wages or fringe benefits based on gender for employees performing similar duties. Furthermore, the company promotes transparency in its compensation practices by providing employees with a clear and accessible wage guide, ensuring that the wage system is understood and accessible to all members of the workforce.

In order to ensure employee satisfaction, a key focus of the case study as outlined in the Materials and Methods section, the company conducts an annual "Employee Loyalty and Satisfaction Survey." To further support employee well-being, the company offers a range of benefits, including private health insurance, life insurance, and personal accident insurance for both store employees and administrative unit staff. Additionally, 20,500 calls were resolved through the established employee support line, addressing various concerns and issues raised by employees.

The employee loyalty rate saw a 2-point increase compared to the previous year, reaching 69 percent in 2019, reflecting improvements in employee engagement and satisfaction. The corporate communication and employee relations teams continue to work proactively to foster a supportive work environment, ensuring that employee concerns are addressed and their needs are met in a timely manner.

In alignment with the information provided, Table 12 outlines the integration of sustainability criteria within the social dimension with the relevant management system standards. This table highlights how specific social sustainability objectives, such as employee satisfaction, fair wage policies, and health and safety measures, are aligned with applicable management system standards to ensure systematic and effective implementation. The standards referenced in this table demonstrate the company's commitment to social sustainability through structured processes and continuous improvement.

Table 12: Social Sustainability Criteria Considered in the Company and the Management System Standards They Integrate With

Social Sustainability Criteria	Management System Standard
Developing Employee Skills	ISO 10002 Customer Satisfaction Management System (Personnel Training)
Work Accidents	ISO 45001 Occupational Health and Safety Management System (Implementation of Occupational Health and Safety Management System)
Employee Health and Safety	ISO 45001 Occupational Health and Safety Management System (Continuous Improvement of Occupational Health and Safety Performance)
Fair Wage Policy Employee Satisfaction	ISO 45001 Occupational Health and Safety Management System (Understanding Employees' Needs)
Product Responsibility	ISO 22000 Food Safety Management System (Control of Product and Process Non-Compliances) ISO 10002 Customer Satisfaction Management System (Improving Product and Service Quality)
Risk Management	ISO 22000 Food Safety Management System (Hazard Analysis) ISO 45001 Occupational Health and Safety Management System (Reducing Workplace Risks)

4.3. Economic Sustainability Dimension

In analyzing the economic sustainability dimension of the company, economic growth was assessed by first examining the income and expense items, as presented in Table 13. This analysis provides a comprehensive overview of the company's financial performance, highlighting key revenue streams and expenditures.

Table 13: Direct Economic Values Produced and Distributed

	%	000 ₺
Income (Net Sales)	100,0%	23.191.364
Distributed Economic Value	86,7%	20.114.896
Operating Expenses	13,4%	3.112.900
Cost of Sales (Payments to Suppliers)	73,2%	16.986.111
Employee Expenses and Benefits	10%	2.317.764
Bank Interest Expenses (Net)	2%	466.250
Payments to the State - Tax Payments	0,1%	15.593
Donations Made	0,0%	292
Retained Economic Value	13,3%	3.076.468

Another key criterion within the economic sustainability dimension relates to the company's approach to supplier relationships. The company prioritizes sustainable growth in collaboration with its suppliers, ensuring mutual development and long-term success. By designing its business model to strengthen supplier partnerships, the company fosters a collaborative environment that

promotes shared growth. This approach enables the delivery of accessible, reliable, and healthy products to customers, while simultaneously supporting the economic sustainability of both the company and its suppliers.

In all contracts with suppliers within the company's operations in Turkey, Ethical Rules are established to ensure compliance with key principles, including the prevention of bribery and corruption, respect for human rights and labor standards, occupational health and safety, and environmental protection. Additionally, the company conducts regular supply chain risk assessments to identify and mitigate potential issues. Annual targets related to supplier performance and sustainability are closely monitored and reported. The number of suppliers, tracked by year, is presented in Table 14, providing insight into the company's growing network of sustainable and ethically aligned partners.

