**The Design and Use of Management Control Systems to Support
The Achievement of Sustainability Agenda**
A Comparative Study on Swedish and Indonesian Companies

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Abstract

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Seminar date: 30 May 2024

Course: BUSN79 Degree Project in Accounting and Finance

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Five key words: Management Control System, MCS package, Sustainability, Developed countries, and Developing countries

Purpose: The purpose of this study is to examine how companies in developed and developing countries have designed and utilized their MCSs to support the accomplishment of their sustainability agenda. The developed country is represented by Sweden, meanwhile, the developing country is represented by Indonesia.

Methodology: This thesis utilized a qualitative approach to gain new insights on the topic. Data was collected through semi-structured interviews with four companies in Sweden and Indonesia. These respondents had expertise and knowledge in sustainability practice, thus they expressed their perspectives on the implementation of MCS to support the sustainability agenda.

Theoretical perspectives: The theoretical data is based on Malmi and Brown's MCS framework (2008). The MCS package includes five controls that can be utilized as an analytical tool to conduct a full study of the organization's sustainability strategy. The MCS package consists of cultural controls, planning controls, cybernetic controls, reward and compensation controls, and administrative controls.

Empirical foundation: The Swedish companies (Duni Group and Rug Company) have different sustainability agendas. Duni Group focuses on environmental issues. Conversely, Rug Company has an equal focus on achieving environmental, social, and economic goals. As an Indonesian company representing a developing country, PHI and energy companies are prioritized to handle environmental issues due to the nature of their operations. Regardless of their approach and goals in their sustainability program, the four case companies demonstrate the implementation of management systems (MCS) to support their sustainability programs. Therefore, the distinction between the four companies in the case is not related to their country classification, whether in developed or developing countries.

Conclusions: The integration of corporate sustainability agendas varies between companies in developed and developing countries. Despite these differences, all companies strive to align their sustainability strategies with organizational goals, though the companies face challenges such as establishing structured reward systems and solid budgeting approaches. Addressing these challenges is crucial for fostering fully integrated MCS that support sustainability goals and create positive societal impacts in demonstrating a global commitment to sustainable business practices.

Acknowledgments

This thesis has been written to fulfill one of the requirements for obtaining a Master's Degree in Accounting and Finance at Lund University, School of Economics and Management. It represents a significant milestone in our academic journey, made possible by the guidance, support, and encouragement of several individuals.

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1. Introduction

1.1 Background

The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 as a global call to action to end poverty, safeguard the environment, and guarantee that by 2030 all people will live in peace and prosperity. When the SDGs were first introduced, many organizations viewed them as mere tools for corporate philanthropy unrelated to their main business strategies, especially since these initiatives are often implemented at the expense of profitability (PwC, 2008). However, this perspective has gradually changed over time as corporations have come to realize that their responses to these challenges can be considered investments in opportunities that potentially lead to more efficient operations. Ridho et. al (2018) highlight that the private sector in every country plays a crucial role in ensuring the achievement of sustainable development goals. Companies may contribute by transforming their organizational strategies to align sustainable development with their business models and overall objectives (OECD, 2016).

The increasing urgency to address sustainability issues through the consistent messages conveyed by the SDGs has simultaneously raised both society's awareness and stakeholders' demands of organizations to be more responsible in carrying out businesses as well. For many years, sustainability was just a merely "nice-to-have" aspect in influencing consumers' purchasing decisions. However, Reichheld et al. (2023) through research on consumption patterns have pointed out that consumers' perspectives on the importance of sustainability are about to shift, and organizations of all industries should gradually extend their sustainability efforts to win over the trust of the customers. In response to this changing behavior, companies increasingly recognize that adopting sustainable business practices can provide them with a competitive edge (Porter and Kramer, 2011).

Organizations continue to demonstrate strong financial and organizational commitments to address social and environmental challenges (Epstein, 2018). One apparent reason is the growing pressure from stakeholders that demand companies incorporate sustainability into their business innovation operations (Ardito, 2023). Companies need to handle resource scarcity and societal issues to benefit from the transformational power of development by making sustainability a success factor (Hahn and Scheermesser, 2006). According to PwC (2003), sustainability embedded in the business model could enhance productivity improvements, cost savings, risk reduction, human resource gains, and increase reputation. The insights from sustainable business activities give opportunities to reshape strategies for growth. Therefore, integrating a sustainability vision into a business model in the organization is crucial (Arjaliès & Mundy, 2013).

The 2023 Deloitte report, focusing on the study of organizations' journey toward sustainability, shows that 48% of the surveyed organizations, ranging from small and medium-sized enterprises to larger organizations across various industries, are actively working on a sustainability plan driven by diverse purposes and priorities. Several organizations prioritize compliance with regulations or gaining a competitive edge, while others prioritize meeting employee and board

expectations. However, despite companies' increasing sustainability initiatives, their sustainability agendas which consist of all the strategies and plans to address social and environmental issues often lack strategic thinking and thus tend to be ineffective (Pinelli & Maiolini, 2017; Baumgartner & Ebner, 2010; Porter & Kramer, 2011). Beusch et al. (2022) further emphasize that there are ongoing challenges for the majority of organizations in effectively incorporating sustainability within their corporate strategies and executing it across their business operations. These challenges mainly originate from managers' perspectives that sustainability impacts are difficult to measure and financial, environmental, and social objectives often overlap with one another (Hart and Milstein, 2003; Porter & Kramer, 2011). Therefore, when organizations have determined the sustainability challenges they want to address, they need to translate them into specific objectives and align them with stakeholders' concerns through the use of management control systems (Durden, 2008). Management control systems (MCSs) can further help foster a strategic balance between coordination and decentralization within different levels of organizational functions in implementing the defined sustainability strategies (Naranjo-Gil, 2016). Overall, the integration of sustainability into organizational strategy through management control systems can offer a clearer understanding of the potential effects of social and environmental changes and problems on a company, thus continuously directing organizations toward the achievement of their sustainability agendas (Gond et al., 2012; Bebbington & Thomson, 2013).

1.2 Problematization

Management control systems play a significant part in identifying emerging threats and opportunities, facilitating environmental decision-making and coordination by managers, promoting goal and value congruence between the individual and the organization, and facilitating learning (Arjaliès & Mundy, 2013). However, despite the increasing attention to sustainability issues over the years, organizations still struggle with integrating sustainability into their corporate strategies (Kiron et al., 2012; Engert et al., 2016; Beusch et al., 2022). Furthermore, the environmental, economic, and socio-political issues we face today have made it increasingly complicated to implement a sustainable development plan (Dhandapani & Venkataraman, 2022).

It is crucial to acknowledge that each region across the globe faces its distinct set of issues and priorities when it comes to sustainability challenges. Although there is generally consistent acknowledgment of the urgency of global sustainability challenges worldwide, the perception and prioritization of sustainability challenges differ between developed and developing countries, influencing how corporations in these regions approach sustainability initiatives (Barkemeyer, 2011). Barkemeyer (2011) argues that although both developed and developing countries view environmental challenges similarly, developing countries tend to address socioeconomic issues more than developed countries. Stanislavská et al. (2020) emphasize that developing countries generally focus more on sustainability initiatives associated with activities that are considered to be the responsibility of the government such as education, healthcare, child labor, and human rights. On the other hand, companies in developed countries often face pressures from stakeholders

to be more proactive in integrating sustainability initiatives into their business operations. They pay more attention to issues such as green marketing or climate change concerns, gender equality, work-life balance, or the integration of disadvantaged groups (Stanislavská et al., 2020).

Rahangmetan (2011) states that society should not anticipate developing countries to accomplish sustainability as easily as developed countries. For developing countries, sustainable development should be viewed as a tool to understand factors such as poverty and rapid urbanization which further serve as indicators of the possibility of economic advancement. To achieve sustainability in those countries, it is crucial to prioritize policies that improve the living conditions of the people. Therefore, organizations in both developed and developing countries should effectively tailor their management controls to align with the emerging sustainability challenges in their respective countries.

Sweden as a developed country is often mentioned as a success story when it comes to sustainability. For many years, Sweden has always been in the top three of various sustainable ranking lists, especially due to the country's strict environmental policies and governmental initiatives with clear objectives both nationwide and internationally (Mänsson, 2016). Sweden also regulates sustainability reporting and makes it mandatory for companies that in the last two financial years have either more than the average number of 250 employees, a balance sheet total exceeding SEK 175 million, or a net turnover exceeding SEK 350 million (The Annual Accounts Act, n.d.). Overall, Sweden's perspective on sustainability is built upon the interdependence between environmental, social, and economic factors and how they are addressed simultaneously, leading to the country's success in balancing economic growth with environmental preservation and social well-being (Brasier, 2023).

On the contrary, Indonesia is a developing country with a lot of potential but still struggles to achieve sustainability. Despite its growing economy, at least 25.9 million people are living in poverty in Indonesia (Badan Pusat Statistik Indonesia, 2023). The country can prioritize sustainability and raise awareness only when the fundamental needs of the people and access to education are met (Silviana, 2023). Indonesia has made significant changes in the sustainability reporting landscape over the years. Sustainability reporting has become mandatory for banks since 2019 and listed companies since 2020, which was further postponed to 2021 due to COVID-2019 (PwC, 2023). Unlike Sweden which is consistently on the top of sustainable ranking lists, Indonesia still has a long way to go to reach a similar level of awareness. However, Indonesia has made remarkable progress over the past five years, initially ranking 102nd in 2019 and now standing at 75th as of 2023 (United Nations Sustainable Development Report, 2023).

Figure 1.1 Sweden vs Indonesia Performance by SDG (Sustainable Development Report, 2023)

It is apparent that Indonesia will require some time to reach the level of sustainability maturity that Sweden has achieved. Despite the challenges, the Indonesian government and companies have consistently demonstrated tremendous improvements and dedicated efforts toward long-term sustainability. With a population of nearly 300 million and an economy predicted to become one of the world's strongest by 2045, Indonesia stands in a distinctive position to drive sustainable, inclusive growth and global efforts to reduce reliance on carbon (McKinsey, 2022). Therefore, comparing Indonesia as a developing nation brimming with potential, with Sweden, a sustainability role model for many nations, is anticipated to yield valuable insights into the differing practices of these two countries.

1.3 Research Purpose

The purpose of this study is to provide practical insights into how companies in developed and developing countries have designed and utilized their MCSs to support the accomplishment of their sustainability agenda. Through the comparisons between Sweden and Indonesia, we assess how companies in the two contrasting countries employ different MCSs to enhance their efforts in shaping their sustainability strategies, ensuring their alignment with the United Nation's

Sustainable Development Goals (SDGs), and achieving their sustainability agenda internally. Our study aims to add to the limitations of prior research that did not focus on the differing practices and sustainability priorities of developed and developing nations. Thus, this study addresses the following research question:

How do companies in developed and developing countries design and use management control systems (MCSs) to support the achievement of their sustainability agenda?

1.4 Outline

The thesis is structured as follows: Chapter two presents and deliberates on the methodology employed. Chapter three establishes the theoretical framework by conducting a literature review on MCS and its role in the achievement of sustainability agenda. Subsequently, chapter four compiles and synthesizes the results of the analyses. Chapter five delves into the implications, encompassing our contributions to existing literature, limitations, and avenues for further research. Finally, chapter six offers a conclusive summary.

2. Theoretical Framework

2.1 Sustainability

2.1.1 Defining Sustainability

The phrase "sustainability" first emerged in 1962 as the result of the progressive integration of the environmental movement and the post-World War II international development community (Lowitt et al., 2009. In the same year, a book titled The Silent Spring was released and it played a significant role in influencing society's current view on the environmental movement. Environmentalism up to that point had been centered on pollution and protecting the natural world. The movement gradually developed as society began to express concerns about environmental issues, triggering the fear that current economic growth rates could lead to potential threats to the survival of both humanity and the planet (Dhanani, 2022). Today, sustainability can be defined as the goal of raising current generations' social and environmental performance without compromising the capacity of future generations to fulfill their social and environmental needs (Hart & Milstein, 2003). In simpler words, sustainability refers to the values and beliefs that emphasize the need for the natural environment to be preserved and improved (Shrivastava & Hart, 1992).

Elkington (1997) argues that sustainable companies should have triple bottom lines (TBL). TBL agenda provides a framework for corporations to measure business performance and success through a balanced focus on economic, social, and environmental dimensions (Goel, 2010). Elkington (1997) simplifies TBL into the 3Ps (People, Planet, and Profit). The people (social line) measures how socially responsible companies are in meeting the needs of stakeholders involved in their operations, including employees, communities, and broader society. It involves implementing ethical and equitable business practices concerning labor, human resources, and the community (Elkington, 1997). The planet (environmental line) assesses how environmentally responsible companies are through the gradual adoption of practices that safeguard environmental resources for the well-being of future generations (Goel, 2010). Lastly, the profit (economic line) not only covers the financial gains companies generate but also the way they are earned, making sure that the benefits are gained in ethical and fair manners. The economic line emphasizes the contributions of organizations to society's prosperity, aiming to bolster its resilience and ability to support future generations (Spangenberg, 2005). Overall, the triple bottom line model highlights the importance for organizations to consider not only their financial gains (Profit) but also their social and environmental impacts (People and Planet) in measuring their overall success and sustainability.

2.1.2 Sustainability Development Goals

The terms "sustainability" and "sustainable development" are often used interchangeably, but defined differently. Sustainability encompasses not only the prudent management of natural resources to prevent depletion but also includes economic and social aspects aimed at meeting

present needs. Sustainable development, on the other hand, is the process of enhancing people's quality of life and well-being over the long run. While sustainability provides a guiding principle and strategy for being sustainable, sustainable development offers operational guidance for achieving sustainability goals (Dhandapani & Venkataraman, 2022).

Over the last few decades, social tensions and environmental degradation have severely strained countries; the main causes of these pressures have been rising per capita consumption and population growth (Pedersen, 2018). These urgent concerns led to a historic global political agreement in September 2015, when 193 countries signed the United Nations Sustainable Development Goals for 2030, also known as SDGs.

Figure 2.1 Sustainable Development Goals (United Nations, 2015)

The United Nations Sustainable Development Goals (SDGs) are a set of 17 interconnected global objectives adopted by UN member states in 2015 to address pressing social, economic, and environmental challenges by 2030. These goals cover a wide range of issues, including poverty eradication, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption, and production, climate action, life below water, life on land, peace, justice, and strong institutions. The SDGs aim to promote prosperity while safeguarding the planet and ensuring that no one is left behind, representing a comprehensive agenda for sustainable development on a global scale.

2.1.3 Corporate Sustainability Agenda

The 17 Sustainable Development Goals (SDGs) with their 167 targets became the foundation for the UN to formulate a global plan of action for sustainable development known as "Transforming

Our World: The 2030 Agenda for Sustainable Development. This Agenda continues to be the world's guidebook for eradicating poverty, preserving the environment, and addressing inequalities. The core of the agenda provides a practical and effective roadmap for addressing the root causes of violent conflicts, human rights violations, climate change, and environmental degradation, with the aim of ensuring inclusivity for all.

All organizations, regardless of size or sector, can make a positive impact on the SDGs (United Nations Global Compact, n.d.). De Smet et al. (2021) suggest that to promote a broad involvement and commitment to shared sustainability goals, a company should have a central team that may involve the company's leaders in crafting and outlining a sustainability agenda at the corporate level. With a definitive mandate from the business, the central team can more effectively ensure the dissemination of the sustainability agenda throughout the organization, providing clear direction to business units regarding their key priorities.

The United Nations (2015) further defines a sustainability agenda as a strategic commitment to incorporating environmental, social, and governance considerations into an organization's operations and decision-making processes. It aims to ensure that businesses, governments, and other entities operate in a manner that balances economic prosperity, social equity, and environmental stewardship to meet the needs of the present without compromising the ability of future generations to meet their own needs.

The World Business Council for Sustainable Development or WBCSD (n.d.) describes a sustainability agenda as a comprehensive strategy aimed at tackling the intertwined issues of environmental degradation, social inequality, and economic instability which involves integrating sustainability principles into business strategies and operations, to generate long-term value for stakeholders while mitigating adverse effects on the environment and society. Overall, the term sustainability agenda refers to a comprehensive plan for achieving sustainable development (Sachs, 2015).

PwC (2008) specifies that the first step towards implementing the sustainability agenda starts with a company's commitment to integrating social, environmental, economic, and ethical considerations into its strategic decision-making. It goes beyond assessing the risks and possibilities these factors provide to the organization and how they affect all of its stakeholders. Ultimately, the sustainability agenda urges businesses to implement measures that mitigate risks and capitalize on opportunities. In this regard, MCSs play an important role in assisting companies to transform their sustainability agenda into improved performance by better aligning organizational and behavioral structures with firms' objectives and underlying value drivers (Henri & Journeault, 2010).

2.2 Integrating Sustainability into Management Control

Otley and Soin (2014) define management control as an activity of directing organizations through the contexts in which they operate to achieve both short-term and long-term goals. Management controls involve processes and methods used by managers to ensure employee behavior and decisions align with organizational goals and strategies, both formally and informally (Malmi & Brown, 2008; Simons, 1995). According to Maciarello and Kirby (1994), formal controls are clear structures, routines, procedures, and processes that are consciously constructed based on information. Informal controls refer to common values, beliefs, and traditions that guide group members' conduct (Ouchi, 1994; Simons, 1995).

Emerging interest in sustainability provides opportunities for increased integration of environmental and social issues into management control systems, which can help firms integrate sustainability strategically (Gond et al., 2012). Based on Ballou et al. (2012) and Gond et al. (2012), management control is crucial for implementing and developing sustainability strategies, policies, and programs. Incorporating environmental dimensions that concentrate on the ability of the system to environment adaption is critical for solving strategic and operational challenges (Collins, 1982; Emmanuel et al., 1990; Le et al., 2024). Hence, the management control process must be considered from both social and organizational perspectives to support the sustainability agenda.

