

MASTERS IN **MANAGEMENT AND INDUSTRIAL STRATEGY**

MASTER'S FINAL WORK **DISSERTATION**

**LEAN MANAGEMENT CONTRIBUTION TO CORPORATE SOCIAL
RESPONSIBILITY (CSR) AND SUSTAINABLE DEVELOPMENT GOALS
(SDG): A BAKING CASE STUDY**

INÊS REBELO ABRANTES

JULY-2025

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SUPERVISION:

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SILVA**

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ABSTRACT

Social and environmental issues are increasing and concerning all sectors, and sustainability may be the key solution to these problems. The purpose of this study is to examine the association between lean and CSR and SDG in the banking industry. This study adopts a qualitative exploratory case study research design. Data was collected through six semi-structured interviews. The main findings of this study were the positive and relevant connection between lean and CSR and SDG. The findings showed that lean implementation may facilitate, indirectly, the achievement of SDG and CSR targets and objectives. The findings also highlight the more efficient contribution of environmental CSR than social CSR, since it's easier to achieve. With these findings and a better understanding of how these concepts are linked, it's possible to plan a company strategy using lean to target CSR and SDG contributions. These insights suggest that banks can strategically leverage lean to enhance their contributions to sustainability goals.

Key-words: Lean; Corporate Social Responsibility; Sustainable Development Goals; banking

RESUMO

Os problemas sociais e ambientais estão a aumentar e a preocupar todos os setores, e a sustentabilidade pode ser a solução chave para estes problemas. O objetivo deste estudo é examinar a associação entre lean, RSC e ODS no setor bancário. Este estudo adota um modelo de investigação qualitativo de *case-study* exploratório. Os dados foram recolhidos através de seis entrevistas semiestruturadas. As principais conclusões deste estudo foram a ligação positiva e relevante entre o lean e a RSC e ODS. Os resultados mostraram que a implementação do lean pode facilitar, indiretamente, o alcance das metas e objetivos dos ODS e da RSC. As descobertas também destacam a contribuição mais eficiente da RSC ambiental do que da RSC social, uma vez que é mais fácil de alcançar. Com estas descobertas e um melhor entendimento de como estes conceitos estão ligados, é possível planear uma estratégia empresarial utilizando o lean para direcionar os contributos de RSC e ODS. Estes insights sugerem que os bancos podem alavancar estrategicamente o lean para aumentar as suas contribuições para as metas de sustentabilidade.

Palavras-chave: Lean; Responsabilidade Social Corporativa; Objetivos de Desenvolvimento Sustentáveis; banca

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GLOSSARY

LM- Lean Management

CSR- Corporate Social Responsibility

SDG- Sustainable Development Goals

CE- Circular Economy

UN- United Nations

ODS- Objetivos de Desenvolvimento Sustentável

RSC- Responsabilidade Social Corporativa

ESG- Environmental, Social and Governance

KPI- Key Performance Indicator

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1. INTRODUCTION

In the last years, organisations worldwide have faced increasing pressure to operate more responsibly, ethically, and sustainably. Global frameworks such as the United Nations, Sustainable Development Goals (SDGs) and Corporate Social Responsibility (CSR) initiatives have become essential tools guiding businesses in their contribution and application of sustainable development (Thakur & Mendiratta, 2022). Although these frameworks were originally aimed at governments and multinational corporations, they are now considered indispensable to operations across all sectors, including financial services and firm sizes.

The banking sector plays a crucial role in transitioning to a more sustainable and inclusive economy and environment (Grozdić, Demko-Rihter, & Benković, 2023). Not only do banks finance development and investment, but they also have the responsibility to ensure that their internal operations reflect the values of sustainability and ethical governance (Tumewang, Almarayeh, & Alharasis, 2025). With the increase of regulation and governance pressure in developed countries, it has become imperative for banks to implement strategies that align with both the SDGs and CSR principles.

One of the most implemented approaches that has gained relevance in this context is Lean Management (LM). Initially, developed in the manufacturing industry, lean focuses on maximising value for the customer while minimizing waste and activities that don't add any value (Du, Zhang, Castro-Lacounture, & Hu, 2023). Over time, lean principles have been successfully adapted to the service sector, including banking. In this context, lean tools and practices such as process optimisation, continuous improvement, and employee empowerment have been used to improve operational efficiency and customer satisfaction.

Despite the increasing attention on sustainability in business and customers, there is still limited research on how LM can actively contribute to achieving CSR objectives and the SDGs, particularly in the banking sector (Nosratabadi, Pinter, Mosavi, & Semperger, 2020). This gap presents an opportunity to investigate whether lean can go beyond operational excellence and support banks in their sustainability journey.

This study aims to explore how LM practices can contribute to the achievement of the SDGs and CSR within the banking sector. More specifically, it seeks to identify which lean practices are most relevant in this context, how they align with the principles of CSR and SGDs, and what challenges or opportunities arise from this integration. With

that being said, the research question pursued in this study was “**How does lean management contribute to the achievement of the SDGs and CSR in baking?**”.

To answer this research question, this study employs a qualitative exploratory case study approach. Data was collected through semi-structured interviews with six employees from two different banks. This study is divided into five chapters. The first chapter introduces the study, discusses its relevance, and presents the research questions. The second chapter presents a literature review on the central themes of the present study and provides a theoretical framework. The third chapter presents the study methodology, including research design, sample and data collection. In the fourth chapter, the main results are presented and discussed. Finally, in the fifth chapter, the conclusions of the work are presented, as well as the implications, limitations, and future research.

2. LITERATURE REVIEW

2.1 *Lean Management*

The lean notion surged at the end of the 19th and early 20th centuries, driven by Henry Ford's development of manufacturing processes (Dekier, 2012). Toyota created lean manufacturing in Japan in the 1950s. After Toyota, many companies worldwide have adopted it to boost their production and competitiveness, making LM the most influential operations management (Kurdve & Bellgran, 2021). Since the release of “*The Machine That Changed the World*” by Womack, Jones, and Roos (1990), research on LM has grown considerably. The term “lean”, in the manufacturing sector, is a word used to highlight the reduction of waste and production uncertainty (Du et al., 2023). For Kamble, Gunasekaran, and Gawankar (2020) LM is the only model for expanding the economy. LM is focused on five principles: value, identification of value stream, flow, pull, and perfection Womack et al., (1990).

There are different interpretations of what constitutes waste. The more consensual definition claims that waste is any activity that does not add value to the customer and hence should be eliminated. In other words, environmental waste is the result of inefficiencies in the use of resources (Dües, Tan, & Lim, 2013). Womack et al., (1990) suggests seven types of waste, overprocessing, overproduction, high inventory, waiting time, unnecessary motion, defects, and unnecessary transportation.

Furthermore, the benefits of adopting LM practices are waste elimination, defect reduction, increase resource utilization, quality and productivity improvement, and lower

production costs Tardio, Schaefer, Nara, and Gonçalves, (2023), prevent pollution, achieve sustainable supply chains, higher employee productivity, and lead time and cycle time decreases (McDermott, ODwyer, Noonan, Trubetskaya, & Rosa, 2023).

Ward and Shah (2007) examined the factors influencing the implementation of LM, including changes in production, management, marketing, extraction and consumption, organisational culture, employee involvement and technological advancements. The article also mentions barriers to implementing LM, such as resistance to change and a lack of leadership commitment. More recently, Gupta and Sharma (2016) also identified resistance to change as a barrier. The authors also pointed out a lack of lean culture, insufficient training, and poor top management commitment as additional barriers. According to Elkhairi, Fedouaki, and Semma (2019), training and education are essential success elements since employee engagement and communication are key. Respect for people and employee engagement are key to lean service (Gupta & Sharma, 2016).

In his book Bertagnolli (2022), claims that “lean is current and even more current than ever”.

2.2. Lean services in banking

The service sector is responsible for more than 50% of the gross domestic product (GDP) of top economies Shoh-Jakhon R. Khamdamov (2024) and much of the employment in the developed economies. The services industry is unique compared to the manufacturing sector due to intangibility, heterogeneity, inseparability, simultaneity, and perishability (Margutti, Marques, & Wada, 2024). Considering the most recent economic events around the world, the recovery of markets has been slow, and competition is increasingly greater. Therefore, the quality of services provided by companies tends to be more valued, leading some companies to adopt lean services.