Table 14: Total Number of Suppliers

	2017	**2018**	**2019**
Total Supplier	2.028	1.901	1.863
Total New Supplier	247	199	299

Another critical aspect of sustainable growth within the company under study is its focus on digital transformation and the corresponding investments in research and development (R&D) in this area. To ensure easy access to products for customers, the company has developed various online sales channels. Products are delivered to customers through four distinct online sales platforms, with collaborations in place to enhance these digital operations. To further support online sales, mini e-commerce warehouses have been established in select store locations. This strategy is aimed at increasing product efficiency and service quality, ensuring that the company remains competitive and responsive to the evolving needs of customers in the digital age.

In line with the information provided, Table 15 outlines the integration of sustainability criteria within the economic dimension with the relevant management system standards. This table highlights how specific economic sustainability objectives, such as supplier relationships, business practices, and R&D investments, are aligned with applicable management system standards. By incorporating these standards, the company ensures that its economic growth strategies are systematically implemented and continuously improved, supporting long-term economic sustainability.

Tablo 15: Economic Sustainability Criteria Considered in the Company and the Management System Standards They Integrate With

Economic Sustainability Criteria	Management System Standard
Improving Economic Conditions	ISO 9001 Quality Management System (Improvement-Process Approach)
R&D Investments	ISO 9001 Quality Management System (Improvement)
Supplier Relations	ISO 10002 Customer Satisfaction Management System (Improvement)
	ISO 9001 Quality Management System (Process Approach-Involvement of People)

Discussion

It is often observed that different managerial approaches and tools implemented within organizations are typically treated as separate entities, without consideration of their interconnections. In fact, disregarding the relationships between these approaches and treating them as standalone solutions is considered a form of bias (Loch and Wu, 2007). This study, however, aims to explore the interactions and integrated use of ISO management system standards in conjunction with sustainability practices, recognizing the potential synergies between these frameworks and their collective impact on organizational performance and sustainability goals.

ISO standards are frameworks developed by the International Organization for Standardization (ISO) to define industrial dynamics and establish quality benchmarks across various sectors. These standards guide organizations in determining quality expectations tailored to the evolving requirements of different industries, helping them improve and manage their processes effectively. Among the most commonly adopted standards are the ISO 9001 Quality Management System Standard and the ISO 14001 Environmental Management System Standard, which focus on process improvement and environmental sustainability, respectively. In addition to these, other standards such as the ISO 45001 Occupational Health and Safety Management System Standard, ISO 10002 Customer Satisfaction Management System Standard, and ISO 22000 Food Safety Management System Standard are also widely implemented. These standards address specific areas of organizational operations, including health and safety, customer satisfaction, and food safety, and are designed to help businesses maintain compliance, improve performance, and ensure stakeholder trust across multiple domains.

This study examines how the implementation of management system standards creates a bridge to achieving sustainability goals, focusing on their harmonization and integration with sustainability

practices. A case study was conducted on a leading company in the Turkish retail sector, which operates in diverse categories such as cosmetics, stationery, glassware, electronics, books, textiles, as well as food and everyday necessities. Semi-structured questions were sent to the company, and based on the responses provided and the analysis of related documents, the study explores the sustainability criteria across the three key dimensions of sustainability—social, economic, and environmental—and their integration with the management system standards. This approach provides a comprehensive understanding of how these standards support and enhance the company's sustainability practices across various operational areas.

Firstly, the studies conducted within the scope of environmental sustainability in the company were examined, revealing that these efforts align with the ISO 14001 and ISO 14064 standards, which are recognized as the Environmental Management System Standards. In the realm of social sustainability, the company has implemented numerous comprehensive initiatives, with the social sustainability criteria closely matching the ISO 10002, ISO 45001, and ISO 22000 standards used by the company. These standards significantly contribute to the company's efforts in promoting social sustainability. The economic sustainability dimension is further supported by the existence of the ISO 9001 standard, which facilitates the optimization of processes and the improvement of overall organizational efficiency. Additionally, the company's commitment to sustainable growth is reinforced through its supplier management practices, in line with ISO 26000, which focuses on social responsibility. These standards collectively provide a strong foundation for the company's economic sustainability efforts, ensuring that business operations not only meet financial goals but also contribute positively to the broader social and environmental context.