The integration of sustainability in the management control establishes a sustainability control system (SCS). Johnstone (2019) defines SCS as management accounting tools that combine organizational strategy with operations in a specific environment by giving information and direction, as well as monitoring and motivating employees to continuously build sustainable practices and procedures for future enhanced sustainability performance. Formal and informal controls are embedded in the SCS. The management uses formal controls to do the sustainability planning, sustainability budgeting, environmental cost accounting analysis, sustainability performance measurement, and reward compensation (Gond et al., 2012). Additionally, informal controls by conducting training and establishing ethics codes and values could shape the organizational culture. Ouchi (1979) emphasizes that informal controls have a significant role in affecting employee behaviors and increasing the effectiveness of formal controls. Informal controls based on sustainable values support desirable conduct driven by environmental, social, and economic concerns (Evans et al., 2017; Rusconi, 2019). Moreover, informal controls are more pervasive than formal controls (Perego & Hartmann, 2009; Riccaboni & Leone, 2010).

2.3 MCS Conceptual Framework

MCS as a package refers to the collection or set of controls and control systems within an organization that work together to align individual activities with organizational goals (Malmi & Brown, 2008). This approach emphasizes the interconnected nature of various control mechanisms, including traditional accounting controls including budgets and financial measures, administrative controls, and culturally based controls such as values and norms. The concept of an

MCS package underscores the importance of viewing these control systems as a whole rather than in separate parts, recognizing that they are designed and coordinated intentionally to achieve desired outcomes. This holistic perspective on MCS enables the development of better theories on designing and implementing control systems to support organizational objectives and drive performance.

Cultural Controls					
Clans		Values		Symbols	

Planning		Cybernetic Controls				Reward and Compensation
Long range planning	Action planning	Budgets	Financial Measurement Systems	Non Financial Measurement Systems	Hybrid Measurement Systems	

Administrative Controls		
Governance Structure	Organisation Structure	Policies and Procedures

Figure 2.2 Management Control Systems Package (Malmi & Brown, 2008)

Based on Figure 2.2, MCSs as a package include five types of controls in the typology namely culture, planning, cybernetic, reward and compensation, and administrative controls. These types of controls fulfill the needs of different systems by diverse interest groups at different times. Hence, the controls should not be characterized holistically as a single system, but rather as a collection of systems.

2.3.1 Cultural Control System

Cultural control could be defined as a set of social norms, values, and beliefs shared with its members that could influence thoughts and actions (Flamholtz et al., 1985). Cameron and Quinn (2011) elaborate that organizational culture represents the condition that is taking place inside of an organization, describes the identity of employees, and functions as an unwritten guide on how to get along in an organization that can increase the stability of the social system. This culture might be utilized as a reference value for dealing with human resource issues in carrying out tasks and behaviors inside the organization (Jerome, 2013). Malmi and Brown (2008) incorporate three aspects of cultural control: value-based, symbol-based, and clan controls.

Value-based controls are developed based on belief systems which refer to an explicit set of organizational definitions that senior managers communicate formally and reinforce systematically to provide basic values, purpose, and direction for the organization (Simons, 1995). Besides value-based controls, organizations also integrate symbol-based controls into the cultural control system. Visible expressions consist of building/workspace design and dress codes to

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develop a particular type of culture is a part of symbol-based controls (Schein, 1997). Having regulations about attire enhances to establishment of favorable workplace perceptions (Ruetzler et al., 2012). Wood and Benitez (2003) describe that formal attire at work reflects the credibility of employees. Moreover, creating open-space offices increases communication and coordination among diverse employees (Malmi & Brown, 2008). Organizations also need clan controls to internalize the desired values by the organizational members. Ouchi (1979) points out that clan control systems focus on the agreement between organizational members and factors that influence the employee's behavior. Ceremonies, rituals, training, and the employee-selection part of the recruitment process represent the clan-control means of creating the necessary goal congruence and organizational members' commitment (Merchant & Van der Stede, 2007; Malmi & Brown, 2008).

2.3.2 Planning Control System

Planning control contributes to determining the functional area's objectives and monitoring the effort and behavior. This control gives standards to be reached concerning the objectives and defining the level of effort and behavior from organization members. Additionally, organizations could coordinate through the alignment of set goals across the functional areas of the organization which has been set in the planning control (Flamholtz et al.,1985).

Malmi and Brown (2008) categorize planning control into two perspectives. In action planning, organizations establish goals for short-term periods or up to 12 months. The focus of the action planning is to comply with strategic plans, achieve short-term goal congruence, and align with employees' daily responsibilities. Meanwhile, long-range planning includes actions for the medium and long term with a strategic focus. According to Anthony and Govindarajan (2007), long-range planning has more than one year period and it provides future strategies, helps organizations select suitable programs, and decides the amount of resources that need to be allocated. Planning programs should transform each entity's strategy, which is generally focused externally, into an internally focused set of activities designed to implement the strategy and, in turn, lead to the achievement of the entity's goals (Merchant & Van der Stede, 2017).

2.3.3 Cybernetic Control System

Cybernetic control refers to a procedure in which a feedback loop is represented by applying standards of performance, monitoring system performance, comparing it to standards, sending back information about unwanted deviations in the systems, and adjusting the system's behavior (Green & Welsh, 1988; Malmi & Brown, 2008). In other words, cybernetic control can function as a feedback-type MCS to measure performance, discover inconsistency, and adjust activity that is needed (Florêncio, 2023). Nevertheless, the transformation of a cybernetic system from a decision-support system to a management control system is achieved by linking behavior to targets and providing accountability for performance variations. Malmi and Brown (2008) identify four cybernetic control systems, namely budgets, financial measures, non-financial measures, and hybrid that combine both financial and non-financial measures.

The majority of organizations use a budget as a main foundation in the MCS. Hansen et al. (2003) elaborate that a budget can intertwine all disparate threads into a comprehensive plan to handle different objectives which includes coordination, communication, and resource distribution. Performance planning and ex-post evaluation of actual performance are important functions of the budget that are used for control purposes. It gives a direction for organizations to plan strategies and evaluate the performances against the target (Malmi & Brown, 2008). Measuring financial performance also has an important part in holding employees accountable. The financial measurements might correlate with the budgeting process (Malmi & Brown, 2008). However, the scope of budgeting is broad and incorporates complex techniques to forecast revenue and cost. Furthermore, organizations implement non-financial measurements that conquer the financial measurement limitations.

The hybrid performance measurement which combines financial and non-financial measures tries to assess organizational performance not only based on profit but also on customer satisfaction, employee loyalty, operational activities, and business development. Organizations use management by objectives as a hybrid measurement to give authority and responsibilities to individuals which is required to reach the organization's target as well as harmonizing personal goals with shared objectives (Drucker, 1954; Kyriakopoulos, 2012). In addition, integrating a balanced scorecard (BSC) guides managers to focus on four dimensions from financial and non-financial perspectives including customer, internal process, financial, and learning and growth. These dimensions help organizations to understand cross-functional relationships that lead to improvement, problem-solving, and decision-making (Kaplan & Norton, 1992).

2.3.4 Reward and Compensation Control System

The reward and compensation system is integrated into the ex-ante and ex-post control mechanisms and is used to motivate organizational members to perform in accordance with the organizational goals (Bonner & Sprinkle, 2002). Verma (2018) explains reward and compensation act as an instrument that is used by organizations to enhance employee productivity with a focus on the performance development of employees and the organization by which better results can be achieved.

Reward could be classified into two categories, namely extrinsic and intrinsic reward. Extrinsic rewards correlate with financial rewards including bonuses and salary increases to long-term progression and promotion (Ferreira & Otley, 2009). Bonner & Sprinkle (2002) argued that monetary incentives strengthen effort and performance by focusing individuals' performance on the task. The integration of effort into the task might influence performance in three ways: effort direction to perform tasks or responsibilities; effort duration includes the time needed to finish obligations; and effort intensity involves the amount of attention individuals devote to the task.

Enhancing individual satisfaction to support productivity and sustain competitive advantage could be achieved through non-financial rewards and compensation (Tausif, 2012). These rewards involve job promotion, job autonomy, and job enrichment. Non-financial rewards have a positive

effect on increasing intrinsic motivation among employees. In other words, the motivation of the individual is rising by expanding self-esteem (Mohammed, 2019).

2.3.5 Administrative Control System

Administrative control systems organize individuals and groups, monitor behavior, hold personnel accountable, and establish task or behavior expectations. Malmi and Brown (2008) divide administrative control into three classifications including organization design and structure, governance structures within the organization, and procedures and policies.

Organizational design and structure can influence interaction and relationship patterns. According to Flamholtz (1983), organizational structure provides control through functional specialization, lowering unpredictability and enhancing predictability. Having a specialized unit to conduct certain activities in the organization and collaboration among departments to other departments in the organization could have a positive impact on achieving organizational objectives (Ditillo & Lisi, 2014).

The governance structure encompasses the company's board structure and composition, as well as its numerous management and project groups. Governance encompasses formal lines of power and accountability. Systems are taking place to ensure that representatives from various roles and organizational units meet to coordinate their operations both vertically and horizontally (Abernethy & Chua, 1996). Meetings and schedules that establish agendas and deadlines and influence organizational behavior are examples of governance structure (Malmi & Brown, 2008).

The bureaucratic approach using policies and procedures is also incorporated into the administrative control to describe processes and behaviors in the organization (Malmi & Brown, 2008). Macintosh and Daft (1987) and Simons (1987) define policies and procedures as standard operating procedures and practices, as well as regulations and policies. Policies and procedures include action controls, such as behavioral limitations, pre-action evaluations, and action accountability (Merchant & Van der Stede, 2007). Moreover, the action controls could offer a more comprehensive understanding of how managers utilize administrative tools to govern behavior than their object of control framework.

2.4 Literature Review on MCS and Sustainability

Cumming et al. (2023) define a literature review as a process to identify, retrieve, and synthesize all relevant studies on a specific topic. The literature review in this thesis consists of five articles that explain the integration of MCS and sustainability. These literatures emphasize the importance of incorporating sustainability considerations into the MCS of organizations. The integration has a significant effect on addressing environmental, social, and governance (ESG) issues within the business context. Furthermore, formal and informal measurement that take place in the management controls has a complementary function to support sustainability activities.

The implementation of MCS for sustainability in developed countries is affected by advanced regulatory frameworks. Beusch et al. (2022) elaborate regulatory frameworks and mature sustainability practices leading to a greater emphasis on aligning control systems with sustainability goals. Coercive pressure from European authorities also has an impact on MCS adjustments in banks (Ferretti et al., 2024). Furthermore, normative demands from customers and institutional investors drove banks to include ESG issues in their decision-making processes and commercial operations. Based on Crutzen et al. (2017), the sustainability management control in the 17 examined companies across Europe has not implemented a full management control package that involves formal and informal management controls. Companies need more resources and time to adjust and implement sustainability management control. Therefore, they focus on either formal or informal controls. On the other hand, informal and formal management systems in place to ensure sustainability are embedded in a company that operates in a developing country (Florêncio et al., 2023). The company's cultural values have a function to support incorporating sustainability into the MCS.

The five articles provide insight and understanding for analyzing this thesis's topic. The literature emphasizes the importance of integrating sustainability considerations into management control systems in developed and developing countries. Organizations need to align their control mechanisms with sustainability goals to effectively drive environmental, social, and governance (ESG) initiatives. Additionally, both formal and informal management controls play a crucial role in supporting sustainability agendas. The combination of formal structures and informal mechanisms is crucial to strengthen sustainable practices within the organization. Hence, these articles work as a basis for analyzing the integration of sustainability into MCS in developed (Sweden) and developing (Indonesia) countries. The details of the literature review are explained further in Appendix 1.

2.5 Summary of Theoretical Framework

The theoretical framework gives comprehensive knowledge for analyzing the research findings concerning the use of management control systems to strengthen the sustainability agenda. The research aims to explore how organizations can leverage management control systems to enhance their sustainability initiatives. By integrating key concepts from the theoretical chapter, the analysis of findings can be approached in a structured manner.

The evolution and definition of sustainability provide a contextual understanding of the term and its significance of sustainability. This historical perspective helps in framing the importance of sustainability within organizational practices and decision-making processes. Moreover, the integration of sustainability into management control systems, as discussed in the theoretical framework, highlights the role of formal and informal controls in aligning employee behavior with sustainability goals. This aspect can be used to evaluate how effectively organizations are incorporating sustainability principles into their control mechanisms.

The theory of the MCS as a package that gives an understanding of processes and procedures that the organization implemented to ensure employees doing work aligns with the organization's objectives. The MCS includes a cultural control system that could influence the thoughts and behavior of employees to achieve sustainability targets. This framework also incorporates planning control systems to help an organization in setting and monitoring sustainability objectives. This aspect can be utilized to evaluate the alignment of organizational goals with sustainability targets and assess the effectiveness of planning programs in driving sustainable development. Additionally, a cybernetic control system helps organizations monitor performance, compare performance to standards, and provide feedback on deviations.

Besides cultural, planning, and cybernetic control systems, MCS as a package also integrates reward and compensation to motivate employees to align their performance with organizational goals. It includes both extrinsic rewards (financial incentives like bonuses and salary increases) and intrinsic rewards (recognition and career progression opportunities). administrative control systems give insights into how organizational design, governance structures, and policies can influence sustainability initiatives. By analyzing the administrative controls in place, the research findings can be assessed in terms of their impact on promoting sustainable practices within the organization.

3. Method

3.1 Research Strategy and Approach

The goal of this thesis is to provide practical insights into how organizations from different developed and developing countries designed and used their MCSs to assist in the achievement of their sustainability goals. Furthermore, this study focuses on exploring the integration of sustainability in the MCSs by emphasizing the perspectives of those involved in management. Therefore, this thesis implements a qualitative research framework that prioritizes the explanation of certain phenomena rather than quantification in the collection and analysis of data (Bryman & Bell, 2015). Creswell (2014) defines qualitative research as an approach to elaborating and understanding the intentions of individuals or groups in responding to social or environmental problems through comparative study using research data as a basis for making conclusions. A comparative study is the process of identifying differences and/or similarities between two or more things (Coccia & Benati, 2018). This study is used on this research to find causation and/or associations that are similar or dissimilar between four companies as research objects that relate to the management control system and sustainability agenda.

The main justification in favor of multiple-case studies for this thesis is that they assist theory development. Furthermore, data from several cases is frequently viewed as more persuasive, and the whole study is deemed more strong (Herriott & Firestone, 1983). Within the framework of the study, the four case organizations under consideration act as research objects. Yin (2018) formulates guidelines for doing interview study that apply to this thesis including questioning, listening, adaptability and flexibility, understanding of the topics under consideration, and a lack of bias. These guidelines help to identify unique and common aspects of the observed cases, develop a compelling comparative design of the thesis, and accommodate the nature and type of the proposed research questions.

3.2 Case Selection

After formulating the research questions, the subsequent step involves the selection of companies. In multiple-case studies, each case is selected carefully to either show similar results, known as literal replication, or different results, but for reasons that can be anticipated, which is called theoretical replication (Yin, 2018). The reasoning behind multiple-case studies can derive from hypothesizing various conditions, in this case, developed and developing countries (Yin, 2018). We do not focus on industry factors as each industry possesses unique strategies tailored to its specific needs, making generalized sustainability focus impractical.

In this comparative study of the design and use of MCSs in supporting the achievement of sustainability agendas, we anticipate contrasting outcomes by choosing Sweden and Indonesia as representatives of developed and developing countries, respectively. Sweden, renowned for its advanced economy and welfare system, serves as a prime example of a developed country. With

its strong commitment to environmental sustainability, social welfare, and economic stability, Swedish companies are expected to offer insights into refined MCS frameworks tailored to address sustainability challenges in highly developed contexts. On the other hand, Indonesia, as a rapidly emerging economy with diverse socio-economic landscapes, represents a developing country striving for sustainable development despite various constraints and challenges. By focusing on Indonesian companies, we aim to explore how MCSs are adapted and utilized within the corporate landscape in a developing country, where the level of sustainability awareness is relatively low and not a core priority of the government and companies in general.

Conversely, the reason for multiple-case designs may also come from understanding literal and theoretical replications by selecting two or more cases expected to have similar outcomes, such as a set of case studies with exemplary outcomes in relation to the research question (Yin, 2018). Therefore, we have chosen Duni Group and Rug Company to represent Sweden in our study due to their significant dedication to environmental and social responsibility. Duni Group which is known for its sustainable dining solutions worldwide, has employed innovative methods to reduce environmental impact, such as utilizing renewable materials and implementing energy-efficient production processes. Similarly, Rug Company, as Europe's leading online rug retailer has also showcased a proactive approach to sustainability with initiatives like eco-friendly packaging and prioritizing sustainable materials sourcing. These companies are expected to demonstrate the effective integration of sustainability practices within the Swedish business landscape, contributing to a broader understanding of sustainable management strategies in developed economies.

Similarly, we have chosen PT Pertamina Hulu Indonesia (PHI) and Energy Company which are well-known as the leading examples of sustainable companies in Indonesia. PHI, as a subsidiary of Indonesia's state-owned oil and gas company, has shown a strong commitment to sustainability by implementing initiatives to minimize environmental impact in the extraction and production processes. On the other hand, the Energy Company, a leading integrated energy corporation in Indonesia, has been proactive in adopting sustainable practices across its operations, including renewable energy investments and community development projects. Through these companies, we aim to gain insights into the unique challenges and strategies involved in achieving sustainability within the context of Indonesia's developing economy, contrasting these with practices in developed and sustainability-mature countries like Sweden and ultimately enhancing the understanding of effective management practices in achieving global sustainability objectives.

3.3 Data Collection

The collection of data is based on both primary interviews and secondary organizational documentation for the four case companies. The primary data is gathered from interviews with company representatives who have the capability and knowledge of MCS and sustainability practices. Moreover, secondary data was collected based on sustainability reports of the four companies.

3.3.1 Primary Data

Primary data for the thesis was collected through interviews essential source of research study information (Yin, 2018). In addition, interviews contribute to the generation of insights about the research topic because the interviewees were able to give meaning to the observed phenomena beyond the one that could be inferred from the written documents. This method has enabled us to acquire knowledge about the interviewees' reflections on the observed phenomena, thus enriching our thesis database with one important perspective.