As LM is one of the most influential approaches in operations, its adoption in service industries has become crucial (Gupta & Sharma, 2016). The first attempt to implement LM in services was in the 90s. However, challenges like a lack of awareness about the benefits of implementing LM and uncertainty about the identification and inefficiencies make this integration more difficult. Several authors (e.g., Slavina and Štefanić (2024); Leite and Vieira, (2015) confirmed that, besides those challenges, implementing lean services can generate financial and economic results and improve

employees' behaviour and operational performance. The change in consumer behaviours and new players in the market cause unimaginable problems for traditional retail banking, forcing banks to realign their business models and operations (Cardillo & Basso, 2025); (ESTEVEES, 2019).

Gupta and Sharma (2016) describe the evolution of LM in services in four phases: pre-lean (before 1998), lean awareness (1998-2003), lean exploration (2004-2008), and lean implementation (after 2009). The pre-lean phase was marked by the beginning of the discussion as to whether goods and services could be treated as the same; in the lean awareness era the use of lean services was tried and some tools were developed to enhance the quality and consumer satisfaction; the lean exploration era was noticed by the true implementation of lean in service sectors such as health care, IT, and financial services. In this phase, some authors agreed that lean could be translated into services but not in a literal way; lately, in the lean implementation era, empirical studies started to emerge with a strong committed leadership for its sustainment, and applicability at an enterprise level was recognized as an important element (Guimarães & Carvalho, 2014).

Considering the increasing evolution of pressure to cost optimization while maintaining competitive services in the global banking industry, lead banks to implemented strategies such as LM (Ononiwu, Onwuzulike, & Shitu, 2024). The goal of lean banking is to eliminate waste, improve service quality, remove bottlenecks, automate repetitive procedures and utilize data analytics Grozdić et al., (2023). It streamlines work processes, improves customer satisfaction, productivity and profitability, and enhances financial awareness and position. It also promotes continuous improvement and makes customers the central focus while reducing environmental impact (Togun, Sobowale, Udom, & Udoh, 2024). Nowadays, the banking processes are described as complex, bureaucratic, and inefficient, with a lack of transparency and difficult access (Santos & Cabrita, 2016). This sector is characterized by a high volume of transactions, consumer heterogeneity, a high degree of employee independence in decision-making, and fungible products. Hence, banks must implement flexible solutions that adapt to customer expectations and must understand their needs a priori, providing them with better quality services through lean management.

To a smoother implementation of LM, companies use lean tools to apply lean in banking. Some of the most used lean tools in banking are Value Stream Mapping (VSM), 5S, Kaizen, DMAIC, 5 Whys, and visual management systems (Wraae et al., 2024; Grozdić et al., 2023).

The VSM is a process mapping technique that helps identify the value-adding and non-value-adding activities in the process (Grozdić et al., 2023). VSM typically involves creating current and future state map of the process and can include all the activities, people, and resources involved, as well as information on the time taken to complete each activity in the process. The VSM show to be one of the most efficient tools, due to the reduction in processing time and activities inefficiencies (Grozdić et al., 2023). To achieve competitiveness, banks have a focus on customers and embedding VSM into the organizational structure (Togun et al., 2024). The purpose of 5S is to create orderly and properly organized workplaces. As a result of a properly implemented, it is possible to improve product quality, increase productivity and improve work safety, which in turn may increase the stability of the manufacturing process (Pawlak, Nowacki, & Kania, 2023). Kaizen means “continuous improvement” in Japanese (Kaizen Institute, 2025). This tool uses small or incremental improvement overtime to improve process. It presumes the implementation of all employees. When well use can lead to efficiency increase, waste reduction and improvement in the quality. The 5 Whys it’s also called as root cause analysis. It is used as a problem-solving method that allows to identify the root cause of a problem. This technique consists in ask “why” five times to understand the true problem and not only a temporary/superficial problem. The visual management systems use a visual signals and cues to communicate information and track performance, helping organizations improve efficiency, reduce waste, and enhance transparency.

To measure the implementation of lean, companies use KPIs such as lead time, cycle time, throughput, defect rate, work-in-progress (WIP), customer satisfaction, employee engagement, cost of poor quality (COPQ) and Overall Equipment Effectiveness (OEE) (Gupta & Sharma, 2016).

2.3.Sustainable Development Goals

Companies demonstrate an increase in awareness regarding sustainability. To guide the company's effort, the UN established seventeen sustainable development goals (SDGs) and one hundred and sixty-nine targets, implemented in 2015, toward 2030 (all the goal are available in the Appendix A) (United Nations, 2015). These targets and goals affect various dimensions, including poverty eradication, improving the quality of education, ensuring access to clean water and sanitation, and taking urgent action to address climate change, aligning the industry with sustainability. The SDG represents an

attempt to balance economic growth with social and environmental responsibility (Elkington, 1998; Thakur & Mendiratta, 2022).

Banks have a crucial role in the implementation and support of sustainable initiatives such as the SDGs. Due to the double role, as a direct implementor and as an activity financial, the bank industry needs to support and encourage this implementation (Kulińska-Sadłocha, 2024). The adoption of the SGD in an industry can have benefits in environmental, social, and governance areas. From an ecological point of view, the implementation of SDGs may reduce the environmental impacts through the reduction in the use of raw materials, minimizing greenhouse gas emissions, and increasing efficiency. The ecological impact is reduced in the short term but also mitigated over a long period (Senadheera, 2022; Saxena, 2022). In the social fields, promote a fairer environment through labour rights, a safer, stable, and loyal workplace, and surrounding communities. Apart from this, the governance prism can benefit from good governance involving having a robust system of oversight, including risk management, transparency, and fair decision-making (Thawornsujaritkul & Boonnual, 2024). Governance under SDG developed aspects such as company leadership, executive compensation, auditing, internal controls, and shareholder rights. Weerasinghe (2025) studied the motivations and strategies of companies in adopting the SDGs, such as the influence of ethical, contextual, and economic impact managers.

Besides these benefits, Cromwell and Peprah (2025) identifies the short-term profit focus, alignment issues, and geographic constraints as a challenge to implementing SDGs. Lawrence (2020) goes beyond these challenges and critiques instrumental rationalism. The author claims that SDGs seem like a linear causality, meaning that with the correct allocation of resources, it's always possible to achieve the desired outcomes, overlooking the complexity of society and the overall problems.

Sardianou, Stauropoulou, Evangelinos, and Nikolaou, (2021) created a model to assess the relevance of each SDG in baking. This analysis was performed in 37 European banks with published sustainable reports, and it was possible to conclude that the SDGs with more impact in the sector were the economic growth and decent work (SDG 8) and fairness and transparency (SDG 16).

Additionally, CSR and the SDGs are closely connected when addressing green banking, as they share the same goal of integrating sustainability and ethics within corporations and society. Researchers consider the SDGs as the CSR dimensions

connected with sustainable banking because the SDGs consist of 17 crucial social and environmental issues (Úbeda, Forcadell, Aracil, & Mendez, 2022).

A study performed by Rahim, Muhmad, Abidin, Muhmad, and Omar (2022) showed a positive relationship between corporate governance and sustainable performance around 96%, while the percentage indicative of a negative relationship is only 4%. These findings suggest that effective corporate governance structures are associated with enhanced sustainable outcomes.

Sustainable development integration in banking can be made through green financing, ESG (Environmental, Social and Governance) criteria incorporation, inclusive financing, and strategic partnership (Cromwell & Peprah, 2025). The KPI's to assess the implementation of SDG are made through the 169 targets created by UN to each goal (United Nations, 2025).

2.4. Lean Management and Sustainable Development Goals

By applying LM practices, most companies will also implement SDGs. The reduction of waste is one of the foundations of LM that aligns with the overall goals defined by UN. Reducing waste and optimizing resources in banking contributes to achieving SDG 12 (Responsible Consumption and Production) and SDG 13 (Climate Action) by promoting sustainable production processes (Salman et al., 2024; Kalemkerian et al., 2022; Thawornsujaritkul et al., 2024). LM can also support SDG 8 (Decent Work and Economic Growth) through increasing operational efficiency, adaptation of the business models, and consequently, economic growth and job creation (Thawornsujaritkul et al., 2024; Schröder & Anggraeni 2019).