It has been determined, as discussed in the second part of the study, that the company does not hold the ISO 31000 Risk Management System Standard or the ISO 26000 Social Responsibility Management Standard. However, it was observed that the company effectively achieves sustainability in these areas by utilizing one or more alternative standards. This finding clearly demonstrates the feasibility of using interchangeable standards to achieve sustainability goals, underscoring the flexibility of management system standards in supporting diverse sustainability initiatives.

Another key outcome of the study is that a management system standard is not confined to just one sustainability dimension. The case study clearly demonstrated that some management system standards can be applied effectively across multiple sustainability areas. This finding highlights the importance of aligning and harmonizing the implementation of management system standards with sustainability initiatives, which may be carried out by different teams under the supervision of various departments. When these applications are interrelated and mutually supportive, they can provide organizational benefits that extend beyond individual departments. In particular, the fact that management system standards pave the way for integrated, cross-departmental collaboration plays a crucial role in achieving holistic sustainability goals and fostering continuous improvement within the organization.

This study enhances the emerging and expanding body of literature on the interplay between management system standards and sustainability. The study makes a significant contribution to the literature by exploring the role of management system standards in bridging corporate operations and sustainability goals. The originality of the research lies in its demonstration of how these standards (e.g., ISO 9001, ISO 14001, ISO 45001) function not merely as tools for operational improvements but as strategic frameworks that advance environmental, social, and economic sustainability objectives. By presenting an integrative and multidimensional application of these standards, this research introduces an innovative perspective that emerges from the interplay of different disciplines.

Furthermore, the study adopts a case analysis of a pioneering retail company in Turkey, offering a detailed examination of specific sustainability practices such as zero-waste policies, innovative employee training programs, and investments in digital transformation. The findings illustrate how these initiatives contribute not only to operational success but also to broader social and environmental impacts. This comprehensive approach highlights the synergistic potential of harmonizing management system standards with sustainability efforts across multiple dimensions.

By providing an integrated framework that guides organizations in achieving measurable progress toward sustainability, this research offers valuable insights for both practitioners and scholars. It establishes a foundation for future studies to explore similar applications across diverse sectors and contexts, thereby contributing to the development of more sustainable business practices globally.

This study has certain limitations that provide opportunities for future exploration. First, the analysis focuses on a single case study of a retail company, which may limit the generalizability of the findings to other sectors or organizational contexts. While the selected company is a leader in its sector, the results may not fully reflect the challenges and opportunities faced by smaller or less resource-intensive organizations. Second, the study primarily relies on self-reported data obtained through semi-structured questionnaires and sustainability reports, which may introduce biases or omit critical external perspectives. Third, the scope of the research is confined to existing management system standards, leaving unexplored the potential impact of newer frameworks or innovative practices in sustainability management. Additionally, while the study highlights the integration of standards with sustainability dimensions, it does not delve into the financial costs or resource implications of implementing such systems.

Future research could explore the broader applicability of management system standards in enhancing sustainability outcomes across diverse organizational contexts. Investigations into the synergy between these standards and other sustainability-focused frameworks, such as circular economy principles or carbon neutrality initiatives, may provide deeper insights into their complementary roles. Additionally, comparative studies across industries and regions could reveal how cultural, economic, and regulatory factors influence the effectiveness of these standards in achieving sustainability goals.

References

Agus, P., Ratna Setyowati, P., Arman, H. A., Masduki, A., Innocentius, B., Priyono Budi, S., & Otta Breman, S. (2020). The effect of implementation integrated management system ISO 9001, ISO 14001, ISO 22000 and ISO 45001 on Indonesian food industries performance. *Test Engineering and Management*, 82(20), 14054-14069.

Ang, L., & Buttle, F. (2006). Customer retention management processes: A quantitative study. *European journal of marketing*, 40(1/2), 83-99.

Bakhtiar, A., Nugraha, A., Suliantoro, H., & Pujotomo, D. (2023). The effect of quality management system (ISO 9001) on operational performance of various organizations in Indonesia. *Cogent Business & Management*, 10(2), 2203304.

Cândido, C. J., & Ferreira, L. M. (2023). ISO 9001 internal decertification motivations: exploring barriers and benefits of certification as withdrawal antecedents. *Production Planning & Control*, 34(4), 330-344.