The interview questions were developed in response to the research question and theoretical framework to achieve the thesis's purpose. Thus, the interview questions were divided into two sections, covering sustainability and the company's MCS. These questions started to find a detailed understanding of the sustainability agenda and MCS in general. Furthermore, the following questions were created based on the MCS framework developed by Malmi and Brown (2008) which involves planning, cybernetic control, reward and compensation, cultural control, and administrative control. By doing so, this study incorporated the semi-structured interview method that allowed both interviewers and the interviewees to have freedom throughout the process. In other words, this approach gave an opportunity to act according to the flow of the interview, make adjustments to the questions, ask additional ones, and confirm for clarifications of the interviewees' answers, and vice versa when needed (Bryman & Bell, 2015).

In the process of contacting potential companies, we sent the interview questions that have been drafted into a template and shared with the case companies precisely to interviewees who were to be interviewed, that is director, mid-level managers, and personnel who directly manage the sustainability agenda in the company. Interviewing these interviewees provided comprehensive insights into the company's MCS and the sustainability agenda within the organization. With knowledge and skills, all the interviewees gave information regarding the sustainability agenda incorporated in the MCS.

Table 3.1 Details of Interviewees

Company	Position	Country	Form	Date	Duration
Duni Group	Sustainability Director	Sweden	Online	19 April 2024	50 minutes
Rug Company	Sustainability Manager	Sweden	Online	6 May 2024	45 minutes
PT Pertamina Hulu Indonesia	Environmental Manager	Indonesia	Online	8 April 2024	116 minutes
Energy Company	Senior Sustainability Specialist	Indonesia	Online	15 April 2024	67 minutes

3.3.2 Secondary Data

In this thesis, secondary data were used to complement primary data for fulfilling triangulation (Bryman & Bell, 2015; Yin, 2018). The main sources of the secondary data were the organizational documents of the case companies, particularly publicly published annual and sustainability reports for the year 2023 of Duni Group, Rug Company, and Energy company, meanwhile, PHI annual and sustainability report for the year 2022 is used as a secondary data because the 2023 sustainability report is not published yet. These provided us with general information about what companies are doing in the field of sustainability and gave us insights into which control systems and metrics are being used to support and express their performance. Therefore, we gained insights into the documentary reality of the case companies (Atkinson & Coffey, 2004). The reports employed, which were sourced from the companies' official websites and written in a clear and accessible manner, were found to be aligned with two factors contributing to the quality of the organizational papers, namely authenticity and meaning (Scott, 1990). The other two criteria for assessing the quality of organizational documents include validity and reliability as a means of triangulation that was also built upon the secondary data in the thesis.

3.4 Data Collection and Interview Guide

Due to distance and time constraints, the interviews were fully conducted online via Zoom and recorded with the interviewees' consent. The interviews followed a semi-structured format based on an interview guide (see Appendix 2) consisting of predefined questions. The semi-structured interview format was selected due to the need to compare companies in Sweden and Indonesia, thus predefined questions were necessary to ensure a fair comparison. This interview method combines both closed and open-ended questions, frequently supplemented with follow-up questions, and is characterized by its flexibility, allowing discussions to stray from predetermined questions and uncover unanticipated areas of discussion (Adams, 2015). Furthermore, it provides the interviewees the opportunity to openly respond to the questions asked, articulate their thoughts, and delve deeper into specific responses (Horton et al., 2004). The recorded interviews were transcribed to generate a written text that will be used for the detailed empirical analysis and direct quotations.

The flexible and interactive approach of semi-structured interviews requires an interview guide which consists of the outline of topics to be discussed, and questions to be asked, arranged in a tentative order (Adams, 2015). We formulated and divided the interview guide based on two main areas. The first section of the interview guide consists of general questions about the companies' sustainability and management control practices. If the answers in the first section show that the company has established clear sustainability agendas and has implemented MCS to uphold them, we can advance to the second section. Otherwise, we will not proceed. The second section of the interview guide consists of detailed sets of questions divided into the subsections of cultural control, planning control, cybernetic control, reward and compensation control, and administrative

control based on the theory of MCS as a package. The subsections served as a guideline for the interviewees to better understand the highlighted area of discussion and provide detailed explanations about the MCS that they have implemented to support their sustainability agendas.

3.5 Data Analysis and Presentation

Data analysis is an important step of qualitative research necessary to generate meaning from the data and uncover insights into the phenomena being studied. In this study, the data will be analyzed using thematic analysis which is a qualitative research method used to identify, analyze, and report patterns or themes within data (Braun & Clarke, 2006). In thematic analysis, researchers go through a series of steps including coding, categorizing, and interpreting data to discover repeated patterns or themes. These themes are then utilized to create a clear and insightful narrative that generates the key findings of the research.

Braun and Clarke (2006) break down the thematic analysis into six steps. The first step is to become familiar with your data which includes transcribing data if needed, reading it thoroughly, and jotting down initial thoughts. Then, you move on to generating initial codes by systematically coding interesting aspects of the data and collecting relevant information for each code. Next, you search for themes by organizing codes into potential themes and gathering all related data. After that, you review the themes to ensure they align with the coded extracts and the entire dataset, creating a thematic 'map' of the analysis. Then, you define and name the themes, refining their specifics and generating clear labels for each one. Finally, you produce the report, selecting compelling examples, analyzing them further, linking the analysis back to the research question and existing literature, and presenting a scholarly report of the analysis. These steps provide a structured approach to conducting thematic analysis, ensuring a systematic and thorough analysis of qualitative data.

The empirical data is presented under three themes derived from the objective and theory employed in this study; country development status, sustainability, and MCS. In the comparative study between Sweden and Indonesia, both countries are selected to represent developed countries with a mature sustainability profile and developing countries with significant potential for sustainability progress, respectively. Under this classification, the study aims to identify the existing sustainability agendas of companies in both developed and developing countries, including the awareness and maturity of the employees regarding sustainability practices. Lastly, the empirical findings are presented across predefined subsections of cultural control, planning control, cybernetic control, reward and compensation control, and administrative control, grounded in the MCS as package theory as a holistic framework. This presentation offers comprehensive insights into how these companies design and use their MCS to drive sustainability agendas.

3.6 Research Limitations

While we determined that the qualitative research method involving data collection from multiple case companies through semi-structured interviews was the most suitable for achieving the purpose of this study, this research method came with its own set of limitations. Qualitative research carries the risk of researchers' subjectivity influencing the results, despite relying on their expertise. Therefore, the interpretation of collected data may not always appear entirely objective (Bryman & Bell, 2015).

Moreover, the research involving only four case companies representing Sweden and Indonesia raises a limitation to the extent to which the research outcomes can be generalized due to the small sample size. While these companies were selected to represent a diverse range of industries and organizational characteristics, the findings may not adequately capture the full scope of sustainability practices across different sectors and business environments. The inherent variability among companies in terms of size, resources, and management priorities can limit the transferability of insights derived from a small sample size, potentially overlooking important trends present in the broader business landscape.

3.7 Validity and Reliability

Validity and reliability are integral components of every research. This is especially applicable to qualitative research where the subjectivity of the researcher may easily skew how the data are interpreted and the research findings are constantly questioned by other researchers with skepticism (Brink, 1993). Validity in research pertains to the accuracy and integrity of scientific findings (Le Compte & Goetz 1982). It can be categorized as internal and external validity (Bryman & Bell, 2015). According to Brink (1993), internal validity refers to how accurately research findings reflect reality, excluding the influence of external variables. External validity, meanwhile, explores the extent to which these findings can be generalized across various groups or contexts. To ensure the validity of this study, we framed the interview questions based on the theoretical framework that we have defined in a way that they would be able to answer our research question on how companies in Sweden and Indonesia design and use management control systems to support the achievement of their sustainability agenda. The interview questions draft was sent beforehand to make sure the interviewees had a clear understanding of the aims and objectives of this study. As the research's observations align with our assumptions, theoretical concepts are able to be developed.

Reliability is defined as the consistency, stability, and repeatability of both the informant's reports and the investigators' proficiency in accurately gathering and documenting information (Selltiz, 1976). Put simply, it can be defined as the requirement that when a researcher employs identical or similar methods, they consistently obtain similar results each time these methods are applied to the same or similar subjects (Brink, 1993). Similarly, reliability can also be classified as internal and external reliability (Bryman & Bell, 2015). In qualitative research, internal reliability refers to

the consistency of data collection and analysis procedures within the study itself, ensuring that the findings remain consistent when different researchers or multiple observations are involved (Noble & Smith, 2015). External reliability, on the contrary, examines the consistency and stability of findings across diverse contexts, populations, or time periods, allowing for the replication and confirmation of results in different settings or with varied participants (Maxwell, 2008). Through this study, we aim to compare the differing practices in Sweden and Indonesia. Therefore, the findings from different cases may differ from one another and cannot be generalized (Bryman & Bell, 2015).

Our study upholds the principles of validity and reliability by aligning our methods with established theoretical frameworks, addressing potential biases, and ensuring consistency and transparency in our procedures. Through these methods, we aim to generate findings that are both valid and reliable, contributing meaningfully to the knowledge of the effective management control systems to support the achievement of sustainability agenda in different country development contexts.

3.8 Ethical Considerations

Ethical consideration is a fundamental aspect of qualitative research, which frequently encompasses principles such as beneficence, nonmaleficence, justice, protection of individuals' identity and dignity, as well as the truthful presentation of research results (Petrova et al., 2016). Ensuring the protection of participants' rights and confidentiality throughout the research procedure is an important part of this study. Prior to participating, each participant had been fully informed of the study's purpose and provided with the interview questions draft. All interviewees who agreed to voluntarily participate in this study had reviewed the interview questions beforehand. We also offered the option of anonymity for individuals and companies that had confidentiality concerns. Initiating discussions regarding confidentiality with participants at the outset of data collection and honoring their autonomy is essential in securing informed consent and fostering trust (Petrova et al., 2016). By adhering to these ethical guidelines, the research sought to maintain the trust and integrity of the participants, while upholding the principles of ethical conduct in research.

4. Empirical Findings

This section is classified into two categories. The first section provides detailed findings based on the information from interviewees and secondary data related to the sustainability agenda and MCS. Whereas, the comparison of sustainability agenda between Swedish and Indonesian companies is elaborated in the second section. Lastly, the final section summarizes the findings of this study.

4.1 Detailed Findings

4.1.1 Duni Group's Overview and Sustainability

Duni Group is the world leader in sustainable dining, food packaging, and circular solutions for the restaurant and catering industry. Duni, BioPak, and Paper+Design are among the brands that the company sells in over 40 countries globally. Duni Group has approximately 2,300 employees in 22 countries, with its headquarters in Malmö, Sweden. Production facilities are located in Sweden, Germany, Poland, New Zealand, and Thailand. Duni Group has consistently provided shareholders with consistent cash flows and dividends, while also supplying customers with new and relevant sustainable dining and food packaging solutions. Duni's net sales in Q4 2023 were SEK 1,971 million, with an operating profit of 9.7%. Furthermore, the company's net income totaled SEK 83 million. It grew by around SEK 24 million over the previous year.

The environmental sustainability and circular options established by Duni Group promote an elevated experience where people come together to enjoy food and drink. As a leading producer of convenient tableware and on-the-go solutions, Duni is dedicated to a sustainable business process, aligning with favorable ESG performance under the "Our Decade of Action" 2030 strategy. Duni's three main projects, becoming circular at scale, going net-zero, and living the change, are critical for key stakeholders, shaping the company's sustainable future. This study aims to guide Duni Group in enhancing its Environmental, Social, and Governance (ESG) performance, aligning with its commitment to sustainability and responsible business practices.

4.1.1.1 Cultural Control System

Duni Group as one of the leading creators of sustainable and innovative concepts for the set table, take-away, and food packaging ensures that the company's sustainability strategy is firmly anchored in how it develops, produces, and sells its products and services. Compared to its competitors, Duni Group has come further on its sustainability journey and the company is making efforts to leverage this as much as possible by engaging its employees as emphasized by the Sustainability Director:

> *"The sustainability maturity at Duni Group is heading in a good direction. We've done a lot of work, and some good performance. But there is a lot of work to do still and I think the main focus for us right now is on competence development especially when it comes to sales and marketing so that they can engage more in this and use it as a sales tool in*

working with customers to leverage our sustainability performance. The awareness of our colleagues is important and if you want to have a good sustainable performance, it's always very important to have the management team and your CEO engaged. I think that we have a very engaged management team and engaged CEO and that helps to put the topic on the agenda for sure."

Duni Group established a sustainability leaders network which consists of 20 employees around the company who have an additional responsibility for sustainability. The 20 sustainability leaders have annual physical meetings and workshops where they go through the current state of sustainability. They are the local champions who encourage and support other colleagues to go deeper into sustainability overall, establishing a sustainability-focused mindset and culture in the company as further explained by the Sustainability Director:

"We started this two years ago, we asked people to apply for the role of a sustainability leader and then that means that they would spend 10% to 20% of their time working with sustainability topics. So there was an application process and then we made a selection from that together with the management team. So it's a cross-functional team. They have local initiatives and local workshops that they manage. So many good examples of this where they step in and they engage their colleagues in different ways."

The sustainability leaders play a crucial role as the local contact to encourage employees' involvement in contributing to the sustainability agenda of the company. Additionally, Duni Group has also established several other platforms to communicate the importance of sustainability for the company. There is an e-learning platform where employees are encouraged to take online training on sustainability topics. The company also consistently communicates sustainability updates every month through internal channels such as Yammer. Besides internal communication, it also emphasizes the importance of active external communication through LinkedIn which is directed not only to the public but also to the employees. Besides active communication and education, Duni Group ensures that sustainability is practically incorporated into the daily activities of the employees as described by the Sustainability Director:

"So I just talked yesterday with our sustainability leader in Poland. They had a group meeting within the finance team and they had an external speaker talking about food waste and how they could reduce their waste then what you could do with, for example, potato peels that you can turn into chips. We also have an overarching travel policy where we want to avoid flying as much as possible, so we encourage people to take public transport wherever possible. We had a big sales meeting last year in Berlin with a lot of people. So then we rented a bus so everyone could go on the bus instead of taking the plane. Things like this come up in different ways."

To ensure effective communication, Duni Group also has an employee engagement platform that measures the employees' understanding and engagement of sustainability and the evaluation of

the work that the employees deal with such as their inputs for future improvements. Additionally, when employees from different functions have ideas regarding sustainability initiatives, they are encouraged to informally communicate their ideas to the sustainability leaders or the central sustainability team.

Duni Group understands that to be competitive in the long run, the company has to step up its sustainability agenda. Therefore, Duni Group believes that establishing a sustainability-minded culture as a part of its strategies can serve as a strength, not from a mandatory perspective, but as an opportunity. Incorporating sustainability perspectives into the company's culture and daily work has made Duni Group more competent and relevant as a company.

4.1.1.2 Planning Control System

Duni Group has three main sustainability initiatives to be achieved in 2030; becoming circular at scale, going net zero, and living the change. The three main sustainability agendas are not divided into short-term, medium-term, and long-term, except for the science-based targets of going net zero. When Duni Group formulated these initiatives back in 2021, the company also aligned the company's sustainability targets with the UN's global sustainable development goal, specifically five goals that Duni Group prioritizes in its operations and that are still relevant to the industry. Through this alignment, Duni Group further defined several KPIs that guide the company in its work and help to track the progress of the sustainability performance as shown in Table 4.1.

Table 4.1 Sustainability Initiatives

Sustainability Initiatives	Related SDGs	Main Areas	Interim Targets 2025	Goal 2023	Duni Group's Science-Based Targets
Becoming Circular at Scale	Goal 12: Sustainable consumption and production Goal 15: Life on land	Environmentally better materials and suppliers Efficient operation Relevant solutions for reuse, recycling and composting No virgin plastic for single-use products	Reduction of virgin fossil-based plastics in single-use products by 50% towards 2019 as a base year Multiple end-of-life solutions FSC®-certified products: 100% for Duni and 75% for BioPak Europe.	Fully circular operations	-
Going Net Zero (net zero climate emissions)	Goal 13: Climate action	Science-based targets that are approved, measured and communicated. GHG Scopes 1 and 2 reported quarterly, Scope 3 is reported annually Measure impact across value chain Transparent reporting of results	Activities in accordance with the approved science-based targets in line with the international Science Based Targets initiative (SBTi) Carbon intensity index 40 for Scopes 1 and 2	A zero vision for greenhouse gases according to the GHG Protocol Scope 1 and Scope 2	**Near-term targets:** Reduce absolute Scope 1 and 2 greenhouse gas emissions by 57.1% by 2030 compared to the base year 2019 Reduce absolute Scope 3 greenhouse gas emissions by 46.2% by 2030 **Long-term targets:** Reduce absolute scope 1 and 2 GHG emissions 90% by 2050 from a 2019 base year Reduce absolute scope 3

Sustainability Initiatives	Related SDGs	Main Areas	Interim Targets 2025	Goal 2023	Duni Group's Science-Based Targets
					GHG emissions 90% within the same timeframe
Living the change (practicing what we preach)	Goal 8: Decent work and economic growth

Goal 17: Partnership for the goals | Be a committed partner for our key stakeholders

Be the trusted expert – with the best solutions, even from a sustainability perspective

Communications with a high degree of transparency, integrity and openness | Key stakeholders see us as a trustworthy sustainability leader

Reach the platinum level in the EcoVadis system

All employees trained in sustainability | A trusted sustainability leader | - |

Source: Duni Group Sustainability Report, 2023

The KPIs setting process uses a top-down approach where the management team submits a proposal that will be reviewed and approved by the board. The approved KPIs will be further communicated by the sustainability team to the lower management throughout the organization and included in the related employees' individual objectives as explained by the Sustainability Director:

> *"When it comes to sustainability planning we have a structure that we use for objectives, goals, strategies, and measures. So it's a standardized approach to break down the overarching objectives of the company into the unit and also on an individual basis. So the people in the units are out there to put at least one objective in their annual performance review related to sustainability and we've worked on linking their objectives to the overarching objectives of the company. So yeah, it's part of the planning process and then in the individual goal setting for all of us."*

The goals are adjusted and updated on an annual basis to serve as a guide for the company on the action plan for the year. Furthermore, the goals play an important role in helping the company track its progress towards the long-term ambition of achieving its sustainability objectives by 2030. The Sustainability Director further elaborates:

> *"The goals should help us drive action that takes us towards the long-term goals for 2030. So on climate, for example, we have a net zero ambition for our operations. In order to get there we need to put plans in place and then calculate in this case the impact on the climate on an annual basis. There are more detailed plans on the annual level so you know what we're not going to do this year. You break down the long-term goal into a stepwise approach and then you bring it back to the year."*

Duni Group uses the GSM cloud which is a written document to store the action plan the company has towards its sustainability achievement. The written document is used as a tool for the sustainability team to track current progress on sustainability performance and assess the need to change priorities, identify challenges, and so on. Through systematic planning and linking the sustainability initiatives with the UN's global sustainable development goal, Duni Group expects that the goals set will be able to guide the company in achieving its long-term ambition to have fully circular operations, net-zero climate emissions, and be a trusted sustainability leader.