By enforcing continuous improvement and innovation, promoting sustainable growth and encouraging innovative solutions (Kaizen Institute, 2025; Miller & Thompson, 2021), it is possible to achieve long-term sustainability (Yang, Hong & Modi, 2020).

2.5. Corporate Social Responsibility

Although the focus of corporations is maximizing financial profits, society in general has demanded more, companies must manage relationships with employees and all stakeholders to create value and benefits for both parties, surging the Corporate Social Responsibility (CSR) concept (Angela, Anthony, Francis, & Damilola, 2021).

CSR is concerned with environmental and social aspects. It seeks to minimize the environmental impact of human action, the ecological footprint, energy consumption, and waste production. The social perspective deals with fair and beneficial practices for the community, in which the organization generates an interdependence between all parties involved. CSR is the management-related concept through which companies integrate environmental and social issues into the operation of their business and their connection with the stakeholders (Carroll, 2021). CSR practices include employee rights, fair labour practices, environmental preservation, fair operating practices, consumer issues, community involvement, respect for human rights and development, and organizational governance. Alongside economic and environmental performance, the improvement of the external image and stakeholders' satisfaction is essential to social targets for CSR practices (Zhu, Zou, & Zhang, 2018).

Banks play an essential role in implementing and maintaining sustainability since they play a dual role. On the internal side, they must implement sustainable practices in their processes. On the external side, they fund responsible projects and businesses and integrate ESG risks into their investment decisions Tumewang et al., (2025). Banks can act as environmental and social policemen by inspecting the borrowers and ensuring that they meet the standards (Rajawat & Mahajan, 2025).

Hence, the bank's activity needs to go beyond the short-term profits, it needs to contribute to global sustainability and the SDGs (Cardillo & Basso, 2025). Therefore, CSR has been applied in the banking industry in areas such as risk management, assessing environmental and social risk, and financial inclusion for all populations. The evolution of sustainable banking begins when banks are involved in socially responsible banking and CSR practices (Nosratabadi et al., 2020).

European and American banks such as BNP Paribas, ABN AMRO Bank, and the Union Bank of Switzerland (UBS) launched CSR and sustainable banking initiatives (Méndez-Suárez, Monfort, & Gallardo, 2020).

Factors such as the board of directors' characteristics and structure are crucial to implementing CSR due to their influence on financial and non-financial performance questions, such as board gender diversity, size, and CEO duality. The top challenges when implementing CSR are financial literacy, inclusivity, and energy efficiency. Banks often prioritize social sustainability over environmental management through the selling of green product and service development (Kumar & Prakash, 2020).

According to Adu (2022), sustainable banking involves banking operations considering the internal and external environmental and social sustainability as conscious members of the society. This concept improves financial development by financing business that generates a good social and environmental impact and promotes transparency and ethics. The implementation of ESG has been placed especially in developed countries, substituting traditional finance, promoting sustainable development, and maximizing the shareholders' value Tumewang et al., (2025). The increased emphasis on sustainability and responsible corporate behaviour has intensified the focus on ESG performance (Fahad & Rahman, 2020; Stewart, 2025). To measure the sustainability of the European banks Abdallah, Saïdane and Slama (2020) proposed five sustainability dimensions: economic, social, and environmental sustainability; diversity; and equal opportunities. According to these scales, sustainability performance measurement involves legal, customer, employee, financial performance, environmental, and social issues. Some KPI's to assess CSR in the environmental field in banking are carbon footprint (CO₂ emissions per year), energy consumption (kWh per employee or unit output), water usage (litters per employee or operation), waste generation and recycling rates, and percentage of operations certified by ISO 14001 (Sekak, Saidi, & Zaam, 2021). For the social aspect the most used KPI's are employee turnover rate, workplace accident/injury rate, diversity metrics, training hours per employee per year, employee engagement or satisfaction score, volunteer hours by employees, and customer satisfaction.

Traditional banks generate revenues without social and/or environmental concerns, which may not be sustained in the long run (Siddique, Nor, Senik, & Omar, 2023). On the other hand, the creation of social finance and ethical banking prioritizes sustainable responsibility, leading to fair investing and transparency. Sustainable banks generate profits by maintaining the social and environmental aspirations of the people (Siddique et al., 2023).

Some of the most used tools in banking to support sustainability are green loans, green banking supply chains, carbon footprint assessment, cooperative partnerships, sustainable bonds, ESG investing, Global Reporting Initiative, Bloomberg databases, and external assurance in sustainable reporting (Miroshnichenko & Brand, 2021).

External assurance refers to an independent third-party evaluation of sustainable data leading to a more accurate, transparent, reliable, and credible report, boosting shareholders' confidence and encouraging investment (Clarkson, Li, Richardson, &

Tsang, 2019). External assurance reduces greenwashing and information asymmetries and increases disclosure dependability (Ruiz-Blanco, Romero, & Fernandez-Feijoo, 2022).

Nevertheless, in developing countries, the implementation of ESG initiatives is not valued due to consumers' lower perception of the consequences (Sardana, Gupta, Kumar, & Terziovski, 2020). This doesn't necessarily mean that emerging countries don't incorporate CSR practices in corporations. The Asian countries are the ones that suffer most from climate change, hence, Asia and Europe are the two continents with the most CSR research and implementation of the concept (Desalegn & Tangl, 2022).

Values such as ensuring people's earnings, fair wages and labour rights, carbon neutrality goals, and circular economy initiatives, aim for banks to achieve SDGs and CSR, cumulatively (Sardianou, Staupoulou, Evangelinos, & Nikolaou, 2021). According to Rocca, Carini, and Veneziani (2022) circular economy is based on design for circularity, cleaner production, responsible consumption, and waste management. To ensure that the concept is well-structured, it's essential to consider the materials' circularity from the beginning of the transformation process since readjustments are more expensive and time-consuming. The (Ellen Macarthur Foundation, 2025) estimates that circular economy could reduce net resource spending in the European Union (EU) by €600 billion annually by 2030, improve resource productivity by up to 3% annually, and generate an annual net benefit of €1.8 trillion.

To achieve economic, social, and environmental dimensions of sustainable performance, companies must adopt LM (Morell-Santandreu, Santandreu-Mascarell, & Garcia-Sabater, 2021). Since measuring sustainability is difficult in services, it is a challenge to establish indicators and measure environmental and social aspects (Marín-García, Gil-Saura, & Ruiz-Molina, 2021).

According to Gupta and Sharma (2016), there is a potential relationship between lean waste elimination and environmental goals. In addition, Morell-Santandreu et al., (2021) claim that technical and social lean practices both have a positive impact on sustainability performance. However, the implementation of these two types of practices may lead to different performances. Social lean has a better effect on social performance, and technical lean has a higher effect on economic performance.

Services companies must focus on people over profits and concentrate on economic resilience and well-being for social and environmental initiatives to reach sustainability (Tan, Chew, & Hamid, 2017).

The lean tools that aim to support environmental sustainability are the 5S by organising workplaces, leading to a reduction in energy and resources, and VSM through the identification and elimination of waste. In the social responsibility, Kaizen is the tool that improves daily work and promotes job satisfaction (Ciannella & Santos, 2022).

2.6. Challenges and opportunities of lean and CSR

LM and CSR contribute significantly to the improvement of sustainability. Partial integration of LM, meaning only adopting lean in some sectors or departments without a holistic approach, can be a challenge to obtain a positive result. To achieve the desired effect, LM and CSR need to be implemented in the overall organization, involving all the employees and departments, top to bottom (Khan, Ahmad, & Butt, 2019).

Aligning lean design, eco-design, and Industry 4.0 technologies can also enhance the sustainability of the final products, increase the product life cycle, and support the development of eco-efficient products (Dahmani, et al., 2021).

Lastly, integration challenges such as barriers and the need for organizational change can occur.

3. METHODOLOGY

3.1. Research design

This study adopts an inductive approach which is most suitable since the starting point is the data collection and its analysis may achieve new concepts. An exploratory study should clarify some aspects already studied but not clarified in the previous articles launched (Brunetti, Matt, Bonfanti, & Longhi, 2020). The chosen methodology was the qualitative mono-method to provide more precise data and a better fit with the study objective (Danaeefard, Kazemi, & Karimi, 2024).