Camango, C., & Cândido, C. J. (2023). ISO 9001 maintenance, decertification and recertification: a systematic literature review. *Total Quality Management & Business Excellence,* 34(13-14), 1764-1796.

Cantele, S., Landi, S., & Vernizzi, S. (2024). Measuring corporate sustainability in its multidimensionality: A formative approach to integrate ESG and triple bottom line approaches. *Business Strategy and the Environment*, 33(7), 7383-7408.

Da Fonseca, L. M. C. M. (2015). ISO 14001: 2015: An improved tool for sustainability. *Journal of Industrial Engineering and Management*, 8(1), 37-50.

Dali, A., & Lajtha, C. 2012, ISO 31000 risk management—"The gold standard". *EDPACS*, 45(5), 1-8.

Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California management review*, 36(2), 90-100.

Elkington, J. (1997). The triple bottom line. *Environmental management: Readings and cases*, 2, 49-66.

Elkington, J., & Rowlands, I. H. (1999). Cannibals with forks: The triple bottom line of 21st century business. *Alternatives Journal*, 25(4), 42.

Fahmi, K., Mustofa, A., Rochmad, I., Sulastri, E., Wahyuni, I. S., & Irwansyah, I. (2021). Effect of ISO 9001: 2015, ISO 14001: 2015 and ISO 45001: 2018 on operational performance of automotive industries. *Journal of Industrial Engineering & Management Research*, 2(1), 13-25.

Fonseca, L., & Domingues, J. P. (2017). ISO 9001: 2015 edition-management, quality and value. *International journal of quality research*, 1(11), 149-158.

Gimenez, C., Sierra, V., & Rodon, J. (2012). Sustainable operations: Their impact on the triple bottom line. *International journal of production economics*, 140(1), 149-159.

Gjerdrum, D., & Peter, M. (2011). The new international standard on the practice of risk management–A comparison of ISO 31000: 2009 and the COSO ERM framework. *Risk Management*, 31(21), 8-12.

Granja, N., Domingues, P., Cabecinhas, M., Zimon, D., & Sampaio, P. (2021). ISO 22000 certification: diffusion in Europe. *Resources*, 10(10), 100.

Gyekye, K. A., Agana, J. A., Mireku, K., Domeher, D., & Koranteng, E. T. (2024). The effect of corporate social responsibility on firm performance: Insights from ISO 9001-certified manufacturing firms in Ghana. *Corporate Social Responsibility and Environmental Management*, 31(3), 1667-1676.

Harrison, H., Birks, M., Franklin, R., & Mills, J. (2017, January). Case study research: Foundations and methodological orientations. In Forum qualitative Sozialforschung/Forum: qualitative social research (Vol. 18, No. 1).

Heras-Saizarbitoria, I., & Boiral, O. (2013). ISO 9001 and ISO 14001: towards a research agenda on management system standards. *International Journal of Management Reviews*, 15(1), 47-65.

Hughes, S., & Karapetrovic, S. (2006). ISO 10002 complaints handling system: a study. *International Journal of Quality & Reliability Management*, 23(9), 1158-1175.

ISO (2023a), "About us. International organization for standardization", available at: https://www.iso.org/about-us.html.

ISO (2023b), "How ISO standards help meet the SDGs", International Organization for Standardization, available at: https://www.iso.org/sdgs.htm.

Jacob, L. A., Gandure, J., & Kommula, V. P. (2025). Investigation of sustainability failures of ISO 9001 quality management system–a case of Botswana. *International Journal of Quality & Reliability Management*, 42(1), 33-60.

Jannah, M., Fahlevi, M., Paulina, J., Nugroho, B. S., Purwanto, A., Subarkah, M. A., & Cahyono, Y. (2020). Effect of ISO 9001, ISO 45001 and ISO 14000 toward financial performance of Indonesian manufacturing. *Systematic Reviews in Pharmacy*, 11(10), 894-902.

Johanes, M., Mark, M., & Steven, J. (2023). A global review of implementation of occupational safety and health management systems for the period 1970–2020. *International Journal of Occupational Safety and Ergonomics*, 29(2), 821-836.

Kiriş, S. B., & Börekçi, D. Y. (2018). Sürdürülebilir Liman İşletmeciliğini Yönlendirici ve Engelleyici Faktörler: Bir Üçlü Bilanço Yaklaşımı. *İstanbul Gelişim Üniversitesi Sosyal Bilimler Dergisi*, 5(1), 192-220.