4.1.1.3 Cybernetic Control System

Duni Group incorporates budgeting that covers the sustainability team and the sustainability efforts of the company in general. The sustainability team first sets the ambition for the year and then further decides on the key activities and projects that the company needs to run. Through the developed sustainability strategy and activities, the sustainability team decides the annual budget required to run the initiatives for the year. To ensure good financial control, Duni Group also tracks the actual spending on sustainability projects on a monthly basis. However, this is the

responsibility of the regular Business Controller instead of the Sustainability Controller as explained by the Sustainability Director:

> *"The Sustainability Controller is responsible for CSRD implementation and making sure that we have the documentation and system in place to make sure we have the right information so that we can do an audit of the information next year. But the budget and planning, we work together with finance here, but that's normal Business Controller."*

Duni currently does not employ a balanced scorecard to measure its sustainability performance. However, there is a KPI structure that is reported to the board which includes some key KPIs that the board at Duni Group has specifically asked for. Specifically for climate impact, Duni Group has a reporting platform where the sustainability team will consolidate the figures reported by the factories to generate a quarterly report. As Duni is a listed company, it tracks and reports the progress of its sustainability performance to the stock market on a quarterly basis as well. The Sustainability Director explains the process:

> *"We have a Climate Specialist in the team, so she collects data from each of our factories, that's where the main impact is. We have a local responsible in each factory who reports energy consumption in the platform. Then we have a calculation on the platform and it's an external cloud-based platform where there are emission factors added so for each MW hour of energy, there is an emission factor to calculate your climate impact. That is done on the platform managed by our Climate Specialist. Then we get a result which is then reviewed with the finance function. So our climate specialist has a review step with our Sustainability Controller to validate them and to do a sort of reality assessment. Then once that is done, it is shared with the management team on the board and then in the external quarterly report as well."*

Duni Group's Sustainability Director emphasizes the importance of "what gets measured gets done". The monitoring and measurement of both financial and non-financial sustainability-related KPIs are fundamental in order for people to realize their roles and responsibilities in the overall achievement of the company's sustainability agenda. It is not solely the responsibility of the sustainability team, rather it requires the organization's efforts as a whole to make sure that the sustainability ambitions can be delivered.

4.1.1.4 Reward and Compensation

Duni Group employs a reward and compensation system for good sustainability performance in the form of an annual management bonus. The sustainability component in the bonus is related to the company's operations and is measured on a quarterly basis as part of the climate reporting as further illustrated by the Sustainability Director:

"So on the management level, a part of the bonus is depending on our climate goal. So yes, there is a link to compensation for management for those who have a management bonus, but otherwise not. Our Climate Specialist is consolidating the data, but the reporting is done in operations. So our Operations Director has a responsibility that this is done in a good way and he is also on the management level, so he has a management bonus into this. And his boss, the Vice President, who is in the management team as well for that business area."

However, this reward system is only applicable to roles that have management bonds. Therefore, the bonus is strictly given to the top and middle management, but not lower management such as the staff. Despite the absence of reward for sustainability performance for lower management, many employees are still interested in applying for the additional role of sustainability leaders driven by their personal motivations as explained by the Sustainability Director:

"We had 20 positions and we had 45 people applying. So it was good. I think that's probably an individual response. Like everything else, you have your own personal motivations. But if I would speculate, I think that some people are engaged in sustainability in general, so they want to add that to their role. Some people see it as a personal development opportunity. And some probably see that there are more and more questions around this. It's a way to be more efficient in your role. It's a mix of reasons."

Through the maturation of Duni Group's sustainability culture and different personal reasons, employees from diverse backgrounds have developed an intrinsic motivation to take on additional responsibilities to actively engage with sustainability issues and contribute to the overall sustainability performance of the company. This intrinsic motivation reflects a genuine, internal drive within the employees to participate in sustainability initiatives, extending beyond mere adherence to regulatory requirements or monetary rewards.

4.1.1.5 Administrative Control System

The decision-making process of sustainability strategies at Duni Group is balanced with both bottom-up and top-down approaches that are done within the sustainability team consisting of five people. The bottom-up approach is mostly used during the ideation stage whereas the top-down approach is set as a reminder of the established KPIs that the company has to achieve as further elaborated by the Sustainability Director:

"So we capture input that we bring that to a team meeting. We have a full-day meeting where we go through the different aspects of the opportunities and then we try to structure it and prioritize them for the next year. So it's built bottom-up by all of us, but we need to also be conscious of the top-down. So for example, we have a climate goal, we have a goal or a KPI on climate, we have a KPI on virgin faucet plastics. So we need to keep that in mind as well. I think it's a combination of bottom-up and top-down"

The central sustainability team ensures it aligns with the local sustainability leaders through online meetings every six weeks. The meetings usually cover the discussion on the development and the ideas to convert the sustainability agenda of the company into something more interesting and engaging. The topics covered heavily depend on the sustainability areas that the company needs to focus on. However, as the sustainability leaders network consists of employees with existing permanent roles from different departments, alignment is sometimes challenging as described by the Sustainability Director:

> *"Of course, there's always a fight for time and resources and attention. They are not sustainability managers in their title. They are marketing managers or they are purchasing or financial controller. So they have a responsibility and of course, it is a challenge to find the time sometimes to be able to do the job in the right way."*

Despite the challenges, Duni Group ensures the commitment of the sustainability leaders who have voluntarily signed up for additional roles and responsibilities by incorporating sustainability performance into their personal performance review and evaluation. As for the central sustainability team, Duni Group ensures that the team is 100% focused on sustainability and assigns specific sustainability-related responsibilities to each different role to maintain the focus and accountability towards the achievement of the company's sustainability agenda.

4.1.2 Rug Company's Overview and Sustainability

Rug Company Group, founded in 2005 and headquartered in Malmö, Sweden, employing about 75 people with different functions. This company is one of Europe's leading online platforms for home furnishing products, specializing in high-quality rugs and carpets. Through its renowned brands, the company offers a diverse assortment of over 30,000 products to customers in more than 40 countries. Rug Company doesn't operate its own factory; instead, it collaborates with various manufacturers and suppliers globally to source its products. These manufacturers are located in different regions including countries like Turkey, India, Belgium, and China, depending on factors like material sourcing, craftsmanship, and production capabilities. In 2023, the company reported a net revenue of 233.3 million SEK, showcasing a strong financial performance despite challenging economic conditions. The company's EBIT margin was 12.6%, and earnings per share stood at 1.17 SEK.

As a leading producer of stylish and eco-friendly rugs, Rug Company is committed to sustainable business practices, aligning with high ESG performance standards under its ABC strategy. Rug Company's ABC strategy is its blueprint for driving sustainability and ethical business practices across its operations. This strategy is structured around three core pillars: Planet, People, and Business. Under the Planet pillar, Rug Company aims to reduce its environmental footprint by adopting a circular business model, using sustainable materials, and minimizing climate impact. The People pillar focuses on social responsibility, ensuring fair labor practices, and promoting

employee well-being. The Business pillar emphasizes responsible purchasing practices, strict adherence to a code of conduct, and maintaining high standards of business ethics. By aligning its goals with the United Nations' Sustainable Development Goals, Rug Company strives to lead the rug industry toward a more sustainable and ethical future

4.1.2.1 Cultural Control System

With the aspiration of becoming a sustainability leader, Rug Company acknowledges the importance of taking responsibility and managing its industry's social and environmental challenges. Rug Company aims to make significant progress towards this ambition by involving its employees and suppliers in directing daily efforts and implementing necessary changes for transformation. However, managing employees' level of awareness and understanding can be challenging and Rug Company makes continuous efforts to educate employees through numerous channels as explained by the Sustainability Manager:

> *"The current level of employees' sustainability awareness definitely can be improved, but the awareness is rising everywhere. Well, in general, I would say it is also kind of tricky for some employees to understand. Therefore, we have an onboarding program for every new employee to have an introduction to sustainability within the organization. We also have this town hall meeting where everyone is participating where we have some slots during the year to talk about sustainability updates and so forth. We also have an intra-net channel where we can share our information on sustainability. So for information sharing, we have the slack channel and the town hall where questions are always welcomed."*

To encourage employees' motivation in contributing to the sustainability agenda of the company, Rug Company also established a group of sustainability ambassadors consisting of employees from different functions who also have interests in sustainability, appointed by their managers. These ambassadors have the voluntary responsibility to support the sustainability initiatives in the company on top of their daily roles as further elaborated by the Sustainability Manager:

> *"With the sustainability ambassadors, we have a meeting one or two times a year where we share information and also collect some feedback on what we do. Sometimes they get different tasks to do and that's easier for me to reach out if there is a certain question about sustainability initiatives that we want to implement, for example in the warehouse. Then we can have two-way communication on how it works in the warehouse and how we want to implement this."*

Rug Company aims to lead the rug industry toward a sustainable future by minimizing the industry's environmental footprint and promoting more sustainable consumption habits among customers. Furthermore, Rug Company also believes that it is important to contribute to the environment not only externally through the products that it sells but also internally through the employees' daily activities. The Sustainability Manager further provides a few examples:

"We have some benefits related to traveling or commuting. We pay a certain amount of money for bus or train tickets that the employees can use monthly. You can also rent an electric bicycle through the company and so forth."

Rug Company believes that by being a sustainability leader, it can increase its chance to attract employees in the long run because building a sustainable corporate culture nowadays is not merely to meet stakeholders' interests, but also to appear as an attractive workplace for top talents who are conscious about the importance of corporate sustainability contributions. Therefore, Rug Company strives to consistently educate its existing employees more on the company's sustainability work.

4.1.2.2 Planning Control System

Rug Company's sustainability strategy, the ABC strategy focuses on three key areas: Planet, People, and Business, each with defined commitments and objectives. The goal of this strategy is to integrate sustainability into the core of Rug Company's business model, underpinning its 2030 sustainability ambitions. Rug Company further identified five critical change levers essential for achieving the company's sustainability goals: its team, customers, business partners, business practices, and communication (Table 4.2). The three key focus areas of Rug Company are further developed into a set of objectives to be achieved by 2025 and 2030. Rug Company's sustainability objectives align with the UN's Sustainable Development Goals, with the main focus on the goals to which Rug Company has the greatest opportunity to contribute and make a difference, as shown in Table 4.3.

Table 4.2 Five Change Levers

Change Levers	Approach
Our team	Drive sustainability into everything we do
Our customers	Engage and inspire customers to consume more sustainably and circular
Our business partners	Support all our business partners to develop sustainable business practices
Our business practices	Maintain functioning and efficient governance through our standards, policies, and Code of Conduct
Our communication	Be transparent about our current programs, ambitions, and challenges

Source: Rug Company Annual Report, 2023

Table 4.3 The ABC Strategy

Focus Areas	Related SDGs	Goal 2025	Goal 2030
Planet	Goal 6: Clean water and sanitation Goal 13: Climate action Goal 17: Partnerships for the goals	Increase the proportion of certified, reused, recycled, or recyclable materials (purchased weight) to 20% Reduce the company's absolute CO_2e emissions by 25% in scope 1 compared to the 2019 base year Reduce the company's absolute CO_2e emissions by 25% in scope 2 compared to the 2019 base year Reduce the company's own operations' absolute CO_2e emissions by 25% in scope 3 compared to the 2019 base year Decrease CO_2e emissions from rug purchases by 20% per square meter of rug sold compared to the 2021 base year Use packaging made from 100% recycled or other non-fossil materials.	Increase the proportion of certified, reused, recycled, or recyclable materials (purchased weight) to 50% Reduce the company's absolute CO_2e emissions by 50% in scope 1 compared to the 2019 base year Reduce the company's absolute CO_2e emissions by 50% in scope 2 compared to the 2019 base year Reduce the company's own operations' absolute CO_2e emissions by 50% in scope 3 compared to the 2019 base year Decrease CO_2e emissions from rug purchases by 50% per square meter of rug sold compared to the 2021 base year Use packaging made from 100% recycled or other non-fossil materials.
People	Goal 5: Gender Equality Goal 16: Peace, justice, and institution Goal 17: Partnerships for the goals	Include 100% of tier 1 suppliers in our work with social audits for improved working conditions Include 10% of tier 2 suppliers in our work with social audits for improved working conditions Achieve an Employee Net Promoter Score (eNPS) of 60 Have no Zero Tolerance cases	Include 100% of tier 1 suppliers in our work with social audits for improved working conditions Include 50% of tier 2 suppliers in our work with social audits for improved working conditions Achieve an Employee Net Promoter Score (eNPS) of 80 Have no Zero Tolerance cases

Focus Areas	Related SDGs	Goal 2025	Goal 2030
		At least one performance review per year for each employee Gender quality; proportion of 40-60% of women in management	At least one performance review per year for each employee Gender quality; proportion of 40-60% of women in management
Business	Goal 8: Decent work and economic growth Goal 12: Responsible consumption and production Goal 17: Partnerships for the goals	Have 100% of suppliers signed the code of conduct Have 100% of all tier 2 subsuppliers mapped Have all corruption incidents reported	Have 100% of suppliers signed the code of conduct Have 100% of all tier 2 subsuppliers mapped Have all corruption incidents reported

Source: Rug Company Annual Report, 2023

The planning process at Rug Company is based on a bottom-up approach where the sustainability team is responsible for the ideation and planning of the sustainability objectives which will be further escalated to and approved by the CEO and the board. The objectives are usually adjusted on an ad-hoc basis based on the results of the materiality analysis as explained by the Sustainability Manager:

> "When we gather more data and update our materiality analysis, we see that maybe things have changed. When we are going to finalize our double materiality analysis and when we have closed this, we are going to update both our short and long-term sustainability goals this year."

In 2023, Rug Company conducted an update of its materiality analysis to align with the GRI 2021 Standard. This update has provided Rug Company with deeper insights into the company's impact and the areas of particular importance that it must prioritize moving forward. In 2024, the company will utilize these insights to refine the short-term and long-term goals based on the newly identified areas, after completing further preparations for CSRD.

Rug Company has specific action plans but only strictly for the goals related to the suppliers, as shown in Table 4.3. If supplier audit findings reveal deviations from social standards, a corrective action plan is collaboratively developed with the supplier, followed by diligent monitoring to ensure progress. Continued lack of improvement may result in the termination of the partnership with the supplier.

4.1.2.3 Cybernetic Control System

Rug Company employs budgeting and cost control to align the spending for sustainability projects within the budget that has been approved. As the Sustainability Manager is not involved in the budgeting process, it becomes the full responsibility of the Chief Organization and Sustainability Officer to propose a budget to the finance team and anticipate the higher costs for bigger projects as explained by the Sustainability Manager:

> "My boss is the one who handles the budgeting. But since she is part of the board, of course, she has some rights to decide on a specific amount of money to spend depending on how large the project is. But generally of course we have to align with the budget."

Although Rug Company has a finance team to oversee overall expenses, it currently lacks a dedicated Sustainability Controller. The Sustainability Manager collaborates with the finance team daily, focusing primarily on sustainability reporting rather than extensively on cost and expense control, as described by the Sustainability Manager:

> "It is of course a lot of work when we do sustainability reporting. Otherwise, the relationship I have with the finance team until now just involves invoices or reports on the

taxonomy. At the moment it's strictly for reporting purposes or some questions here and there, but not so much more. But I can see that there would be an increased collaboration in the future. We can also see ahead that we probably will need a Sustainability Controller or if we share it between the Sustainability and Finance departments."

Rug Company does not use a specific dashboard for sustainability performance but relies on a system called Locker Studio to collect relevant information. A dedicated admin gathers data from orders and suppliers, which is stored in this system. Users can extract, create, and generate reports related to sustainability. However, this system primarily covers information from the purchasing team and suppliers regarding materials used and does not extensively cover other KPIs, such as emissions. Consequently, financial performance and other KPIs are not included in this system.

4.1.2.4 Reward and Compensation

At Rug Company, sustainability initiatives generally do not include rewards or compensation. Neither the sustainability team nor other employees receive extrinsic or intrinsic rewards for achieving sustainability goals. However, an exception exists for a specific team in India responsible for rug production, as the materials used by Rug Company are imported from India. This team manages production processes, including raw material purchases and design preparation. Their compensation is based on quarterly performance reviews, as further explained by the Sustainability Manager:

> *"A quarterly meeting with our Indian team where we consider both quality controls and sustainability metrics. This person's compensation model is based on the performance that we reviewed past quarter, so that's the only thing that we have."*

In general, sustainability KPIs are not yet integrated into employees' objectives except for roles that are directly associated with the sustainability objectives of the company. This integration is something that Rug Company is currently working on as emphasized by the Sustainability Manager:

> *"We are currently working to integrate sustainability KPIs into different functions. If we want to do real work on sustainability, we have to work on it on all these different levels and sustainability has to be integrated with all different functions. So for example, when purchasing decides on how to ship our products from Turkey, do they plan this well enough so we have time for the containers instead of the trucks? That could be a really good KPI to measure. It could be the plastic in the warehouse, for example. I think it's really good to push sustainability out in the organization because that is where everything happens."*

Compensation and benefits are an important part of Rug Company's employee performance and engagement framework to support critical work in recruitment, organizational, and employee development. However, despite ongoing efforts to integrate sustainability KPIs into various functions, Rug Company currently has no plans to implement a rewards and compensation model

associated with this integration. Nevertheless, many current employees have demonstrated intrinsic motivation and personal interest by voluntarily serving as sustainability ambassadors without expecting additional rewards. Rug Company believes that integrating sustainability KPIs will not only enhance overall employee motivation but also increase awareness of the significance of their contributions to sustainability. This integration aims to foster a deeper understanding and commitment to sustainable practices across the entire organization.