The case study is the research strategy that best aligns with a qualitative mono-method (Yin, 1989; Barratt, Choi & Li, 2010). The case study is a research strategy that aims for in-depth exploration since it provides a more specific scenario, leading to a more straightforward analysis of the causes and solutions of the problem (Voss, Tsikriktsis, & Frohlich, 2002). Focusing deeply on a small situation or company rather than understanding the overall market, it is possible to have a clearer analysis and understanding of the evolving factors that affect SDG. The target population for this study is banking companies that implemented LM and CSR, to address the research question.

This choice reflects the crucial role in advancing sustainable development due to its dual function: as a key financier of economic activities and as an implementer of responsible internal practices (Laguir, Stekelorum, Laguir, & Staglianò, 2021).

This study follows a multiple case study design (Cannas, Pozzi, Saporiti, & Urbinati, 2025). The cases are based in two banks: bank 1 and bank 2. The two banks were selected based on their level of implementation of LM practices, CSR practices, and SDG implementation as well as market influence and publicly available sustainability reports.

3.2. Data collection and analysis techniques

This study used primary data collected through semi-structured interviews (interview guide available in Appendix C), which are one of “the most common and effective methods of data collection in qualitative research” (Jamshed, 2014).

The study consists of six interviewees with an average time per interview of around 45 minutes, which, according to DiCicco-Bloom and Crabtree (2006) is by the expected time of a semi-structured interview. The interviewees had different roles and responsibilities, and to ensure a more accurate information, some of the questions also varied during the interviews as the flow of the dialogue diverged (DiCicco-Bloom & Crabtree, 2006). Although only six interviews were conducted, the participants were carefully selected from diverse roles and departments, both within and beyond Portugal, including members of employee associations such as the *Lean Ambassadors' Community*. This selection was based on the knowledge about the topic and position to ensures a wide range of perspective.

All the interviews were performed via Microsoft Teams between April and May of 2025.

To avoid legal issues, the anonymity of each participant and bank was granted, and during the study, they will be approached as interviewee A, B, C, D, E, and F of bank 1 and bank 2. Table I shows the roles, the bank, the duration, and the location of each interview.

Table I: Semi-structured Interviews Description

Interviewee	Bank	Role	Date	Duration	Location
A	1	Data Analyst	09/04/2025	45	Microsoft Teams

B	1	CSR Specialist	11/04/2025	30	Microsoft Teams
C	1	Continuous Improvement Specialist- Member of Lean Ambassador's Community	15/05/2025	35	Microsoft Teams
D	2	"Técnica Sénior"- Process Optimization Department	02/05/2025	45	Microsoft Teams
E	2	"Técnica Sénior"- Sustainability department	22/05/2025	60	Microsoft Teams
F	2	"Técnica Sénior"- Sustainability department	09/05/2025	45	Microsoft Teams

The analysis techniques and procedures are crucial to achieving the correct conclusion. Therefore, this analysis must be detailed. Hence, comparative and thematic analysis is a better approach for qualitative analysis. Comparative analysis allows the study of some cases and establishes the differences and similarities between them (Barjaktarović, Paunović, & Ječmenica, 2013).

3.3. Company overview

3.3.1. Bank 1

Bank 1 is a leading European bank in Portugal for corporate, institutional, and private clients. It is present in 75 countries, with more than 182,000 employees, including more than 9,000 employees in Portugal alone and more than 40 years in the Portuguese market. The company covers the business areas that constitute the core activity of the group worldwide, such as commercial, personal banking & services, investment & protection services, and corporate & institutional banking. It includes products such as

capital markets, structured finance, asset management, real estate, leasing, and accounting.

Currently, the bank has a few entities in Portugal competing in the personal financing area and supporting customers.

3.3.2. Bank 2

Bank 2 was founded in 1985, and it went through several mergers and acquisitions until it became the bank we know today. With the ambition to grow, the bank exports services and opened representative offices around Africa and Europe, with special attention to Poland, Greece, Romania, Angola, and Mozambique.

This entity is one of the biggest private banks and one of the leaders in the Portuguese market. The bank has over 6,000 employees and a network of over 695 branches across Portugal, offering retail, corporate, and investment products.

4. FINDINGS AND DISCUSSION

4.1. Data Analysis

4.1.1. Lean in banking

Regarding lean implementation, the interviewees of both banks state that they are applying it in their daily activities and that lean is part of their strategy. The following quote supports this idea: *“In Portugal, the bank approach lean consistently and includes lean as part of the strategy, in the search for efficiency”* (Interviewee C). Bank 2 implemented lean in 2010 in back-office activities to eliminate waste gradually from banking processes, supported by the promotion of changing behaviour to establish a culture of continuous improvement. Nowadays, bank 2 is also implementing lean in front-office activities and is looking to optimise processing in daily tasks, deliver better quality service, and optimise resource allocation. Interviewee E states that *“After a pilot project (back-office implementation), the consolidation of the procedures to be adopted and the calculation of projected results was decided to extend to other specifications of the bank”*.

Regarding the use of lean tools and practices, interviewees from bank 1 and 2 (Interviewee A, C and F) mentioned that the used lean tools promote standard operating procedures to reduce errors and minimize duplication of effort. They also mentioned using the VSM tool to map processes and analyse current states and possible

improvements. For example, the following quote confirmed that “*the most effective lean tool is VSM since it’s possible to map out entire workflows such as client onboarding, deal execution, and post-trade processing. With this tool, it’s possible to identify where the bottlenecks and delays are, to fared on redesign the process*” (Interviewee A). Interviewee C from bank 1 believes that all the tools are equally effective, depending on the purpose of the implementation, while interviewees D and E from bank 2 selected Kaizen as the most efficient lean tool. It implies the teams’ problem identification and comes up with daily solutions, providing constant benefits in efficiency, quality, and motivation. Nevertheless, interviewee C highlighted that lean mindset changing was the focus of the implementation, “*the most used practice are programs and initiatives related to changing the mindset*” (Interviewee C). Beside interviewee C, it was also mentioned by interviewee D that “*The most effective Lean tool has been Kaizen, for its ability to promote continuous improvement in a practical and participatory way*”. This important change is a starting point for departments' autonomy and continuous improvement. With the implementation of lean mindset, the tools should only be used according to the necessities of the projects, making, sometimes, lean mindset more important than the tools used. Therefore, interviewees from both banks mentioned Kaizen as the main tool to address continuous improvement, since it ensures efficiency and quality in the processes. Interviewee D from bank 2 also highlighted 5S to promote a cleaner and standard workspace, the 5 Whys to identify the source of the problem, avoiding superficial solutions, and PDCA (Plan, Do, Check and Act) to better structure a continuous improvement, and selected Kaizen as the most efficient lean tool. In their opinion, Kaizen implies the teams’ problem identification and comes up with daily solutions, providing constant benefits in efficiency, quality, and motivation.

In contrast, the lean techniques that are no longer being used in bank 1 confirmed by interviewee A are “*traditional lean templates and overly detailed document methods, since they were based on a very mechanical mindset*”. Nevertheless, the bank uses lean to move from a mechanical system to a dynamic one, changing the way to think. This movement gave more autonomy to each department and created a decentralised system.

Interviewees D and E from bank 2 highlighted the substitution of physical Kanban for a digital method, and the use of Poka-Yoke systems to avoid errors.

- Motivations to adopt lean practices

The motivations to implement lean it’s strongly connected with the benefits of the implementation according to interviewees from both banks. Two main benefits identified

were the easy implementation and visible positive impact in the efficiency, as explained by interviewee C *“simplest and has the greatest impact in work efficiency”*. Other reasons include improving operational performance and customer service with greater speed and quality, reducing waste, mitigating operational risk through standardising and controlling processes, reducing process times, errors and inefficiencies, optimising processes and making them more agile. The increase and complexity of regulation, and client expectations for better products and services was also identified as a motivation by bank 1 nominally, interviewee A and C.

Interviewee C from bank 1 highlighted the role of lean ambassadors in process improvement and reducing the number of working hours, as well as improving the quality of life of employees. The following quote supports this idea *“more than 4,000 processes were improved through lean ambassadors, including 1,450 in 2024 alone. This resulted in more than 216,000 hours being saved and indirectly improved the quality of life of employees, as they stopped doing repetitive activities and started dedicating their time to activities that create value”*.