Loch, C.H. & Wu, Y. (2007). Behavioral operations management: Foundations and Trends in Technology, *Information and Operations Management*, 1(3): 121-232.

Medić, S., Karlović, B., & Cindrić, Z. (2016). New standard ISO 9001: 2015 and its effect on organisations. *Interdisciplinary Description of Complex Systems: INDECS*, 14(2), 188-193.

Morgado, L., Silva, F. J. G., & Fonseca, L. M. (2019). Mapping occupational health and safety management systems in Portugal: outlook for ISO 45001: 2018 adoption. *Procedia manufacturing*, 38, 755-764.

Neves, M. E. D., Reis, S., Reis, P., & Dias, A. G. (2024). Impact of ISO 14001 and ISO 9001 adoption on corporate performance: evidence on a bank-based system. *International Journal of Productivity and Performance Management*, 73(5), 1641-1667.

Nica, I., Chiriță, N., & Georgescu, I. (2025). Triple Bottom Line in Sustainable Development: A Comprehensive Bibliometric Analysis. *Sustainability*, 17(5), 1932.

Nogueira, E., Gomes, S., & Lopes, J. M. (2025). Unveiling triple bottom line's influence on business performance. *Discover Sustainability*, 6(1), 43.

Pesce, M., Shi, C., Critto, A., Wang, X., & Marcomini, A. (2018). SWOT analysis of the application of international standard ISO 14001 in the Chinese context. A case study of Guangdong Province. *Sustainability*, 10(9), 3196.

Podrecca, M., Molinaro, M., Sartor, M., & Orzes, G. (2024). The impact of ISO 45001 on firms' performance: An empirical analysis. *Corporate Social Responsibility and Environmental Management*, 31, 4581–4595.

Saeidi, S. P., Sofian, S., Saeidi, P., Saeidi, S. P., & Saaeidi, S. A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of business research*, 68(2), 341-350.

Sahoo, S., & Upadhyay, A. (2024). Improving triple bottom line (TBL) performance: analyzing impacts of industry 4.0, lean six sigma and circular supply chain management. *Annals of Operations Research*, 1-32.

Savitz, A. (2013). *The triple bottom line: how today's best-run companies are achieving economic, social and environmental success-and how you can too*. John Wiley & Sons.

Stigzelius, I., & Mark-Herbert, C. (2009). Tailoring corporate responsibility to suppliers: Managing SA8000 in Indian garment manufacturing. *Scandinavian Journal of Management*, 25(1), 46-56.

Su, H. C., Dhanorkar, S., & Linderman, K. (2015). A competitive advantage from the implementation timing of ISO management standards. *Journal of Operations Management*, 37, 31-44.

Valmohammadi, C. (2014). Impact of corporate social responsibility practices on organizational performance: an ISO 26000 perspective. *Social Responsibility Journal*.

Vijerathne, D. T., Wahala, W. M. P. S. B., Rathnasiri, M. S. H., De Silva, V., & Dewasiri, N. J. (2025). Literature review on sustainability. *Greening Our Economy for a Sustainable Future*, 33-45.

Welch, C., Piekkari, R., Plakoyiannaki, E., & Paavilainen-Mäntymäki, E. (2020). Theorising from case studies: Towards a pluralist future for international business research. Research methods in international business, 171-220.

Widianti, T., Firdaus, H., & Rakhmawati, T. (2024). Mapping the landscape: a bibliometric analysis of ISO 31000. *International Journal of Quality & Reliability Management*, 41(7), 1783-1810

Wilson, J. P., & Campbell, L. (2016). Developing a knowledge management policy for ISO 9001: 2015. *Journal of Knowledge Management*, 20(4), 829-844.,

Wühle, M. (2023). *Making Sustainability Measurable: A Practical Book for Sustainable Living and Working*. Springer Nature.

Yin, R. K. (2009). Case study research: Design and methods (Vol. 5). sage.

Zhao, W., Zhang, J., Liu, X., & Jiang, Z. (2022). Application of ISO 26000 in digital education during COVID-19. *Ain Shams Engineering Journal*, 13(3), 101630.