4.1.2.5 Administrative Control System

The sustainability team at Rug Company consists of two members who lead the sustainability strategy and are internalized in the company. Additionally, this sustainability team is supported by sustainability ambassadors from several departments (IT department, business-to-business department, etc). Regarding the decision-making process, the sustainability team implements a top-down and bottom-up approach. The board of directors decides and approves policies that would be implemented for all employees. Therefore, sustainability strategies are formulated through a top-down approach or centralized. Nevertheless, daily operation decisions will be based on the bottom-up approach where the sustainability team provides suggestions to the top management level, as stated by the Sustainability Manager:

> *"Yeah, it is. It is combined. But I would say that we come up with a lot of suggestions that we present to the management team and the board members."*

The sustainability team at Rug Company is part of the People and Organization department. The leader of the team serves as the Chief Organisation and Sustainability Officer (COSO). The COSO holds a position on the board and reports directly to the CEO. This role is responsible for developing and implementing Rug Company's strategy and monitoring sustainability activities. Additionally, the COSO handles responsibilities beyond sustainability, such as managing the financial budget for the sustainability team and personnel. Conversely, the Sustainability Manager is fully dedicated to sustainability tasks, assigning specific sustainability-related responsibilities to ensure accountability for achieving the company's sustainability goals.

To support the ABC strategy and sustainability objectives, the company follows several standards and policies to ensure compliance with rules and regulations, as well as the protection of its operations and suppliers. Rug Company closely watches dynamic changes in sustainability and laws, such as Corporate Sustainability Reporting Directive (CSRD), Corporate Sustainability Due Diligence Directive (CSDDD), UN Global Compact's Ten Principles, and UN Guiding Principles on Business and Human Rights (UNGP).

4.1.3 PT Pertamina Hulu Indonesia's Overview and Sustainability

PT Pertamina Hulu Indonesia (PHI) is Pertamina's subsidiary entity which focuses on oil and natural gas production through exploration and production activities. As an energy company, PHI

manages upstream oil and gas assets in Regional 3 Kalimantan including East Kalimantan, South Kalimantan, and North Kalimantan. In 2023, PHI produced an average of 62.2 thousand barrels of oil per day (MBOPD) and gas production of 710 million standard cubic feet of gas per day (MMSCFD), which is equivalent to approximately 11% and 26% of Pertamina oil and gas production (PHI, 2024). PHI continues to carry out different technological and creative innovations, efficiency efforts, synergies, and cooperation with other Pertamina subsidiaries by involving dedicated 2,500 employees with global expertise and exceptional performance. These activities aim to create benefits for all stakeholders, particularly the Indonesian government and the people.

PHI has implemented sustainable oil and gas operations through innovation and technology. The company applies environmental management systems, resource conservation, and community development programs. PHI received a Proper Gold and Green rating in the Environmental Management Performance Rating Program from the Ministry of Environment and Forestry. Several sustainability policies are incorporated in the PHI's business namely energy and water management system, greenhouse gas (GHG) reduction, and 3Rs (Reduce, Reuse, Recycle) of B3 and Non-B3 waste management.

4.1.3.1 Cultural Control System

PHI is one of the subsidiaries state-owned oil and gas company in Indonesia that focuses on the extraction and production processes. The sustainability issues are closely related to the business operations. Therefore, the company strengthens sustainable activities in exploration activities for new oil and gas reserves. During the past five years, PHI has been trying to build a sustainability culture within the company. Previously, sustainability activities were conducted in each of the functions separately and there is no specific function responsible for sustainability. However, the company has appointed a new job role at the vice president level to manage sustainability performance. It shows that the management is willing to take sustainability seriously. The Environmental Manager elaborates further information about the progress to increase sustainability awareness:

> *"Sustainability is a culture. It's not enough embedding the culture from top to bottom, you have the CEO message. You have the KPIs, you have the management commitments, etcetera, etcetera. However, building a sustainability culture takes time because building culture is bottom-up not only from the top to the bottom. That's why we are still growing."*

Spreading sustainability culture in internal organizations is conducted through training. PHI holds mandatory training for employees regarding environmental, social, and governance aspects. Besides training, PHI adjusts the risk matrix to support sustainability activities. The management incorporates ESG into the risk matrix to bridge the current risk matrix with ESG requirements. It accommodates the social aspects to ensure the safety and well-being of the community, environmental aspects which focus on the long-term environmental challenges, reputation and

legal aspects to comply with certain regulations, and asset aspects to maintain the worker's protection. The new risk matrix will be formalized in May 2024 and the company will hold a workshop to socialize the new risk matrix to give employees have better understanding of sustainability and guide the implementation daily.

In the current business process, PHI integrates sustainability practices in daily operations. The company develops a sustainability mindset for employees by introducing a carbonization calculator. The function of this calculator is to measure the total consumption CO_2 in a day. For instance, the company put a tracking tool on the employee's car. The company could calculate the CO_2 that is being released from a car using the carbonization calculator based on the total distance taken by an employee. Although the implementation of the carbonization calculator is not massive, PHI still continuously socializes this calculator to employees.

One of the important factors in sustainability culture is sustainability awareness. The sustainability awareness of PHI's stakeholders has a significant impact on supporting the sustainability agenda. Foreign investors act as the main stakeholders who have increased their awareness of the company's sustainability. These investors continuously monitor and review the sustainability risk of the company that they invested in. Thus, PHI is motivated to improve the sustainability performance. The company is not only extracting the profit but also doing business ethically, specifically doing business in a green way. Being a sustainable company can eliminate the potential business risk in the future. For instance, reducing the risk of persecution from the government the blockade from the local community, or environmental issues that can cause reputation damage for the company.

The communication process of sustainability at PHI is carried out through general committee meetings. There are four levels of committee meetings. The first level of committee meetings is at the director level followed by senior managers at the second level. The third level of committee meetings consists of group leaders who discuss information from the grassroots level, especially regarding sustainability and the social environment. Lastly, the fourth level of committee meetings provides a chance for grassroots to meet with their group leaders and talk about safety, the environment, social, security, and sustainability. This process combines the top-down and bottom-up approaches. The CEO and board of directors provide direction and tasks that employees must execute which relies on the top-down approach. Meanwhile, the suggestions and feedback from the grassroots level to higher management are based on the bottom-up approach.

In internal communication, the company uses a platform called Komet. Komet is a digital platform for distributing and utilizing information as a source of knowledge online. The function of this platform could give opportunities to do knowledge sharing among employees as elaborated by the Environmental Manager:

> *"Employees gather and share their best practices through Komet. Each employee could input the ESG aspects to the Komet sharing. If they have initiatives related to sustainability*

involving decarbonization, carbon footprint, social, etc, the employees may able to share it with Komet."

As a practical way of sustainability culture, PHI is actively engaging in community activities. PHI commits to managing the impacts of business and operational activities on the communities and environment, particularly in the company's working areas. The contribution of PHI to the community includes socio-economic development through education; economic empowerment; health; infrastructure; providing job opportunities; and increasing environmental sustainability. For instance, PHI executes social and environmental acitivities through Pertamina's Desa Energi Berdikari (DEB) Waste to Energy for Community (Wasteco). This program facilitates renewable energy available in villages to support community's economic and social activities. Community engagement is aligned with the company's values. PHI follows the national state-owned company value called AKHLAK. This value is an abbreviation of *Amanah* (Trustworthy), *Kompenten* (Competent), *Harmonis* (Harmony), *Loyal* (Loyal), *Adaptif* (Adaptive), and *Kolaboratif* (Collaborative). The company implements collaborative value to engage with external stakeholders. Moreover, community development activities are a practical form of harmony value.

4.1.3.2 Planning Control System

The sustainability agenda at PHI is divided into three categories based on the time horizons. The goals and objectives that should be achieved in less than a year are classified as short-term plans. Short-term plans are designed to address the objectives that align with the company's proposed risk. For instance, the company focuses on reducing emissions. In a short-term plan. The management monitors the progress of emission reduction that could increase the efficiency of activities. Furthermore, the company fulfills reaching the medium-term plans in 5-10 years which have the same directions as the short-term plans. Developing carbon accounting standards to comply with national and international standards as well as stakeholder engagement to fully support national net zero emissions targets and commitments are the medium-term goals that the PHI tries to accomplish. The short-term and medium-term objectives have been designed to support the long-term goals that relate to net zero emissions that will be accomplished in the next 20 years. PHI has designed a comprehensive plan that is carried out through two main pillars. The first pillar focuses on decarbonization business activities, while the second promotes green, integrated energy business development. Furthermore, this corporation contributes to the energy transition by allocating capital expenditures for low-emission energy and renewable energy development.

PHI engages with stakeholders when setting the company's objectives. As a subsidiary of a state-owned company, the management collaborates with the government to decide the goals regarding sustainability. In addition, PHI tries to adjust its plans to meet the needs of the government plan in the future, as stated by the Environmental Manager:

"The environmental footprint has a relation with the government. We have to know the local government's demands, we have to know the Indonesian government on a big scale. Furthermore, the government's plan to move the capital city from Jakarta to Kalimantan also affects our goals. Previously, we focused on expanding operations by building new power plants. However, if Kalimantan becomes the capital city, it will be specialized for government activities. Since our operational site is in Kalimantan, the target plan is really tight with the stakeholder's plan or stakeholders' condition in the future."

Currently, PHI is working on 10 sustainability priorities. The environmental focus is related to net zero targets, biodiversity, and waste management. In the social aspect, the company focuses on labor safety to reach zero fatality. PHI tries to implement work procedures to prevent major incidents and fires that could take place on working sites. Additionally, the governance aspect involves corporate ethics to build a zero-corruption culture. The other governance activity that the company tries to comply with is digital cyber regulation to minimize cyber threat security. Among the three aspects of ESG, environmental aspects are the company's main focus since the company developed a new risk matrix for preserving the environment. The 10 sustainability priorities are aligned with the UN SDGs, as elaborated further in the Table 4.4.

Setting KPIs for sustainability iniatives are crucial in the achievement of sustainability targets. PHI includes two approaches to formulate the KPIs. The top-down approach is started from top level management, Chief Sustainability Officer (CSO), that has been selected by CEO to handle the sustainability targets. The CSO will communicate the sustainability objectives to the subordinates involves vice presidents and managers. On the other hand, the bottom-up approach is implemented during the risk assessment. The management is mainly responsible to focus on medium and high risk, as stated by Environmental Manager:

"If the risk is high to very high or to medium high, we need something to some effort to bring out either the scalability of the risk or the take out of the risk, right? So. The KPIs are generated from that from the business assessment."

The implementation of priority sustainability plans at PHI is detailed in the written action plans. The company formulizes a sustainability policy at the corporate level as a guide for all business functions. This policy integrates strategies and activities for ESG components including environmental, social development, and governance. Each business function applies the sustainability policy in the daily operations and helps employees attain their targets.

Table 4.4 Sustainability Focuses

Sustainability Aspirations	Sustainability Focuses	Related SDGs	2022 Initiatives	PHI's Quantifiable Targets
Environmentally Friendly Company	Addressing climate change	Goal 7: Affordable and clean energy Goal 13: Climate action	Developed Zero Roadmap Implemented Decarbonization Delivered NRE Capacity	**2025:** 23% emission reduction from BAU Scenario (~9.1 million ton CO_2e) refer to 2010 baseline emission and 2021 rebaseline emission calculation **2030:** 32% emission reduction from BAU scenario (~21.4 million ton CO_2e) refer to 2010 baseline emission and 2021 rebaseline emission calculation
	Reducing Environmental Footprint	Goal 6: Clean water and sanitation Goal 7: Affordable and clean energy Goal 13: Climate action	Exceeded Company Performance Rating Program (PROPER) for waste and water	**2025:** 98% of sites operated in significant impact areas certified with ISO 14001 Water: Reduce fresh water consumption by 5% in a water-stressed area **2030:** 100% of sites operated in significant impact areas certified with ISO 14001 Water: Reduce fresh water consumption by 10% in a water-stressed area
	Protecting Biodiversity	Goal 14: Life below water Goal 15: Life on land	Systemized Biodiversity Program Internalized Blue	**2025 and 2030:** 50% NPI for a new facility after 2022

Sustainability Aspirations	Sustainability Focuses	Related SDGs	2022 Initiatives	PHI's Quantifiable Targets
			Carbon Initiatives	
Socially Responsible Company	Innovation and Research Reorientation	Goal 7: Affordable and clean energy Goal 8: Decent work and economic growth	Sustainability-focused research and innovation	**2025:** Minimum 30% of realized investment and operational budget for R&D focus on decarbonization **2030:** Minimum 44% of realized investment and operational budget for R&D focus on decarbonization
	Expanding community engagement and impact	Goal 1: No poverty Goal 4: Quality education Goal 7: Affordable and clean energy Goal 14: Life below water Goal 15: Life on land	Improved accessibility to energy for the community	**2025:** - Total energy capacity from Desa Energi Berdikari (DEB) - Solar Energy: 317,000 Watt Peak - Biogas and Biomethane: 551,960 m3/year - Microhydro Energy: 14,000 Watt **2030:** - Total energy capacity from Desa Energi Berdikari (DEB) - Solar Energy: 662,000 Watt Peak - Biogas and Biomethane: 663,560 m3/year - Microhydro Energy: 21,500 Watt
Good Governance Company	Enhancing Occupational Health and Safety (OHS)	Goal 3: Good health and well-being Goal 8: Decent work and economic growth	Enhancement of health and safety aspect	**2025:** 80% location with high-risk operation certified ISO 45001 Zero Major Accident (Fatality, Oil

Sustainability Aspirations	Sustainability Focuses	Related SDGs	2022 Initiatives	PHI's Quantifiable Targets
				Spill, Property Damage) **2030:** 100% location with high-risk operation certified ISO 45001 Zero Major Accident (Fatality, Oil Spill, Property Damage)
	Prevention of large-scale incidents	Goal 3: Good health and well-being Goal 12: Responsible consumption and production Goal 14: Life below water Goal 15: Life on land	Conducted process safety management	**2025 and 2030:** 100% of high-risk operation locations at PHI have carried out process safety audit
	Respecting and empowering employees	Goal 5: Gender equality Goal 8: Decent work and economic growth	Promoted human rights Developed ESG operating model	**2025:** 16.5% of total employees at PHI with online human rights training module Minimum 17% of female representation in leader position at PHI 2030: 33% of total employees at PHI with online human rights training module Minimum 20% female representation

Sustainability Aspirations	Sustainability Focuses	Related SDGs	2022 Initiatives	PHI's Quantifiable Targets
				in leader position at PHI
	Strengthening digital security	Goal 16: Peace, justice, and strong institutions	Cyber security structure and culture	**2025 and 2030:** - PHI gets an ISO 27001 certification - Obtain cyber security maturity BSSN Level 4 (Managed Implementation) and Cyber Security Maturity BSSN Level 3 (Defined Implementation) - Phishing Prone rate is maintained at a level of less than 10% according to IOC standards
	Improving corporate ethics	Goal 16: Peace, justice, and strong institutions	Enhanced GCG assessment	**2025 and 2030:** PHI gets ISO 37001 certification

Source: PHI Sustainability Report, 2022

4.1.3.3 Cybernetic Control System

Monitoring sustainability progress gives a direction for PHI to know the current process of sustainability implementation. The management of PHI incorporates financial measurement to control sustainability initiatives. Operational expenditure (OPEX) is used to measure the expenditure of short-term plan activities including employee salaries and utilities expenses. Meanwhile, the measurement tool for long-term targets is based on capital expenditure (CAPEX) involving the purchasing of buildings, equipment, and machinery. Additionally, the allocation of the financial budget depends on the project's prioritizations. The Environmental Manager explains further information regarding financial measurement:

> *"Every sustainability programs or sustainability initiatives require the CAPEX and OPEX to control the sustainability agenda. PHI has a specific budget for sustainability initiatives to present clear and reasonable financial commitment. These budgets are established from the rigorous process of budget planning."*

Besides using financial measurement, PHI also integrates non-financial measurement. The management attempts to balance the financial and non-financial measurements. The company uses surveys to measure customer satisfaction which is held annually and suppliers satisfaction in their corporation with PHI. Furthermore, the company conducts a materiality survey to determine sustainability materiality within the organization. The material topics prioritized by PHI include economics, environmental, governance, and social. In the internal organization, PHI encourages the learning and growth of all employees. The management continuously monitors employees to ensure that they have the necessary skills to implement sustainability technologies and processes in their activities. The company also strengthens the internal process by identifying the right investment through feasibility tests to increase efficiency.

Utilizing a dashboard to track financial and non-financial performance takes place at PHI. This dashboard helps employees understand the sustainability progress that proceeds in the company. For instance, the decarbonization targets have both financial and non-financial indicators. The financial side of the project covers the investment budget that relates to CAPEX and the non-financial aspect is based on the total amount of CO_2 being reduced. Each business function will generate information from the dashboard based on its needs. The finance division will focus on the financial data, meanwhile, the sustainability division aims to look at the environmental data involving carbon emission and waste management. Although the financial and non-financial indicators are crucial, balancing these two aspects is a challenge for PHI. At one point, the finance division wants to reduce the business expenses. However, sustainability activities require a large investment that needs a budget to execute the sustainability plans.