- Barriers to lean adoption

Besides all the benefits mentioned above, the interviewees also recognize the existence of barriers to the lean adoption. The main barriers revealed for both banks were a lack of time to dedicate to continuous improvement and resistance to change. The following quote from interviewee E illustrates this: *“initial resistance to change by some teams, accustomed to traditional methods traditional work methods”* (interviewee E). Another mentioned barrier was the longevity of lean implementation. Lean should be continually implemented with effort. Interviewee A, bank 1 employee, highlighted this point by saying *“challenge of maintaining momentum. Lean isn’t a one-time project, it requires continuous effort, sponsorship from leadership, and a mindset shift that takes time to embed”*. It was also pointed out the constant challenge of making the lean a bank implementation, rather than only for some departments or regions. This challenge is supported by the interviewee A intervention *“the complexity of aligning lean efforts across different regions and departments, especially when systems, regulations, and cultures are so different”*.

- KPI’s

To measure the impact of lean, bank 1 uses as KPI’s the time saving in FTE (Full Time Equivalent) - unit that measures the number of hours an employee works efficiently

throughout a year. Measurements such as, number of errors, number of lean ideas, employee performance inside the *Lean ambassador's* program, and hours of training sessions provided, are some of the KPI used. Interviewee A claims that *“these KPIs help us not only measure impact but also identify areas where we can continue to improve or expand lean practices”*. The bank 2 looks more for efficient indicators such as operational capacity, raw material cost, and quality of the services.

4.1.2. Corporate social responsibility

The importance of implementing CSR is recognize by interviewee B from bank 1, *“the bank puts sustainability in the centre of our strategy, and CSR is taken seriously in the bank”*. Bank 1 selects the most pollution-intensive sector to prioritise in action (i.e., oil, gas, mining, shipping), guaranteeing actions in more problematic sectors, showing that the bank has a true commitment in ESG and CSR concepts. Also, to ensure a correct screening of the companies, bank 1 had implemented a constant monitoring of high-risk entities and as stated by interviewee B: *“a list of companies, goods and activities that are excluded, and we don't do not cooperate with them, it's called the exclusion list. For example, we did not cooperate with companies who included their activities, production or use of controversial weapons, trade in any species of plants for any or animals or products are great regulated”* (Interviewee B). Banks 1 and 2 are involved in several key CSR initiatives in community involvement, environment, employees, and quality of service. The bank is involved in numerous community-oriented programmes as part of its community involvement initiatives. These include educational initiatives such as financing schools and providing resources for children from less affluent backgrounds, charitable contributions including financial donations, and volunteering activities. Employees are encouraged to take part in local community support and philanthropic efforts as stated in the following quote: *“Philanthropy is also very present in the bank priorities, especially social charity* (Interviewee B). In the environmental dimension, reducing energy consumption, going paperless, and minimizing the carbon footprint are some of the efforts from both banks. Bank 1 has also followed the prohibition of single-use plastic implemented by the EU and the use of clean energies to charge phones and computers. Regarding employment, the bank promotes the workers' well-being by promoting a healthy work-life balance, ensuring diversity and inclusion in the workplace, and a strong commitment to fair labour practices. Some branches even have the mandatory “CSR day”, which all the teams need to volunteer for a day in an activity

linked with CSR. Other CSR practices mentioned by interviewees from bank 1 were programmes to promote women in leadership roles, increase opportunities for entrepreneurs and support industries, and implement a code of conduct, equal opportunities for each employee, a conflict-of-interest management policy and an anti-corruption policy. To address CSR products, bank 1 developed financial products that have a positive societal impact, such as sustainable investment products, green bonds, and financing for projects with social and environmental benefits. Bank 2 and its foundation have cooperation protocols and partnerships with several institutions, enabling voluntary initiatives that create social and environmental value. These initiatives support disadvantaged groups or individuals in need of special services within Portuguese society. Bank 2 has also organised, encouraged, and monitored, which constitutes an important contribution to the materialisation of its CSR. This idea is supported by the following quote: *“The CSR practices go beyond the contribution to the development of the society.”* (Interviewee E). In terms of community involvement, bank 2 is committed to social development and supporting the communities in which it operates. This commitment is demonstrated through financing charity associations, raising awareness and providing literacy training. The bank also finances and volunteers with “Banco Alimentar Contra a Fome”, with more than 2,000 hours spent in 18 different locations and 79% of employees participating. The main actions implemented to reduce the environmental impact were the use of LED illumination to ensure energy efficiency, optimisation of the air conditioning (AC), and progressive reduction of the paper used. On the employee's side, gender equality, fair and inclusive environment promotion, continuous employee training, and providing employees' healthcare systems are the main responsibilities of the bank 2. To address CSR products, bank 2 sells services adapted to the environment and social impacts, and financing renewable energies.

- Motivations and benefits

The reasons to apply CSR practices in the bank activities are consistent in bank 1 and bank 2. Between the main reason of the CSR implementation is the new regulation, making ESG criteria mandatory in some territories, attractiveness of new clients and investors, decrease in financial risks and promotion of loyalty for stakeholders. Interviewee B supported these motivations confirming that *“Some reasons are due to the fact of it's becoming mandatory requirement by National Bank of Ukraine, including the ESG criteria, the benefits associated with the implementation of sustainability, increase of the attractiveness of investors and customers, reduction of risks and financial losses,*

improved reputation and increased trust and loyalty.” Interviewee A highlighted the ethical, business, and regulatory reasons. As a financial institution, the bank is responsible for contributing to a positive world, aligning with the shareholders' and clients' expectations. Bank 2 implemented CSR because they believe in the sustainability and social responsibility in the community, one interviewee mentions that *“they are essential pillars of our strategy, growth, innovation and positive impact”* (Interviewee F). Interviewee E confirmed that bank 2 assumes the responsibility and wants to comply with the 1.5 C° in the Paris agreement and confirmed that it is guided by the principles of the global compact defined by the UN in human rights, work conditions, and anti-money laundering topics.

The benefits of adopting CSR are various. Bank 1 interviewees mentioned the *“attractiveness of investors and new costumers - stakeholders understanding the attractiveness, avoiding financial and reputational risks and fight the greenwashing (when company in the marketing sphere call their products green, but they're not green)”*- (Interviewee B). Other interviewees (Interviewee A and C) even mentioned the enhancing customer loyalty, as many clients are seeking sustainable partners, supporting employee satisfaction, and avoiding financial and reputational risks. Two interviewees from bank 2 referred to strengthening the trust and reputation of a solid and human bank in the sector. They mentioned attracting talent and engaging employees with purpose by promoting workplace inclusion, equality, and well-being initiatives. They also mentioned creating more inspiring and innovative financial solutions through green products, generating long-term economic value with a positive social and environmental impact, and integrating ESG principles. They said they actively contribute to the SDGs.

- Barriers

Implementing CSR can present some challenges. The main barriers for bank 1 were ensuring consistent implementation across all areas of the bank, measuring the tangible impact of CSR initiatives, balancing profit with environmental and social considerations, and addressing the tension between short- and long-term profit. Another barrier was ensuring that all employees are equally engaged in CSR efforts across different regions and departments. As mentioned in the following quote, communication with stakeholders can be difficult, and they face some resistance to CSR and ESG: *“just save our money, we don't care about sustainability”* (Interviewee B). Bank 2 interviewees also recognize that implementing CSR can be challenging due to the difficult uniform implementation in the bank strategy, leading to implementation in parallel with the other

sector, the perception of additional costs when the implementation without an immediate return, resistance to the change, difficulty in communicating CSR goal with fear of “greenwashing”, and difficulty in measure the real impact.

- KPI's

To measure the impact of CSR initiatives and practices, bank 1 uses several KPIs. Interviewee A mentions some of them: *“these include carbon emissions reduction, the number of sustainable investment products offered, and the amount of financing directed toward environmentally and socially responsible projects. The bank also tracks employee engagement in CSR-related activities, such as volunteering hours and participation in diversity and inclusion programs”*. However, for confidentiality reasons, not all the KPI's could be shared. In bank 2, they developed their sustainable report where they define the guidelines and KPI's. Some examples of CSR KPIs are better female representation in senior management positions (85.34% men and 14.66% women) and equal pay. These guidelines are aligned with GRI (Global Reporting Initiative) and SASB (Sustainability Accounting Standards Board) standards. They are reviewed annually by an independent entity, ensuring transparency.