4.1.3.4 Reward and Compensation

PHI gives rewards and compensation to employees who achieve goals and targets. The company believes that giving monetary rewards is a way to appreciate employee's accomplishments and functions as a tool to retain manpower. The Environmental Manager explains further information regarding reward and compensation as stated:

> *"So the managers will set the goals and if the employees could achieve the goals, the management will give the rewards. For example, we are rewarding decarbonization initiatives. We cannot add it to the salary directly, but we have a separate incentive that rewards decarbonization initiatives. It works the same for fatality prevention. So, we have a system to reward the employees and now we use the system to reward them for sustainability-related activities. And about the salary, the salary in general. You know it will increase year by year."*

Before giving compensation, PHI would assess the employee's performance using the sustainability matrix that incorporates into each individual objective. For example, the operator level which includes the grassroots level should be able to calculate CO_2 when they are doing their activities. To enhance the knowledge and skills of employees needed in doing responsibilities, the company provides internal development through training to increase personal growth development. Nevertheless, the company is currently developing an assessment that includes roles from third parties to evaluate employees from various levels to review the maturity level of ESG and sustainability performance. Furthermore, the performance evaluation of employees is conducted annually to measure the employee's contribution, as stated by the Environmental Manager:

> *"We evaluate the employee's performance and divide it into 4 categories including good performance, best performance, fair performance, and lack performance. In addition, sustainability aspects are already in the performance measurement."*

The reward and compensation at PHI are given after the employees successfully complete projects. These employees involve the permanent staff and non-permanent staff (contractors and subcontractors). For instance, there is a decarbonization project that incorporates 20 employees. After finishing the project's responsibilities, the company will give rewards to 20 employees that are given in one-time. In other words, they would receive direct incentives whether they are permanent or non-permanent staff.

4.1.3.5 Administrative Control System

The sustainability activities at PHI are integrated with the parent company's objectives. As a subsidiary company, PHI follows the current policies that the parent company has formulated. In practice, the sustainability process is managed by the sustainability team at the parent company. All subsidiaries, including PHI, have no sustainability team within the organization. Although PHI

does not have a sustainability team, the implementation of sustainability practices has been developed in the daily operations. The parent company regularly communicates with PHI to discuss the sustainability progress, as emphasized by the Environmental Manager:

> *"Holding gives us the framework of what data they need, what term, or what aspiration they need on a monthly basis. We PHI, the sub-holding upstream, are reporting our data, reporting our progress to them for the parent entity to be able to make a dashboard out of it. For example, they ask us to preserve more trees like preserving trees in the forest. So, we have to do a lot of clearing in the forest because we need to extract the oil. However, to minimize the impact on the environment, we will create a biodiversity action plan."*

During the implementation of sustainability activities, PHI forms several task forces to execute the sustainability strategies. Each task force has a responsibility to do a specific project related to sustainability. For instance, PHI builds a water treatment plant to process the excess waste before throwing it away into the sea. Hence, the task force tries to develop initiatives regarding waste disposal and the task force also works to create technical solutions for biodiversity and waste on the seawater. After the project is completed, the task force will be dissolved. If there is a new project that should be done, PHI will create a new task force.

The decision-making process at PHI combines the top-down (centralized) and bottom-up (decentralized) approach. The top-down approach occurs when the top management level of the parent company formulates sustainability strategies and policies. These strategies are functioned as a basis for developing the operational action plan. Meanwhile, the bottom-up (decentralized) approach is used for the day-to-day decisions to solve technical issues.

4.1.4 Energy Company's Overview and Sustainability

The energy company has portfolios spreading across Indonesia, especially in the energy value chain. This company incorporates Energy Resources, Energy Services, Energy Infrastructure, and Diversified Portfolio into a complete value chain that provides energy solutions to meet national and global needs. Currently, the energy company expands its business into new sectors such as electric vehicles, nature-based solutions, logistics and infrastructure, minerals and digital technology. The operations map of this organization consists of 17 areas within Indonesia. Based on the 2023 Annual Report, the revenue in 2023 was US\$ 3,026,839,190; it decreased 30.18% from 2022. The majority of the revenue consists of coal's revenue around 88.0% and non-coal revenue was only 12.0%. However, the 2023 profit decreased 70.43% from the previous year at US\$ 521,201,117 to US\$ 151,043,091.

Energizing Indonesia for a sustainable future is the main purpose of the company. Along with the vision and mission, the company is committed to achieving sustainability targets that involve the ESG aspects. On the environmental pillar, the company has achieved the Scope 1 GHG emissions intensity and land reclamation targets. One of the major achievements we can highlight is the completed installation of solar PV in three locations: Kideco site in Paser, INDY Bintaro Office

Park in South Tangerang, and Interport Business Park in Kariangau. The group companies (parent and subsidiary companies) have implemented the social pillar by conducting various activities to promote talent development, gender equality, and health and safety. For instance, the company held a training program called ESG Day to increase employee awareness of ESG and to invite its contractors and third parties to support the company's commitment to sustainability. Moreover, the company provides a women-to-women mentoring program to empower and nurture women to hold leadership positions within the company. Lastly, the sustainability committee has applied its work program to ensure that the ESG performance has achieved the target and to provide strategic directions for future improvement that align with the governance pillar.

4.1.4.1 Cultural Control System

As Indonesia's leading diversified energy company, Energy Company prioritizes environmental, social, and governance (ESG) as the fundamental principles of the company's operations. The company emphasizes that its mission to contribute to Indonesia's economic development and improve the quality of life of the people in Indonesia can only be meaningful if it incorporates responsible ESG practices. This commitment is also reflected internally and embedded in the company's culture involving employees of all departments across the organization. The Senior Sustainability Specialist further elaborates:

> *"I would say that the sustainability awareness of the employees in Energy Company is quite mature in comparison to other companies in Indonesia, but it can be further improved. I think that is not limited only to those whose departments are related to sustainability because we have many ways of communicating this to all of our employees, not just those who are in related departments. So I think that everyone is aware of the sustainability agendas. It's just a matter of how deep their awareness and knowledge about sustainability and ESG are as a concept."*

Every subsidiary company has one ESG task force which is a semi-permanent team consisting of existing employees chosen by the management across different departments assigned to work on the sustainability agendas for the subsidiary. As sustainability agendas are a long-term commitment, the members of the ESG task force remain unchanged unless someone leaves the company. Furthermore, Energy Company ensures that all employees have access to sustainability knowledge. There are mandatory trainings and workshops for all employees whose responsibilities are related to sustainability. Additionally, if any employee is interested in specific sustainability topics, the company will assess the needs and help the employee attain training and workshops, even if they are not necessarily related to their roles. Furthermore, Energy Company encourages knowledge sharing among employees. To facilitate this, the company releases a biweekly newsletter where employees are encouraged to submit articles and one of the most common topics covered in the newsletter articles is sustainability. The company further ensures that ESG aspects

are embedded into its culture by consistently encouraging employees to incorporate sustainability into their daily activities as described by the Senior Sustainability Specialist:

> *"We have already measured our energy consumption at our office, so we know how much electricity we're using in the office. We also have the waste management initiative where we know that the waste that we generate will be managed properly and responsibly with the help of our vendor. In our meetings, we have stopped using plastic bottles and this applies to not only the holding company but also to our subsidiaries as well. So we try to incorporate these little sustainable practices into our day-to-day office life, but it has been quite challenging as well to have that kind of behavioral change in the office."*

Energy Company values every ESG aspect equally and tries to communicate them regularly to the employees through desktop wallpapers and email blasts. The company also holds quarterly town halls where they usually cover not only financial performance but also updates on sustainability performance and new sustainability initiatives. Energy Company also ensures that all employees understand the values communicated through regular assessment as elaborated by the Senior Sustainability Specialist:

> *"Every year we distribute what we call a materiality assessment survey to our employees to see whether our perspective on sustainability is aligned with what they see. For example, we would ask them to rate the importance of each of our ESG material topics, such as the importance of energy in our business, the impact of emissions on our company, and so on. Through this material assessment survey, we also can see whether or not our employees understand what we're doing in the sustainability team. When we see that some employees do not understand some of the material topics that we have, we adjust our communication plan to communicate better about these sustainability topics, because we understand this is quite technical and we have to have some kind of high-level communication materials to help them understand better."*

Energy Company is certain that the sustainability culture is well established within the organization as the employees' awareness aligns with the company's sustainability objectives. The assessment results have shown that the employees are aware of the sustainability material topics and why they are important for the whole organization to keep maintaining the sustainability performance that it has now. Energy Company plans to continue what it has done to maintain the sustainability-minded culture across the organization.

4.1.4.2 Planning Control System

Energy Company views its ESG commitments as fundamental to its business practices and as a guiding principle towards realizing the sustainable future the company aspires to contribute to. Energy Company is committed to responsibly managing its portfolio and carbon footprint in line with its scope 1 and 2 emissions reduction targets, 25% by the end of 2025 and 33% by the end of

2030 against the 2020 baseline, with a longer-term ambition of achieving net-zero emissions by the end of 2050, aligning with Indonesia's ambitious target of reaching net-zero emissions by 2060. To achieve net-zero emissions, Energy Company has developed a high-level road map that the public can access through the published sustainability report. The long-term ultimate goal which is net-zero emissions is backed up with various medium and short-term targets in all three ESG principles (refer to Table 4.5).

Table 4.5 ESG Targets

ESG Metrics	Goal Area	Short-term Target	Medium-term Target
Energy	Scope 1 and 2 Emissions	Reduce scope 1 and 2 emissions by 25% in 2025 Reduce scope 1 and 2 emissions intensity per revenue by 50% in 2025 Reduce scope 1 and 2 emissions intensity per ton coal production by 10% in 2025	Reduce scope 1 and 2 emissions by 33% in 2030 Reduce scope 1 and 2 emissions intensity per revenue by 55% in 2030 Reduce scope 1 and 2 emissions intensity per ton coal production by 25% in 2030
	Energy Management	Increase % RE share in the energy consumption mix to 30% by 2025	Increase % RE share in the energy consumption mix to 35% by 2030
	Water Management	Reduce water withdrawal intensity per revenue by 30% by 2025	Reduce water withdrawal intensity per revenue by 32% by 2030
	Waste Management	Divert 40% of waste from landfill by 2025	Divert 45% of waste from landfill by 2030
	Land and Biodiversity	Increase land reclamation area by 20% by 2025	-
Social	Local Communities	1% EBIT spent on community development every year	-
	Health and Safety	Zero fatalities every year for employees and contractors	-
	Diversity and Inclusion	20% women in workforce by 2025 15% women in senior management by 2025	25% women in workforce by 2030 20% women in senior management by 2030
Governance	Business Ethics	80% of employees attend code of business conduct training by 2025	100% of employees to attend code of business conduct training by 2030

ESG Metrics	Goal Area	Short-term Target	Medium-term Target
		100% of board members to attend code of business conduct training by 2025	100% of board members to attend code of business conduct training by 2030
	Corporate Governance	30% (by weight) of board & senior management evaluation KPIs tied to ESG topics by 2025	-

Source: Energy Company Sustainability Report, 2023

The planning processes of these targets differ based on how long the terms are. There is no comprehensive process for setting the long-term target of net-zero emissions as it has been set as an ultimate commitment for which the company and employees are held accountable for the significant progress made in the coming years. However, the processes are different for short and medium-term targets as explained by the Senior Sustainability Specialist:

> *"For the short-term and medium-term goals, we do a very in-depth review of our sustainability performance historically and we also do a very comprehensive projection of our new businesses and how they would contribute to our sustainability performance later on. The short and medium-term goals target setting and planning are much more comprehensive."*

While the long-term target is permanent, the short and medium-term targets are usually adjusted on an ad-hoc basis due to the dynamic nature of the business as further elaborated by the Senior Sustainability Specialist:

> *"The short-term and medium-term goals are already an adjustment from the targets set back in 2021 because between 2021 and 2024 we had a lot of strategic changes. So for example, in 2021 we divested an energy shipping company, in 2022 we divested a contract mining company and in 2023, we divested one of our coal mining assets. But we also invested in more new businesses between 2021 and 2024. So, we actually adjusted our targets to reflect these strategic divestments and investments. As the business portfolio has changed significantly between 2021 and 2024, it only made sense that we adjusted our targets because they no longer reflected our business portfolio."*

Besides climate action, the company also takes part in initiatives indirectly related to its nature of business such as health and well-being through specific flagship programs to help the community have more equitable access to healthcare especially in its main operational areas and regions. Therefore, Energy Company tries to incorporate the SDGs into its sustainability agenda, although not explicitly on the targets. Energy Company continues to track and assess the ESG metrics applicable to the company's sustainability goals and revisit the targets for a balance between ambitious and realistic.

4.1.4.3 Cybernetic Control System

Energy Company incorporates budgeting to control and monitor the spending of its sustainability initiatives. It is a bottom-up process where related staff propose the budget which is approved by the management and the finance team, including both the CEO and CFO. At Energy Company, the monthly monitoring of spending and realization cost of each initiative are the responsibility of the heads of departments. Instead of controlling, the finance team mainly has the role of ensuring the accuracy of the spending as elaborated by the Senior Sustainability Specialist:

"I think at our company the control is not necessarily in the finance team because the sustainability initiatives are proposed by the sustainability team and if they have been approved by the management, the finance team would approve the transactions and so on. It's just that sometimes when approving these transactions, the finance team would discuss back and forth with the sustainability team to confirm whether the amount is correct and whether it has been spent on the correct projects and so on."

Despite the existing budget, Energy Company is not very strict when it comes to the spending of sustainability initiatives. On several occasions, the sustainability team has the flexibility to request additional budget on existing projects as explained by the Senior Sustainability Specialist:

"This happens quite often, especially for large projects, in which sometimes additional budget needs to be proposed, but I don't think we have encountered problems or challenges related to this. With regards to the finance team, if it has been approved by the management then the finance team would be okay with it."

Energy Company previously used an Excel-based ESG performance measurement tool called the ESG dashboard which is a simple dashboard distributed from the holding company to all the subsidiaries to collect data in terms of the material topics and the performance each quarter. The data is usually consolidated at the beginning of the following quarter and reported to the Sustainability Committee. Energy Company is currently undergoing a massive transformation and is onboarding to have a new platform that is more digitized with the help of an external third party. However, the financial monitoring of sustainability initiatives is done separately from sustainability performance and therefore, is not incorporated in the ESG dashboard.

4.1.4.4 Reward and Compensation

At Energy Company, sustainability is not necessarily incorporated in the KPIs of all employees. It is only applicable for departments or employees that actually have responsibilities in sustainability. In addition, the company has a specific ESG task force comprised of members from different departments selected by the management, and sustainability-related KPIs are only applicable for these employees. However, since 2023 Energy Company has started employing sustainability KPIs for all board members, which includes the Board of Directors and the Board of Commissioners. This initiative is expected to ensure the board's active involvement in the oversight of the company's sustainability programs, performance, and policies. Despite incorporating sustainability aspects into the board's KPIs, Energy Company currently does not implement any kind of reward and compensation mechanism specifically for sustainability performance. However, the Senior Sustainability Specialist agrees that having a system to reward and compensate for this aspect would be a good motivation:

"I think that it's not very common yet for companies in Indonesia to have that. But I agree that having reward and compensation would be very beneficial for the company to

accelerate progress. It's just that right now we don't have the structure or the specific framework for that. I think that people would be more motivated to develop, to come up with innovative sustainability initiatives if they are rewarded with compensation such as bonus and job promotion."

Energy Company tries to develop employees' intrinsic motivation by encouraging them to participate in volunteering events. The participation will be stated in the annual performance appraisal and recognized by the management. Occasionally, the company will hold specific sustainability-related competitions to celebrate special events and reward employees who win, as described by the Senior Sustainability Specialist:

"As part of one of our recent anniversary celebrations, we held a competition for our employees to come up with ideas to implement or develop sustainability or green initiatives in their operational areas, and this was actually really helpful because we came up with many innovative sustainability initiatives through this program. We had awards for the employees with the best or with the most innovative sustainability initiatives that they designed and we gave money to those who won the award."

With the absence of systems to incentivize and reward employees on sustainability initiatives, Energy Company relies heavily on socialization and communications to drive the employees' motivation to contribute to the company's sustainability agenda. The company continues to give recognition to the employees who help to promote its sustainability agenda and initiatives. Although incentivizing employees for the achievement of sustainability performance is not very common yet for companies in Indonesia at the moment, Energy Company may potentially look towards it in the near future.

4.1.4.5 Administrative Control System

The existing ESG task forces in every subsidiary company play a crucial role in helping the company achieve its overall sustainability agenda. However, given the large number of subsidiary companies owned by Energy Company, there are some challenges in incorporating the ESG task force and managing sustainability as explained by the Senior Sustainability Specialist:

"Currently one of the main challenges that we face is that our subsidiaries have a wide range of maturity levels. A more established coal company would have more in-depth knowledge of sustainability, how to measure and monitor their performance, and so on. However, in the newer businesses, for example, in the electric vehicle sector or the nature-based solutions sector, the human resources are not as skilled yet in monitoring and measuring. So our main challenge is to have that knowledge transfer from the more established companies to the newer companies, and that's what we are currently trying our best to do. At our team, we try to make our ESG tools as user-friendly as possible so that

the newer businesses can easily enter the data and understand what kind of data they need to provide to us and so on."

To mitigate the low level of sustainability maturity in subsidiary companies, Energy Company facilitates one-to-one sessions between the holding company and the subsidiary ESG task force of the newer businesses to provide guidance on how to measure and monitor sustainability data. Depending on the needs, the sustainability team may further set up a coaching session between a more established subsidiary company and a newer company to facilitate two-way knowledge sharing between the companies.

The sustainability team is small with only three people consisting of the Senior Sustainability Specialist, the Sustainability Senior Manager, and the Head of Sustainability. As the sustainability team is a part of the CEO Office, Corporate Communications, and Sustainability department, the team's work is mixed with corporate communication and CEO office tasks as well. The Senior Sustainability Specialist is the only staff in the team who does not hold any other responsibility unrelated to sustainability. Additionally, due to its small size, the decision-making process in the team is informal and done through a discussion, as explained by the Senior Sustainability Specialist:

> *"Currently, in the Sustainability team, there is one person that only holds responsibility for sustainability, while the other two allocate time for other responsibilities such as Corporate Communications and CEO Office. Due to the small team, decision-making is relatively easy and can be done merely in a discussion. For example, we are given the opportunity to propose initiatives regardless of our position and the team would discuss the feasibility and commercial viability and it would be proposed further to the Board if the team agrees to."*

The sustainability team with its three members is further responsible for drafting the annual sustainability report with the help of an external copywriter. But in terms of performance measurement, it is done internally. Once the figures are confirmed, the company employs an external assurance process with a third party to verify whether or not the data generated is aligned with the standards that the company follows. Lastly, the finalized report will go through the board's approval. With additional layers of validation through third-party assurance, Energy Company aims to ensure that it delivers accurate and transparent information about its current progress and achievement of its sustainability agenda to the general public.

4.2 Summary of Detailed Findings

Type of Control	Important Component	Duni Group	Rug Company	PT Pertamina Hulu Indonesia	Energy Company
Cultural Control	Sustainability strategy	A strong sustainability culture serves as a strength and opportunity to stay competent and relevant as a company	Sustainability is a central part of the operations and is governed by policies, guidelines, measurable goals, and action plans, along with codes of conduct for employees and suppliers	The sustainability culture is continuously growing. The management tries to increase sustainability awareness which based on the parent's company objectives	ESG is the fundamental principle of the company's operations, emphasizing its mission to contribute to Indonesia's economic development and quality of life through responsible ESG practices
	Special task force	Sustainability leaders consist of 20 employees from various departments as local sustainability champions for local initiatives and workshops, selected through an application process	Sustainability ambassadors from various departments to assist the sustainability team in implementing initiatives related to their departments	A special task force is established to complete the sustainability project. This task force is a temporary group and will be diminished after the project is done	Exists in every subsidiary company consisting of existing employees from various departments tasked with subsidiary sustainability agendas, chosen by the management
	Communication channel	E-learning platform, internal communication through Yammer, external communication through LinkedIn, and employee engagement platform to measure employees' understanding and collect feedback	New employee onboarding programs, town hall meetings, and an intranet channel (Slack)	A dedicated platform for information sharing; *Komet* and general committee meetings to discuss sustainability progress	Desktop wallpapers, email blasts, mandatory and ad-hoc training, biweekly newsletter, quarterly town hall, annual materiality assessment to measure employees' understandings and collect feedback

Type of Control	Important Component	Duni Group	Rug Company	PT Pertamina Hulu Indonesia	Energy Company
	Daily operation	Sustainability is incorporated into the daily activities of the employees such as food waste management and environmentally friendly travel policy	Sustainability is integrated into the daily operation by establishing a travel policy to reduce carbon emissions through public transportation ticket subsidies and bicycle rental facilities	Sustainability is incorporated into the employee's daily operation through a carbonization calculator and community activities engagement	Sustainability is incorporated into the daily activities of the employees such as energy consumption measurement, waste management, and plastic bottles ban in the company
Planning Control	Goal segmentation	The three sustainability agendas are to be achieved by 2030 and not divided into time horizons, except for the going net-zero target is divided into near-term (to be achieved by 2030) and long-term (to be achieved by 2050)	The goals under three key areas: Planet, People, and Business are divided into short-term (to be achieved by 2025) and long-term (to be achieved by 2030)	The sustainability goals are divided into three categories including short-, medium-, and long-term objectives. These goals follow the parent's entity goals to achieve net-zero emissions	The long-term goal of net-zero emissions (to be achieved by 2050) is backed up with medium-term (to be achieved by 2030) and short-term targets (to be achieved by 2025) in all three ESG principles
	Alignment with UN SDGs	Yes, on the goals relevant to the company	Yes, on the goals relevant to the company	Yes, on the goals relevant to the company	Yes, relevant SDGs are incorporated into the sustainability agenda, but not explicitly on the targets
	KPIs setting	A top-down approach where sustainability KPIs are set by management, approved by the board, and communicated and integrated into	A bottom-up approach is implemented to formulate the sustainability objectives and specific targets which will be further escalated to and	The KPIs setting is conducted through a bottom-up approach for risk assessment and top-down approach for strategic direction. There is an adjustment	Short and medium-term goals are set based on thorough reviews of past performance and projections for new acquisitions. Long-term targets remain permanent, while short and

Type of Control	Important Component	Duni Group	Rug Company	PT Pertamina Hulu Indonesia	Energy Company
		individual employee objectives, with annual adjustments guiding the company's action plan	approved by the CEO and the board	if the government's plans change	medium-term ones are adjusted on an ad-hoc basis
	Written action plan	Yes, exists as a tool to track current sustainability progress, adjust priorities, and address challenges	Yes, but only for supplier compliance	Yes, exists as a tool to guide business functions to implement sustainability and help employees to attain their targets	Yes, a high-level road map for net-zero emissions is accessible publicly
Cybernetic Control	Budget and control	Yes, budget exists and spending is tracked monthly under the Business Controller's responsibility.	Yes, but it is mainly the responsibility of the Chief Organization & Sustainability Officer (COSO). COSO as a part of the board has more rights in budget and spending	Yes, budget exists and spending is monitored through CAPEX for short-term activities and OPEX for long-term activities	Yes, but control is the responsibility of the heads of departments instead of finance. The company is lenient with sustainability spending and the team can request additional budgets for projects as needed
	Measurement tool	No balanced scorecard but there is a specific KPI structure that includes key KPIs. A dedicated reporting platform only for climate impact managed by a Climate Specialist and validated by the Sustainability Controller	No dashboard for sustainability performance. However, the company relies on a system called Locker Studio to collect relevant information and generate reports related to purchasing and suppliers	Both financial and non-financial measurements are used to track the sustainability progress	Previously used an Excel-based ESG dashboard distributed from the holding company to subsidiaries for quarterly data collection. Currently undergoing digital transformation for a new platform, but financial monitoring is not included in the ESG dashboard
Reward and	Sustainability	Sustainability rewards	No sustainability	Sustainability rewards	No regular sustainability

Type of Control	Important Component	Duni Group	Rug Company	PT Pertamina Hulu Indonesia	Energy Company
Compensation	performance achievement	are limited to the top and middle managers as management bonuses	reward and compensation in general but there is sustainability-related compensation for a specific team in India that deals with the production	and compensation are given to permanent and non-permanent staff after they successfully complete projects	rewards; occasional ones like employees' sustainability idea competitions exist
Administrative Control	Sustainability team	Consists of five employees who strictly work on sustainability tasks, supported by local sustainability leaders	The sustainability team, part of the People and Organization department, includes a Sustainability Manager who reports to the COSO. Only the Sustainability Manager solely focuses on sustainability tasks, supported by sustainability ambassadors from different functions	No sustainability team, but a special task force exists to support sustainability objectives	The sustainability team consists of three employees housed within the CEO Office, Corporate Communications, and Sustainability department. Only the Senior Sustainability Specialist solely focuses on sustainability tasks, supported by ESG task forces in every subsidiary company
	Decision-making	Combined approach, bottom-up for ideation and top-down for alignment with existing KPIs	Combined approach, bottom-up for daily operation decisions and top-down for strategy formulation	Combined approach, bottom-up for day-to-day decisions and top-down for formulating sustainability strategies and policies	Informal in the initial stage but with combined bottom-up and top-up approaches in the final stage. The team makes decisions through informal discussions. The agreed decision is escalated to and approved by the Board.

5. Analysis and Discussion

This chapter elaborates on the analysis of findings from the four companies concerning the study's research questions and relevant literature. The first section analyzes the different focus of sustainability agendas in Swedish and Indonesian companies, followed by a comprehensive discussion on the benchmarks of MCS designed and used in the four case companies. Additionally, the challenges in integrating MCS into supporting the achievement of sustainability agendas will be further discussed in the last part.

5.1 Corporate Sustainability Agenda in Developed and Developing Countries

Sustainable companies are advised to adopt triple bottom lines (TBL), which offer a well-rounded approach to assessing business performance by considering economic, social, and environmental dimensions (Goel, 2010). In practice, companies in both developed and developing countries tend to adjust their strategies to effectively address specific sustainability issues that are relevant to them.

Duni Group primarily contributes to the environment as outlined in its three main sustainability initiatives (Table 4.1). While two main objectives center on achieving circularity and net-zero emissions, the final objective briefly touches upon the social aspect with the ambition to maintain a reputation as a trusted sustainability leader through equality, diversity, and inclusion, as well as strong collaborations with key stakeholders and renowned sustainability rating system. Duni Group's strong emphasis on the environmental aspect is evident in how the company sets specific near-term and long-term targets only for net-zero emissions, but not for the other aspects. Overall, the company's sustainability strategy is deeply rooted in its approach to developing, producing, and selling its products and services.

On the other hand, Rug Company is known for its sustainability ABC strategy which focuses on three areas equally; Planet, People, and Business (Table 4.3). The People focus area does not only cover responsible external suppliers and manufacturers but also the diversity and equality for the employees and internally. The company has further identified five change levers vital for achieving its sustainability goals: the team, customers, business partners, business practices, and communication (Table 4.2). Rug Company acknowledges that to achieve its vision and long-term goals, the entire business must be conducted in a way that is economically, socially, and environmentally sustainable. Due to this reason, Rug Company has set clear ambitions and goals that permeate that drive the company to create social, economic, and environmental sustainability at all levels.

When it comes to the corporate sustainability agendas in Indonesia, both PHI and Energy Company have similar focus areas. As a subsidiary of Pertamina, a state-owned oil and natural gas corporation in Indonesia, PHI has comprehensive sustainability agendas that address a wide range of sustainability issues. While the company heavily focuses on environmental issues that are

relevant to its industry (Table 4.4), PHI also integrates socioeconomic aspects into its agendas, especially through Desa Energi Berdikari, a program by its parent company intending to provide access to renewable energy available in villages in Indonesia, which the community then utilizes to foster economic and social activities.

Similarly, Energy Company also focuses heavily on the environmental aspect, making net-zero emissions its sole long-term commitment and ultimate objective. Despite not being included in its long-term objective, Energy Company is committed to spending 1% of its EBIT every year to develop and engage with the communities in which the company operates (Table 4.5). The company consistently contributes to the communities through a wide range of educational, health, empowerment, and social programs that create jobs and livelihoods, and promote entrepreneurship and self-sustainability.

Our findings reveal a few differences in the sustainability agendas between developed and developing countries. Duni Group places a strong emphasis on environmental concerns while maintaining a social-external goal to uphold its reputation as a sustainability leader. The United Nations (2022) emphasizes that developed countries must prioritize climate change as they have the resources to significantly reduce global emissions. On the other hand, Rug Company values environmental, social, and economic aspects equally. While maintaining environmental concerns relating to its supply and production, it puts a heavy emphasis on the subjects of labor rights and working condition. This is because Rug Company's primary motivation for sustainability started from addressing human rights within its supply chain, as the company conducts most of its manufacturing and businesses outside of Europe, particularly in developing countries such as Turkey and India. Conversely, both Indonesian companies show similar results. PHI and Energy Company both extensively prioritize environmental aspects due to the operational nature of their businesses. Additionally, they actively engage in community upliftment through their established socioeconomic initiatives.

When it comes to the main focus of sustainability agendas, companies in developed countries tend to tailor their strategies based on their expertise and requirements. They may cover only one or even all three dimensions of the triple bottom line depending on the relevant issues they want to address. When a company from a developed country primarily conducts its manufacturing operations in developing countries, it addresses all three dimensions—environmental, economic, and social as it also prioritizes the labor rights and community well-being of the countries where it produces and sources its supplies. On the other hand, companies in developing countries show a strong commitment to environmental conservation coupled with significant socioeconomic initiatives, particularly in the small villages or areas where they operate. This indicates that companies in developing countries address all three dimensions of the triple bottom line. These findings align with Barkemeyer's (2011) observations that companies in developing countries tend to address socioeconomic issues more comprehensively than those in developed countries, thereby

fostering meaningful community engagement and support toward addressing relevant sustainability challenges faced by developing countries.

5.2 MCS in Developed and Developing Countries

MCS incorporates two different control systems including formal management controls and informal management controls. Formal management controls have the function of inspiring and motivating employees by establishing goals and standards, measuring performance, and providing corrective feedback (Crutzen et al., 2017). Conversely, the behavior of group members motivated by values, beliefs, and traditions is integrated into the informal management controls (Simons, 1995). In this study, all examined companies have developed a package featuring both formal and informal controls. However, not all the case companies fully integrated the formal and informal management controls.

Among the case companies, Duni Group has a strong integration of formal and informal management controls. The formal controls include the sustainability goals, budgeting, KPIs measurement, and decision-making process to support the establishment of informal controls. The employee's awareness could be built through formal processes leading to the alignment of cultural and informal controls in organizations. In turn, the values and norms of the informal system strengthen behaviors that support the formally identified organizational goals and targets. The informal system of Duni Group is embedded in the implementation of a strong sustainability culture. Hence, the MCSs are deemed congruent with both formal and informal controls to monitor and assess sustainability for internal purpose.

Besides Duni Group, the fully integrated formal and informal management controls also take place at PHI's MCS. The company formulated 10 sustainability focuses as the sustainability agenda. Along with the sustainability focuses, PHI combines financial and non-financial measurements to track the sustainability progress. In addition, the formal organizational structure which appointed a new job role of the sustainability vice president indicates that the supports the sustainability culture in the internal company. To support the achievement of sustainability targets, rewards and compensation are given by the management to motivate employees to be able to achieve the goals and targets. Sustainability culture is incorporated in the daily operation of organization to support the decarbonization initiatives. Thus, the implementation of informal cultural controls reinforces formal controls and the existence of informal controls has the function of supporting the establishment of a complete package of formal controls. The integration between formal and informal controls affect the decision-making process within internal organization.

The sustainability-related MCS at Rug Company is semi-integrated formal and informal management controls. The control system mainly relies on informal controls rather than formal ones. As Rug Company concentrates heavily on labor rights and working conditions, the only action plan that exists in the company involves corrective actions for suppliers' deviation of conduct. Budgeting exists but it is managed by the Chief Organization & Sustainability Officer

(COSO). While aligning with the budget is a given procedure, the COSO is also part of the board and thus, she has more rights when it comes to budget and spending proposals for big sustainability projects. Additionally, there is no sustainability-related reward and compensation employed in the company. However, an exception is made for a specific team in India due to the team's job responsibility to work with the materials used for the production. Despite the strong sustainability culture established in Rug Company, the MCS is not comprised of a complete package due to the absence of several important control systems.

Similarly, Energy Company's sustainability-related MCS is also semi-integrated formal and informal management controls. The long-term target of this company is not equipped with a detailed process, meanwhile, short and medium-term objectives are based on thorough reviews of past performance and projections for new acquisitions. Furthermore, the budgeting process is the heads of departments' responsibility instead of finance. The company tends to be flexible with sustainability spending, allowing the sustainability team to request additional budgets for projects as needed. The small size of the sustainability team leads initial decisions informally through discussion so that the process is more direct. These informal controls raise awareness about organizational sustainability goals. Furthermore, as informal controls are more subtle than formal restrictions, this control might encounter less resistance (Crutzen et al., 2017). The domination of informal controls in the MCS facilitates a flexible and straightforward first layer of decision-making process within the sustainability team.

The integration of formal and informal controls in MCS is elaborated in Figure 5.1. Based on Crutzen et al. (2017), formal controls are divided into complete package and incomplete package. On the other hand, informal controls are classified into weak cultural control and strong cultural control.

Informal Controls Formal Controls	Weak Cultural Control	Strong Cultural Control
Complete Package	-	Duni Group and PHI
Incomplete Package	-	Rug Company and Energy Company

Figure 5.1 Sustainability Management Control Patterns (Crutzen et al., 2017)

Despite the differing focuses and targets within their sustainability agendas, all four case companies exhibit the implementation of Management Control Systems (MCS) to support their sustainability initiatives, based on Malmi and Brown's MCS framework. The cultural control systems in the four companies are present, implying that these organizations regardless of the country's development status, align sustainability culture with the company values, provide communication channels to inform the employees, and integrate sustainability practices into daily

operation activities. In general, the sustainability culture among the four case companies has functioned as an antecedent, and management accounting associated with management control is a component of the change process that fosters organizational change toward environmental sustainability (Tipu, 2022).

The planning control systems in the four case companies exhibit a similar structure. PHI and Energy Company utilize a framework that categorizes sustainability plans into short-, medium-, and long-term objectives, while Rug Company focuses on short- and long-term goals, all of which are aligned with the UN Sustainable Development Goals (SDGs). PHI adjusts targets based on shifts in government plans, Energy Company typically makes ad-hoc adjustments in response to changes in the business portfolio, whereas Rug Company updates its objectives based on the results of materiality assessments. Duni Group applies a similar design strictly for its net-zero target while grouping other objectives to be achieved by 2030. All four case companies also have written action plans on specific areas they want to focus on, using them as a guidance to take corrective actions and address challenges.

The cybernetic control systems in the four case companies also show a similar structure where they employ budgeting and financial measurement to coordinate resource allocation. Moreover, it provides a direction for companies to design strategies and evaluate their performance against the aim (Malmi & Brown, 2008). When it comes to sustainability performance measurement, PHI is the only company that uses a hybrid performance measurement approach, combining both financial and non-financial metrics. PHI's use of budgeting and surveys is an implementation of management by objectives, empowering employees to determine goals and assess results against predetermined goals (Greenwood, 1981).