4.1.3. Lean and CSR synergies

All the interviewees of bank 1 believe in a direct connection between the concepts lean and CSR. This idea is present in the following quote: *“lean and CSR are complementary because most of the lean techniques encourage CSR practices.”* (Interviewee A). Interviewees from bank 2 (interviewee E and F) mentioned that the bank doesn't apply lean directly in CSR, or at least they are not aware of the direct connection. However, the implementation of lean in the overall strategy provides a link between these two concepts: *“Within the scope of CSR, process management at the bank is a strategic and essential tool for promoting ethical, efficient and sustainable performance”* (Interviewee F). Eliminating waste and making continuous improvements has an impact on CSR. For example, reducing the use of paper and energy has a positive environmental impact. Additionally, reducing repetitive employee tasks through automation frees up more time for CSR activities. Bank 1 uses lean tools to achieve CSR. Interviewee C even mentioned that *“self-discipline and 5S are basic but fundamental tools for almost all processes - keeping everything organised and changing the mindset”*. Lean allows the bank to identify all kinds of waste, including environmental ones. It's possible to identify the overconsumption of raw materials and human resources, leading the bank to reduce

the print volume, smarter use of the lighting, and a reduction in business trips, use of Microsoft Teams. For bank 2, the implementation of lean guides the companies to reduce waste and respect the community and the environment. The internal improvement thought lean are visible in a better working environment and more transparency.

Some examples of lean practices that contribute to CSR initiatives in community involvement for bank 2 mentioned are the participation in the “Ajude a Semear a Inclusão” project. Interviewee E highlighted that “*the objective was to promote the social inclusion of the youth population with less intellectual development*”. Lean allows an efficient allocation of the resources in the social sphere. The bank optimisation and cost saving allow it to distribute more money to the social associations. In bank 1, lean aims to streamline how they plan, coordinate, and communicate volunteering and charitable initiatives, which increases participation and visibility. In bank 2, lean practices focused on continuous improvement, waste elimination, and process optimisation, have consistently reinforced the bank's CSR. These approaches are applied across the different areas of the bank, with direct impacts on community involvement. Lean practices enhance the bank's ability to respond more effectively and quickly to social needs. Process reengineering, for example, allowed the creation of new workflow solutions in the operations section.

On the environmental side, bank 1 supports continuous improvement in the digital transformation, which reduces paper and travel, and it promotes efficient use of infrastructure. Bank 2 eliminated the waste, not only in the offices, since the bank implemented a hybrid work frame, the bank also organised a beach clean, collecting more than 550 kg of waste, and reducing energy through automatic systems. Interviewee A mentions the application of “*lean more proactively in the development and delivery of sustainable financial products*”, using lean to improve ESG data collection and reporting, which remains a pain point for many financial institutions. Bank 2 referred to sustainable digitalisation of the processes, complementary lean tools, lean thinking in ESG initiatives, applying lean in financial inclusion, optimisation in the value chain, and development of sustainable and inclusive products. Interviewee A used the example of employee volunteering, since usually is an activity with higher participation and has reduce bureaucracies, “*Lean can help reduce administrative hurdles and make participation easier, which increases engagement*”. The key is using lean's structured problem-solving methods to ensure CSR initiatives are not just aspirational but deliver clear, sustainable outcomes. For bank 1, internal reports are no longer printed, they are changing for cloud-

based digital reports, and the implementation of 5S to have a clean workspace. Bank 2 agrees with the positive contribution of the lean tools to the environmental dimension of CSR. One of the biggest investments made by bank 2 were the improvement of digital systems to reduce the paper- using the digital signature, use of the app instead of going to the branch, development of an intelligent systems that rationalize the energy, and sign an agreement with EDP to only buy green and clean energy- impacting positively the emissions of CO₂. This idea is supported by the following quote: *“Through the implementation of electronic workflows, digital signature and encouraging the use of digital channels by customers and innovation in the APP, the bank has managed not only to improve efficiency of services to significantly reduce environmental impact associated with the use of paper, thus contributing to the preservation of resources natural.”*- (Interviewee E).

On the employee's dimension bank 2 promotes constant training, using the LEAD program (postgraduation), in association with some universities. Also, the efficiency of the processes allows a healthier work-life balance due to the reduction of the workload. Interviewee A mentioned the improvement in the work structure allowing the reducing of bottlenecks, and consequentially, an increase in the efficiency. *“Lean improves work structure- it removes bottlenecks and allows for more meaningful engagement, which enhances satisfaction and retention”*- (Interviewee A). Another example is the use of Lean to revamp the onboarding process, particularly for remote or cross-border employees. One practical application of this is the use of VSM to identify redundant steps, delays in document approvals and communication gaps in the onboarding process. Lastly, on the quality of the product side, bank 1 uses lean principles to help deliver ESG-aligned offerings more efficiently and with greater quality control, ensuring that these products truly deliver value in line with their social commitments. Bank 2 sells products that promote financial literacy, through written and verbal explanation of all the risks and implications of subscribing to the product or service, assists enterprises with the development of a microcredit product, and approves credit to sustainable projects and companies. The following quote from interviewee E supports these practices: *“...has developed products and services accessible to different segments of the population, including initiatives for financial literacy and support for clients in vulnerable situations. These actions reflect the bank's commitment to social responsibility and equity”*. Bank 2 implemented the simplification of the processes, which allows a quicker service to the consumers.

4.1.4. Lean and SDG

For bank 1, several SDGs are important, but the priority is SDG 8 – decent work and economic growth, which includes inclusive jobs and economic growth, SDG 12 – responsible consumption and production with reduction of waste and increased efficiency, and SDG 13 – climate action for environmental commitment. These SDGs are the ones that align closely with the bank's core activities and values. However, interviewee B mention that “*no SDG is more important than the other*”. Besides this, social SDGs are the priority in the bank, especially connected with the people. Bank 2 highlighted are SDG 4 – quality education, SDG 7- affordable and clean energy, SDG 8- decent work and economic growth, SDG 10 – reduced inequalities, and SDG 13- climate action.

Regarding the connection between lean practices and SDGs, interviewee A confirmed that “*lean practices contribute directly to these goals by driving efficiency, transparency, and continuous improvement in how we operate.*” Also, stated that lean supports SDG 8 by improving workflows, reducing unnecessary stress or inefficiencies, and creating a better work environment. For SDG 12, lean helps identify and eliminate waste, whether it's paper, time, or excess steps in a process. And with SDG 13, lean is a natural ally because it promotes smarter use of resources, leading to measurable reductions in energy use. Considering that a process is a set of steps to achieve something, there is always a way to contribute and improve. If there is a process, there is waste, therefore, there is the possibility of improvement - direct application of lean to reduce waste. Bank 2 interviewees also recognize the positive relation between these concepts, as illustrated in the following quote: “*lean adoption speeds up the achievement of the SDG*” (Interviewee E). For SDG 4, continuous training for employees promotes financial literacy, for SDG 7, the lean tools promote energy reduction and clean energy support, and for SDG 8, the lean efficiency and continuous improvement lead to economic growth.

Some examples of how lean initiatives contribute to SDG in bank 1 include speeding up the client experience and implementing paperless workflows within their client onboarding process through lean. This enables them to identify which activities can be improved. Lean also aligns with SDG in the internal mobility process, making it more simplified and giving more quality of life to the employees.

Bank 1 considers that the lean tool most impacted the SDG was VSM. It's especially powerful because it allows to see inefficiencies across the entire process. 5S is

also impactful when it comes to improving environmental conditions and organising physical or digital workspaces to be more energy- and resource-efficient. Kaizen, with its focus on small, continuous improvements, plays a key role in embedding a culture that naturally aligns with long-term SDG efforts. For bank 2, the most important tools to address SDGs is Kaizen in continuous improvement and increasing the efficiency, 5S, and VMS by mapping workflows to identify waste or improvements.

- CSR as a strategy

Questioned about the necessity of CSR in a strategy in sustainable banking in the future, interviewee B said, *“Absolutely. CSR is no longer a ‘nice to have,’ it’s a strategic imperative. The financial sector has a major role to play in addressing global challenges like climate change, inequality, and responsible growth. A strong CSR strategy allows banks to not only meet those expectations but lead on them”*. Interviewees from bank 2 also mention this approach. For instance, interviewee F state that: *“it’s in the strategy of the group and it’s inevitable. CSR is essential to ensure the long-term sustainability.”*

To assess the SDGs' impact, bank 1 uses a mix of internal KPIs for efficiency metrics and sustainability indicators, external sustainability ratings, and detailed ESG reporting to track their contributions. All the SDG KPI's and results are expressed in the annual sustainable report. Some examples of this KPI are for greenhouse gas emissions per FTE: 1.48 t CO₂e/FTE in 2024, against a target of ≤ 1.85 t CO₂e/FTE in 2025, the financing support for low-carbon economy of €179 billion deployed by end of 2024 (against €200 billion by 2025) and female representation in senior management of 39 % women in senior leadership roles, aiming for 40 % by 2025. Bank 2 SDG assessment is made through KPI's at the beginning of the year, each department defines a few volunteering hours to complete, a number of participants in workshops, etc, through the ESG data platform, and the certifications and external commitments.

4.2. Discussion of the results

This study aimed to understand how LM practices contribute to both CSR and SDGs in the banking sector. The results indicate that lean contributes positively to both CSR and SDGs. This finding is supported by Morell-Santandreu et al. (2021), who argue that lean practices, when strategically implemented, can reinforce CSR initiatives and contribute to broader sustainability goals. Nevertheless, this positive contribution is sometimes made indirectly and unplanned, especially in the SDGs aligning with Ivanaj et al. (2021), that note lean's contribution to sustainability is often indirect and not always

explicitly with broader frameworks such as the SDGs. This means that in some cases, the main focus of the banks is not achieving all the SDGs defined by the UN, but rather by implementing lean and/or CSR, companies consequently implement it. Although CSR and SDG integration were not always a deliberate objective of lean initiatives, the results suggest a natural alignment between the two, especially in environmental and operational dimensions. This finding is also aligned with the argument of Gupta and Sharma (2016) that lean is primarily designed to improve operational efficiency and that it often naturally aligns with environmental and CSR objectives. Most of the conclusions taken from this study are supported by the recent literature review regarding lean, CSR and SDG.

Through the interviews, it was possible to conclude that, in both banks, lean tools contribute more clearly to environmental CSR than to social CSR. This finding was also mentioned by Sardanou et al. (2021). All banks emphasised how lean tools contribute to reducing paper use, travel time and unnecessary procedures. Conversely, social contributions are more indirect, involving a better work-life balance, and greater engagement in CSR activities such as volunteering. Even when banks are aware of social issues and express a willing to address them, their impact often remains limited to internal stakeholders such as employees, rather than extending to more vulnerable or disadvantaged social groups. This may be due to the structural and complex nature of many social challenges. These findings echo those of Ivanaj, Collet, Gendron, and Friser (2021), who emphasise that the relationship between LM and CSR is not always straightforward. The authors argue that, depending on how it is implemented, lean can either contradict or complement CSR goals. If lean is adopted with a narrow focus on efficiency, it may not support broader CSR objectives. However, when integrated strategically, lean can provide a foundation for environmental and social sustainability efforts. Bank 1 and Bank 2 confirmed the findings of Gupta and Sharma (2016), who emphasised that lean implementation could make companies more efficient in terms of resources, time and money. This allows employees and companies to focus on CSR practices. This shift in focus showed that lean can contribute to the CSR implementation by freeing resources. This aspect demonstrates lean as an enabler, not the driver, since lean practices did not always directly initiate CSR action. Instead, lean often created capacity (i.e., time, clarity, structure) that enabled CSR initiatives to be more easily adopted or implemented. Bank 2 reported that the time saved by lean tools and culture-elimination of activities that don't add value to the product or the consumer, elimination of repeated tasks and reduction of repetitive tasks through automation- is applied in

volunteer hours in association or directly in the community service. The hours saved can also directly impact employees' work-life balance since, in some cases, the reduction of tasks leads to an increase in free time, making employees leave the workspace earlier and improving the work experience. The time saved may be redirected to other tasks planned for the day, allowing them to complete those tasks more carefully and pay greater attention to the quality. This finding is aligned with Gupta and Sharma (2016) who argue that lean services improve efficiency and process control, creating an internal environment that facilitates the implementation of CSR and sustainability practices, even if not directly intended for that purpose.

With regard to the SDGs, it can be concluded that there is a positive connection between lean and them, both directly and indirectly, as was previously demonstrated by Sardianou et al. (2021). The connection between these two concepts is intentionally in cases such as improving the energy source/distribution and lighting in an office to reduce the energy consumption and not overload the environment. On the other hand, the indirect connection between lean practices and CSR or SDGs can be seen when reducing unnecessary processes and resources, not necessary to the final product, leads to a reduction in overconsumption and overproduction. Morell-Santandreu et al. (2021) highlight this finding, explaining that while lean practices can be deliberately employed to reduce environmental impacts, such as energy consumption, they can also contribute indirectly by reducing unnecessary processes and resources, thereby limiting overproduction and promoting responsible consumption. Some of the most impactful lean tools for achieving SDGs are those that optimize operations, reduce waste, and improve customer experience, with a greater relevance to VSM, Kaizen, and 5S. This finding aligns with the Grozdić et al., (2023) study, which identified VSM as a central tool for reducing process inefficiencies in financial institutions, and with Wraae et al., (2024) which mentions Kaizen and 5S as more useful lean tools. The most affected goal by lean techniques is SDG 8- decent work and economic growth- through improved internal efficiency and time savings, SDG 12- responsible consumption and production- via waste reduction, paperless processes, and streamlined operations, and SDG 13- climate action- through energy-saving initiatives and the reduction of unnecessary resource usage. These findings partially follow the view presented in Sardianou et al., (2021), which highlighted the supremacy of the importance of SDG 8 and SDG 13.

Analysing more in deep, each bank was possible to point that bank 1 appeared more intentional and guided by formal structures in the implementation of lean and CSR,

which suggests an older and consistent implementation of the management system. In contrast, bank 2 has a more emergent relationship with CSR, suggesting a more recent and superficial implementation. For bank 2, lean helps CSR and SDG, but not always intentionally and/or directly, using lean to solve operational problems with CSR benefits seen as a by-product. Grozdić et al., (2023) had explored lean maturity in a banking context, showing how some banks integrate lean into strategy. Bank 1's structured and leadership-driven approach to lean aligns with the maturity stages described by Grozdić et al., (2023), where lean evolves from isolated tool use to a strategic organisational mindset. Bank 2's more operational use of lean tools corresponds to what Morell-Santandreu et al., (2021) describe as a low-integration approach, where lean exists more as a toolkit than a cultural or strategic transformation.

A pattern visible in this study, especially in bank 1, is the importance given to the lean mindset and lean culture. Some interviewees (interviewees B and C) believe that the lean mindset is more important than implementing all lean tools, leading to the conclusion that, lean culture is more valued than lean mechanics in bank 1. This observation reflects the findings of Morell-Santandreu et al. (2021), who argue that the implementation of lean is more effective when it is based in a cultural and mindset shift, rather than being limited to the mechanical application of tools. The interviewees reported that a lean mindset allows banks to have a more critical and structured view of the processes, independently of the use of lean tools, confirming the fact that lean tools are understood as a way to achieve the objective, initially triggered by the desire of the lean mindset. Therefore, interviewees consider that the constant mindset of changing, making better and improving the process is crucial to fully implement lean. Interviewee C even mentioned that processes are several activities leading to a main goal, and all the activities have waste, making space for improvement. This idea aligns with the analysis of Morell-Santandreu et al. (2021) of the cultural and philosophical dimensions of lean. They emphasise that a tool-based (mechanical) approach to lean is insufficient for achieving long-term value or sustainability. The authors argue that a managerial mindset and employee engagement are essential for integrating lean with broader goals such as CSR. Some of the unexpected findings during the interviews were the fact that despite formal CSR commitments by the banks, some shareholders resisted change, particularly when CSR initiatives seemed disconnected from core operations. Interviewee B reported a client saying, *"Just save our money, we don't care about sustainability"*. This behaviour reveals a perspective of "side projects" rather than being integrated with strategy, which

reflects the resistance to change regarding sustainable topics. Ivanaj et al. (2021), pointed out that CSR initiatives may face resistance when stakeholders perceive them as being misaligned with core business priorities or financial objectives, supporting this finding. Nevertheless, it's important to highlight that not all external shareholders have this attitude; this segment is just a small part of the shareholders. The findings also revealed internal resistance to CSR initiatives, particularly when they were considered to be peripheral to core operations or involved adjusting the workflow of older teams and departments. Several teams, shareholders and banks have expressed resistance to change. Gupta and Sharma (2016) identified resistance to change, particularly from established teams and stakeholders, as a major barrier to implementing CSR and lean, thus confirming this finding. Nonetheless, it's not possible to assess the resistance to change considering that many banks don't disclose this information to share the image of a good implementation of CSR- this practice may be classified as greenwashing since its publicity the great implementation, when there's resistance to change for several shareholders. This challenge in the CSR implementation is reflected in Sardianou et al., (2021), who identify cultural resistance and lack of strategic alignment as major barriers to embedding CSR effectively within organisations.