Duni Group and PHI incentivize employees to achieve sustainability targets through rewards and compensation. This compensation is based on extrinsic rewards correlated with financial incentives, including bonuses and salary increases (Ferreira & Otley, 2009). At Duni Group, these rewards are limited to middle and top management, whereas, PHI provides rewards and compensation to all employees, including both permanent and non-permanent staff upon project completion. Rug Company provides incentives exclusively to a specific team in India responsible for material handling, primarily due to the company's sourcing from India and the team's focus on that aspect, rather than integrating sustainability performance into their broader rewards and compensation system as a whole. Furthermore, Energy Company occasionally motivates employees by giving extrinsic rewards on special ad-hoc events, such as internal sustainability ideation competitions.

The administrative control systems of the four case companies are well-developed, indicating structured interaction and cooperation, set authority and accountability lines, and clear forms of decision-making. Duni Group, Rug Company, and Energy Company each have dedicated departments to oversee sustainability activities, supporting the achievement of organizational

objectives (Ditillo & Lisi, 2014). PHI also has a similar department, despite only being employed at the parent company level. The decision-making processes at all four case companies integrate both top-down and bottom-up approaches. However, Energy Company's initial decision-making process within the sustainability team relies on informal discussions due to the smaller size of its team.

In general, the design and use of MCS supporting sustainability agendas in these four companies involve particular control systems being prioritized in one company over another, and vice versa. Despite having a strong sustainability culture, both Rug Company and Energy Company are categorized under an incomplete package due to the absence of rewards and compensation schemes for sustainability performance. Moreover, Energy Company's decision-making processes are notably informal. While Crutzen et al. (2017) could not identify any company that exhibits a complete package with both strong formal and informal management controls, we managed to identify two companies under this category, not only in a developed country but surprisingly also in a developing country. Duni Group and PHI are classified under strong cultural control, offering a complete package as they are the only ones that employ rewards and compensation for sustainability performance. They establish strong sustainability cultures and fully maximize the role of MCS in supporting their sustainability agendas.

Our findings reveal that companies from both developed and developing countries can achieve a complete package with strong formal and informal management controls simultaneously, regardless of the pressing sustainability issues each country currently faces. In both contexts, companies have integrated MCSs into their sustainability practices, albeit to varying degrees, with certain control systems being favored in one company over another. This underscores a global commitment to sustainable business practices, transcending national boundaries and highlighting the universal acknowledgment of the significance of sustainability in the corporate landscape. Consequently, there are no differences in how companies in developed and developing countries design and use MCSs to support the achievement of their sustainability agenda.

5.3 Challenges in Integrating MCS into the Sustainability Agenda

The full integration of MCS into sustainability agendas presents various complex challenges for companies aiming to align their business strategies with environmental and social objectives. Our findings show that the major issue in this integration process is the absence of an established and regular reward and compensation system for the achievement of sustainability performance. Implementing this component proves challenging for companies due to several factors. While reward and compensation systems may potentially boost sustainability initiatives within organizations, they are never free from the risk of potential malpractice (Lin and Ho, 2008). On the other hand, Energy Company believes that it is currently uncommon for most companies in Indonesia to have a specific and regular reward and compensation system for sustainability performance. Mousa and Othman (2020) similarly highlight that the use of compensation to foster

an environmentally conscious employee culture is not widely practiced yet in developing countries. As companies in developing countries tend to focus more on production and service, they need to implement reward and compensation systems that consider both employee and organizational interests when evaluating sustainability performance (Usman and Mat, 2011).

Another noticeable challenge in the integration process arises from the lack of a solid budgeting approach under cybernetic control systems. One potential explanation for the absence of formal budgeting in certain companies could be attributed to the challenges associated with measuring the return on sustainability investments (Arjaliès and Mundy, 2013). While budget and cost control are formalized in all four case companies, they are somewhat more lenient in Rug Company and Energy Company. At Rug Company, where the head of the sustainability department is also a board member, there appears to be a slightly more flexible approach. Similarly, at Energy Company, the sustainability team is empowered to request additional spending as needed, reflecting a more adaptive stance toward budgetary constraints. Depending on their strategic objectives, organizations have the flexibility to employ a variety of techniques to integrate sustainability into their budgeting and forecasting processes (Accounting for Sustainability, 2023). Hence, companies can address this challenge by implementing effective budgeting and cost-control strategies tailored to their specific needs and sustainability objectives.

Overall, addressing specific challenges in integrating MCS into sustainability agendas is essential to foster a fully integrated and value-creating MCS. Establishing a structured reward system for sustainability performance is crucial, but implementing it can be challenging. Additionally, the absence of a formal budgeting system complicates tracking sustainability investments and expenses. Companies must navigate these challenges while balancing employee and company interests and advancing sustainability responsibility. Overcoming these challenges is important for maximizing the role of MCS in supporting the achievement of corporate sustainability agendas and creating positive impacts on society.

6. Conclusion

6.1 Conclusion

The integration of corporate sustainability agendas varies significantly between companies in developed and developing countries, as evidenced by the case studies of Duni Group, Rug Company, PHI, and Energy Company. Developed country companies, such as Duni Group and Rug Company, shows a dichotomy in their approaches; Duni Group focuses primarily on environmental sustainability with well-established targets, while Rug Company emphasizes environmental, social, and economic goals to equally address issues in the developing countries where it sources and manufactures. Conversely, the Indonesian companies PHI and Energy Company prioritize environmental sustainability due to the nature of their industries but also engage in substantial socioeconomic initiatives, reflecting a broader approach to community engagement and support.

MCS plays a pivotal role in supporting these sustainability initiatives. Duni Group and PHI demonstrate strong integration of formal and informal controls, fostering a robust sustainability culture within their organizations. At Rug Company, the informal controls are more prioritized by raising sustainability culture through training and daily sustainability practices while the action plan for sustainability projects only focuses on corrective actions for suppliers' deviation of conduct. Similarly, Energy Company emphasizes informal controls and flexibility in budgeting which allows management to implement adaptive sustainability spending. This disparity highlights the varying degrees to which companies leverage MCS to align their sustainability strategies with organizational goals.

Addressing the challenges of integrating MCS into sustainability agendas is crucial for maximizing their effectiveness. Establishing a strong sustainability culture in the internal organization is important to strengthen the formal control systems. When a strong sustainability culture is embedded in an organization, employees are intrinsically motivated to achieve sustainability targets. Thus, structured reward and compensation systems for sustainability achievements become less essential. Additionally, implementing a solid budgeting approach is necessary to track sustainability investments accurately. Overcoming these challenges will enable companies to create a fully integrated MCS that supports their sustainability goals, fostering long-term value creation and positive societal impacts. This effort underscores the global commitment to sustainability, transcending the distinctions between developed and developing countries.

6.2 Contributions

The findings of this study provide theoretical contribution between MCS and sustainability. By investigating this connection, the study gives elaboration on how organizations implement MCS to promote sustainable practices. Moreover, the study contributes to the current literature by looking into the distinctions between formal and informal controls under MCS frameworks in both developed and developing countries. This comparative analysis deepens understanding of how

MCS operates in four different companies, emphasizing the importance of context-specific approaches in obtaining long-term results. Additionally, this research is able to indicate two companies both in Sweden and Indonesia that implement full-package of MCS to support sustainability agendas. Through comparative studies, this research not only enhances theoretical frameworks but also gives practical insights that can inform global organizational strategies for incorporating sustainability concepts into management practices.

The research provides practical contributions by offering organizations actionable insights on incorporating sustainability into MCS. Organizations can learn from the study's findings that both formal and informal controls are crucial in promoting sustainable practices. By understanding the role of cultural controls, companies can foster a corporate culture that prioritizes sustainability, encouraging employees to integrate these values into their daily operations. Planning controls help organizations set clear, sustainability-oriented goals and monitor progress towards these objectives. Cybernetic controls, with the budgeting process and measurement tool allow company for continuous improvement and adaptation of sustainability initiatives. Reward and compensation controls incentivize employees to achieve sustainability targets, aligning personal and organizational goals. Lastly, administrative controls ensure that sustainability practices are embedded in formal procedures and regulations, providing a structured approach to sustainability. By integrating these five control systems, organizations can develop a comprehensive MCS that supports and enhances their sustainability efforts.

6.3 Limitations

In addition to the limitations of the research method outlined in section 3.6 regarding the research method, the thesis also encompasses limitations on the findings. The study is delimited to Sweden and Indonesia as the representatives of developed and developing countries respectively. While these countries offer valuable insights into sustainability practices due to their diverse economic, social, and environmental landscapes, limiting the focus to these two nations inherently restricts the generalizability of the research findings. Variations in cultural norms, regulatory frameworks, and industry structures between Sweden and Indonesia may influence the applicability of findings to other developed and developing countries with distinct contextual factors.

Another significant limitation of the research findings arises from the composition of the case companies studied. The two case companies selected from Sweden originate from completely different industries, whereas the Indonesian case companies selected both hail from the same industry with a well-established status and maturity. This composition suggests that the findings may not potentially represent the broader landscape of sustainability practices in Indonesia, particularly among less established companies operating in different industries within developing countries.

Lastly, we were not able to conduct additional interviews with other functions and roles in the organizations due to time constraints. The opportunity to conduct further interviews with finance

and human resources functions would have enabled us to delve deeper into the analysis of rewards and compensation and cybernetic control systems within the case companies. Although this factor could have influenced the results of our findings, we acknowledge that it is constrained by the overarching time limitations inherent in our thesis.

6.4 Future Research

The study has provided valuable insights into how companies in both developed and developing countries design and utilize Management Control Systems (MCSs) to drive their sustainability agendas. Nevertheless, further research is required to achieve a broader representation.

Firstly, expanding the geographic scope beyond Sweden and Indonesia to encompass a wider range of developed and developing countries is crucial. Investigating MCS practices in emerging economies across continents such as Africa and Asia-Pacific would offer a more comprehensive global perspective on sustainability-focused management control strategies in developing countries.

Secondly, there is a potential need for future studies to explore the influence of industry-specific factors on the customization of MCSs to address sustainability challenges. By conducting in-depth analyses within industries such as technology, healthcare, and services, researchers can uncover sector-specific nuances in MCS design and implementation for sustainability management.

Furthermore, conducting comparative studies on companies operating in developed and developing countries within the same industry with a larger sample size would enhance direct comparative analysis and improve the generalizability of the results. Understanding the impact of economic, social, and environmental contexts on MCS practices across different country and industry contexts can inform more effective approaches to sustainable business management.

7. Appendix

Appendix 1

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Table 7.1 Literature Review

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Name and Year	Title	Methodology	Main Finding
Peter Beusch, Jane Elisabeth Frisk, Magnus Rosén, and William Dilla (2022)	Management Control for Sustainability: Towards Integrated Systems	Qualitative research is based on the longitudinal case study of a multi-national industrial organization headquartered in Sweden (MECH). Data collection from 26 interviews with the 14 respondents.	Simon's LOC provides an adequate framework for investigating how MCS-SCS integration benefits an integrated sustainability strategy. Particularly, the interactive control system occurs during the process of modifying MECH's control systems to strengthen its integrated sustainability strategy, which involves changing organizational rules and routines. However, incorporating sustainability-related measurements into cybernetic controls, such as the BSC, is insufficient to meet the difficult task of adopting an integrated sustainability plan.
Nathalie Crutzen, Dimitar Zvezdov, and Stefan Schaltegger (2017)	Sustainability and management control. Exploring and theorizing control patterns in large European firms	Qualitative research Data collection is based on semi-structured interviews conducted with the 17 sustainability managers of each company (Belgium, France, Germany, The Netherlands, and The UK).	In current practice, managers of major organizations tend to either pursue a formal or informal approach to management control and most now believe that sustainability-relevant behavior may be more easily impacted by informal rather than formal controls. Nevertheless, companies are likely to use both approaches in the future since formal and informal management controls are complementary and can support one another. Focusing solely on one type of managerial control, whether formal or informal, raises the danger of internal organizational

Name and Year	Title	Methodology	Main Finding
			conflicts.
Marina Florêncio, Lídia Oliveira, and Helena Costa Oliveira (2023)	Management Control Systems and the Integration of the Sustainable Development Goals into Business Models	Qualitative research is based on the case study of the Brazilian multinational company (Natura). Data collection from third-party sources, including public interviews, podcasts, and webinars (from 2017 to 2022).	Natura has strong informal and formal management systems in place to ensure sustainability. The company's cultural MCS is offered as a driver for the incorporation of the SDGs, as sustainability issues should be embedded in the company's operations and be organically anchored. The main challenges of MCS in this company are related to cybernetic controls, specifically the measurement. There is still a lack of defined indicators to help with the implementation, assessment, and evaluation of corporate sustainability and companies' contributions to the SDGs. Natura develops new solutions to address these difficulties, including measurement standards that function as management tools.
Angelo Riccaboni and Emilia Luisa Leone (2010)	Implementing Strategies through Management Control Systems: The Case of Sustainability	Qualitative research is based on the case study of Procter & Gamble (P&G). Data collection is generated from documentary research (P&G website, annual reports, sustainability reports, sustainability	A new way of organizational approach considering financial, social, and environmental factors has been implemented in P&G. Furthermore, MCS might have a significant effect in addressing social and environmental challenges in addition to financial concerns. Social and environmental issues can be effectively integrated into

Name and Year	Title	Methodology	Main Finding
		newsletter) and field research through semi-structured interviews.	traditional strategic planning, organizational structures, and performance assessment systems, as outlined in the "Objective Goals Strategies Measure" framework. Formal measurements involve objectives, performance assessments, and rewards must be used alongside informal factors such as corporate culture, ownership, and leadership commitment to integrate sustainability into an organization.
Paola Ferretti, Cristina Gonnella, and Pierluigi Martino (2024)	Integrating Sustainability in Management Control Systems: An Exploratory Study on Italian Banks	Qualitative research is based on an exploratory study of the three largest Italian banking groups. Data collection is compiled from 12 semi-structured interviews with managers from the sustainability and controls areas and relevant operational areas	MCSs are being reconfigured in response to institutional sustainability demands. Coercive pressures from European authorities emerged as the major drivers of MCS modifications in banks. Furthermore, normative pressures from customers and institutional investors pushed banks to incorporate ESG issues into their decision-making processes and commercial operations (e.g. lending and finance). The ESG has become a significant pillar of the bank's strategic plan with full integration into the bank's worldwide strategies and strategic management processes. Following the integration of the ESG theme into the global business plan, banks made several administrative control modifications to account for ESG objectives. Furthermore, banks modified their cybernetic controls to evaluate ESG performance by generating sustainability KPIs. This study also focuses on reinforcing all material risk-takers motivation and sensitivity to sustainability,

Name and Year	Title	Methodology	Main Finding
			and these sustainability indicators and targets are incorporated into the reward and compensation systems. Moreover, cultural controls are widely recognized as crucial control mechanisms for directing organizational behavior toward sustainability.

Appendix 2

Interview Questions

Sustainability

- What is your company's sustainability agenda? By when do you want to achieve this?
- Do you integrate the 17 SDGs and their 167 targets into your company's sustainability agenda?
- What is the motivation of your company for being sustainable?
- How does your company compare to the rest of its competitors regarding sustainability?
- Based on your knowledge and understanding, what is the current level of sustainability maturity and awareness in your country?
  - o Sustainability maturity: we're looking at how advanced and comprehensive the efforts towards sustainability are within the country (e.g. adoption of green technologies, implementation of sustainable policies, etc).
  - o Sustainability awareness: we're focusing on how much people in the country know and care about sustainability issues. This includes their knowledge about environmental conservation, social equity, and economic development and their willingness to engage in sustainable behaviors and support sustainability initiatives.
- Do you think the current level of sustainability awareness in your country affects the management and employees' initiatives in contributing to the achievement of the agenda?

Management Control Systems

- Do you use management control systems (MCS) to support your sustainability initiatives? If so, could you explain how they are structured and used?
- Who in the organization is in charge of designing the sustainability-related MCS?
- How does your organization measure and monitor its sustainability performance? Are these methods formalized within your MSC?
- Can you share how frequently sustainability measurement and monitoring occurs within your organization? Is it an ongoing process or tied to specific intervals?
- How are the results of sustainability measurement and monitoring communicated within the organization? Who is involved in reviewing these results?
- Do you have formalized processes or systems in place to measure and monitor sustainability performance?
- In addition to formalized measures, do you also engage in informal practices or methods to promote sustainability within your organization?
- How do you envision the role of MCS evolving in the future to further support your sustainability agenda?

Planning

- How do you conduct planning for sustainability? Is it divided into short-term and long-term plans?
- Do you have a written action plan to operationalize your sustainability objectives? (An action plan is specific steps you need to take to achieve a goal)
- How do you measure the fulfillment of your agenda? Do you divide the agenda into several criteria?
- When the sustainability agenda is being planned, who are the stakeholders who take part in the planning process?

Cybernetic control

- How are you using budgets to control and monitor your sustainability agenda?
- How do you integrate the information from sustainability activities with financial control?
- How do you balance the financial and non-financial perspectives (learning and growth as well as internal processes) in terms of controlling sustainability?

Reward and compensation

- Do you give extrinsic (bonus/salary increases) and intrinsic (job autonomy/promotion) rewards for sustainability achievement?
- How do you measure the sustainability achievement of each employee?
- Are the measurements based on short-term or long-term performance?
- How do you motivate your employees to implement sustainability value practically?
- Who is eligible for these rewards? (senior or middle managers)
- Why do you not have an incentive system? (if that's the case)

Cultural control

- What is the current level of awareness of your employees on sustainability?
- How do you educate your employees on sustainability?
- Do you have a platform where employees can discuss and share information on sustainability?
- Do you take sustainability into account when arranging company meetings?
- Which values do you communicate about sustainability to employees?
- Do you have any symbols or reminders of sustainability in the organization, for example having open discussions or periodic meetings to discuss the sustainability agenda?
- Are there any other actions that you take to create sustainability-minded employees?

Administrative control

- How is the work with sustainability organized in the organization?
- Do you have a dedicated team that works with sustainability in the organization?

- (If it so) How is the process of decision-making in the sustainability team? Is it centralized or decentralized?
- Those who work with sustainability in the organization, do they work with other work tasks unrelated to sustainability as well?
- How do you make sure your employees follow policies?

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