The mandatory "CSR day"- a mandatory day where all the employees need to volunteer for a day in an association to aim at the society or environment- in bank 1, it is also an unexpected finding, since in most companies and banks, it isn't a common practice. Most banks allow employees and teams to participate in volunteering and activities related to CSR, but not with a mandatory character. This initiative demonstrates the real commitment of bank 1 to CSR and society in general. Once again is important to highlight the double role of banks in the implementation of CSR and ESG practices.

For the sake of better understanding, in appendix B is available a summary table regarding the main finding in each bank.

5. CONCLUSION

Answering to the research question, "how do lean management contribute to the achievement of the SDGs and CSR in baking?", the study has revealed the positive connection between LM practices and CSR and SDG. Through the implementation of lean, banks benefit from a contribution to the achievement of the SDGs and CSR practices. The study showed that even when banks are not intentionally targeting the SDGs, lean indirectly contribute to achieving several targets and goals. To obtain a

positive implementation of lean, and consequently, CSR and SDGs, it's essential to use lean tools and lean culture (i.e., continuous improvement mindset) factors.

The findings showed that banks are more likely to address environmental CSR than social CSR. This finding may be associated with the increased awareness of environmental problems. Another important finding of this study was how tasks and scheduling were adjusted following the implementation of lean. Certain activities were removed from employees' daily routines, enabling a redefinition of work priorities and time allocation. The implementation of lean suggests an increase in the efficiency of the resources used, leading to an increase in saved time. In both banks, the time saved is used to stretch the CSR activities and tasks to achieve the SDGs.

This study has some limitations that may affect generalization of our findings. The main limitations are that it only considered two European banks, making the sample of the study small. The European bank's culture is unique and when compared to other such as American banks, can be considered very open-minded and sustainable. Besides the European and American banks, the Western banks, especially in the Middle East, where the countries are predominantly Islamic, the differences arise. In Islamic countries, borrowers are forbidden to both receive and pay interest since they believe that interest is exploitative and promotes inequalities. Therefore, the adoption of lean, CSR and SDGs in Islamic banks may be different from that of European banks. For a variety of legal, confidential and ethical reasons, it wasn't possible to target this segment of banks in this research.

Another limitation is the cross-sectional nature of the study, which didn't allow to have a clear and precise view of the long-term results. It's not possible to anticipate the connection between lean and CSR and SDG over a long period. The small number of interviews is also a limitation of this study. Lastly, it is important to note that the data collected is based on the managers' perceptions. Future research should also include objective data for triangulation. To address these limitations, further research should explore more banks and interview more employees, particularly from Islamic banks, in order to gain a clearer understanding of the differences from the European banking sector and the relationship between lean management and corporate social responsibility (CSR) in the Middle Eastern market. It would also be interesting to study the connection between Islamic culture and CSR and the SDGs. Future research could benefit from exploring these challenges and combining synergies to develop advantageous technologies (Sasso, Filho & Ganga, 2025; Dahmani et al., 2021). Regarding the theoretical implications, this

research adds to the literature on LM and the CSR connection. It reinforces findings from previous studies, such as Grozdić et al., (2023) and Morell-Santandreu et al., (2021), especially in the context of the lean implementation and interaction with the CSR concept. By looking at banks 1 and 2, this study enriches the theoretical framework regarding the European banks and their view on CSR and SDG practices, as well as the plans with lean.

This study highlights several practical implications for banks aiming to align LM with CSR and the SDGs. First, lean can be used not only as an operational improvement tool but as a strategic enabler of CSR, by freeing up time, resources, and organisational clarity that support sustainability initiatives. Banks may benefit from intentionally designing lean programs with CSR objectives in mind, rather than treating them as separate efforts. Second, fostering collaboration between lean teams and CSR departments could enhance the planning and execution of socially and environmentally impactful projects, such as volunteering programs or digital inclusion efforts. Third, incorporating CSR and SDG awareness into lean training, especially within lean ambassador networks, can help employees generate improvement ideas that are not only efficient but also ethically and environmentally responsible. Finally, the adaptability of lean tools to support non-operational CSR goals, such as employee well-being and community involvement, presents a valuable opportunity for banks to expand the social dimension of their sustainability strategies.

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APPENDIXS

APPENDIX A- Sustainable Development Goals table

Figure 1: Sustainable Development Goals by UN



APPENDIX B- Main findings with the interviewees

Theme	Bank 1	Bank 2
Lean Tools Used	VSM, 5 Whys	Kaizen, 5S, PDCA, VSM
CSR Focus	ESG, Philanthropy, Employee Initiatives	Volunteering, Social Inclusion, Green Energy
SDG Priorities	SDG 8, 12, 13	SDG 4, 7, 8, 10, 13
Main Challenges	Stakeholder resistance, legacy tech	Integration with core business, regulation

APPENDIX C- Interview guide per topic

Lean Banking

- How does your bank approach lean?
- What lean management practices are currently implemented in your bank?
- What lean tools have been used? And why?
- Which tools and techniques does the bank no longer use? And why?
 - Departments or processes in which lean was applied
 - Tools used
 - Practices implemented
 - Main results obtained
- What were the reasons for implementing lean management?
- In your opinion, what has been the most effective lean tool used in your bank?

7. What are the key benefits your organisation has experienced from lean implementation?
8. What challenges/barriers do your banks face when implementing lean management?
9. What key performance indicators does the bank use to measure the results of lean initiatives?

CSR

1. How does your bank approach Corporate Social Responsibility (CSR)?
2. What CSR practices are currently implemented in your bank?

Practices implemented in each category

- Community involvement
 - Environment (e.g., reducing energy consumption, going paperless)?
 - Employees
 - Social products and services quality
 - Areas or departments involved
3. What were the reasons for implementing CSR practices?
 4. What are the main benefits of adopting CSR in your bank?
 5. What challenges/barriers do your banks face when implementing CSR practices?
 6. What key performance indicators does the bank use to measure the results of CSR initiatives?

Lean and CSR

1. How do lean practices align with your bank's CSR initiatives? Which activities in particular?
2. In what ways do lean practices help your bank address CSR?
3. Can you provide specific examples where lean practices contribute to CSR initiatives? (ask for each category)
 - Community involvement
 - Environment (e.g., reducing energy consumption, going paperless)?
 - Employees
 - Social products and services quality
4. In what ways do lean practices help your bank address environmental sustainability (e.g., reducing energy consumption, going paperless)?
5. Can you provide specific examples where lean practices contribute to ecological outcomes?
6. In what ways do lean practices help your bank address CSR? Each category
 - Community involvement

- Environment (e.g., reducing energy consumption, going paperless)?
- Employees
- Social products and services quality

7. Can you provide specific examples where lean practices contribute to social initiatives?

Lean and SDG

1. Which SDG(s) does your bank consider a priority?
2. How does the adoption of lean practices align with (or contribute to) these SDGs?
3. How does the bank assess its contribution of the bank to the SDG achievement?
4. Which SDGs do you think lean practices in banking can most effectively contribute to? (e.g., SDG 8 - Decent Work and Economic Growth, SDG 12 - Responsible Consumption and Production, SDG 13 - Climate Action, etc.)
5. Can you provide examples of lean-led initiatives in your bank that you believe will contribute to the achievement of the SDGs?
6. Are there specific lean tools (e.g., Kaizen, 5S, Value Stream Mapping) that you believe have the most impact on achieving SDGs?
7. What opportunities exist for banks to further leverage lean management to achieve these sustainable development goals?
8. How can banks further leverage lean management to implement other CSR practices?

In your opinion, is CSR a necessary strategy for sustainable banking in the future?