Social Sustainability Reporting Readiness in Software Services: Drivers and Challenges

Outline of Bachelor Thesis

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Study program: Wirtschaftswissenschaften
8. Semester
Matriculation number: 7798555

Frankfurt am Main, August 10, 2025

Contents

1. INTRODUCTION

Paragraph 1: The Rationale for the Research

As social and sustainability concerns gain prominence in corporate agendas, reporting practices are evolving across industries. Firms in the software services sector are increasingly expected to disclose their social sustainability performance, driven by institutional pressures, internal strategic considerations, and stakeholder expectations.

Paragraph 2: Research Gap

Despite the growing importance of SSR, there is a lack of comprehensive frameworks tailored to the unique challenges faced by the software services sector. Existing literature often overlooks the specific context and needs of this industry, resulting in a gap that this research aims to address.

Paragraph 3: Research Objectives

This study aims to develop a structured assessment framework to measure the readiness of software service companies in Europe to engage in social sustainability reporting. It evaluates disclosure practices, identifies challenges, and proposes improvement strategies.

Paragraph 4: Scope and Limitations of Research

The study focuses only on the social dimension of ESG, analyzing 30 European software firms using publicly available data. It does not cover E/G dimensions or collect primary data.

Paragraph 5: Significance of the Study

Academically, the thesis fills a research gap through the development of a sector-specific framework for assessing social sustainability reporting in software services. Practically, it offers a quantitative tool for companies to evaluate their SSR readiness in light of regulatory requirements such as the CSRD.

Paragraph 6: Research Questions (RQs)

This research aims to answer the following questions:

- RQ1: What is the current level of social sustainability reporting readiness in the European software services sector?
- RQ2: Which organizational factors act as key drivers or barriers influencing firms' readiness for social sustainability reporting?

Paragraph 7: Structure of the Research

This thesis is organized as follows:

- Chapter 2 reviews relevant literature, including definitions, sector context, theoretical frameworks, and prior research.
- Chapter 3 outlines the research methodology, including approach, data collection and assessment framework.
- Chapter 4 presents findings and analysis from empirical research.
- Chapter 5 discusses the practical and academic implications of the findings.
- Chapter 6 summarizes the research, key conclusions, contributions, recommendations, limitations, research ethics and suggestions for future research.

2. THEORETICAL BACKGROUND, PRIOR LITERATURE, AND CONCEPTUAL FOUNDATIONS

2.1 Theoretical frameworks for social sustainability reporting (SSR) readiness in software services

1. Opening Paragraph (ca. 1/3 page): Introduction to the role of theory in this research

Theoretical frameworks provide a foundation for understanding the variation in social sustainability reporting (SSR) readiness across software service firms.

2. Main body paragraphs (ca. 2 page): Overview of key theories

a. Institutional Theory

Institutional Theory (DiMaggio and Powell 1983) explains how external forces such as regulatory mandates (e.g., CSRD, ESRS), industry norms, and peer behavior exert pressures that influence the motivation of software firms in social sustainability reporting.

b. Resource-Based View (RBV)

The Resource-Based View (Barney 1991) highlights that SSR readiness depends on a firm's internal capabilities and that a lack of such resources may limit readiness even under strong external pressure.

c. Stakeholder Theory

Stakeholder Theory (Freeman 1984) views SSR as a strategic response to meet the expectations of key stakeholders.

3. Closing paragraph (ca. 1/3 page): Integration and relevance to the study

These theories complement each other by offering distinct yet interconnected explanations of SSR readiness, which will serve as analytical tools to interpret empirical results in Chapter 5.

2.2 Foundations and Prior Literature on Social Sustainability Reporting

Paragraph 1: Overview of Social Sustainability Reporting

Social sustainability reporting in this research highlights the S-Pillar in CSR Reporting. Overview of SSR is presented (Edge 2022; Fiechter et al. 2022), and relevant standards (Dechow 2023) to be used in Chapter 3 (CSRD, ESRS, GRI) are defined.

Paragraph 2: Prior Literature on Social Sustainability Reporting

Prior research on SSR in software is scarce (Ye et al. 2020; Afshari et al. 2022) and social disclosures are often weak (Christensen et al. 2021; Reitmaier et al. 2024).

2.3 Sectoral Characteristics and Reporting Practices in Software Services

Paragraph 1: Sector Characteristics

The software services sector is a service-based industry highly reliant on human capital and intangible assets.

Paragraph 2: Reporting Practices in the Software Services

Reporting practices in the software services sector are evolving, with firms increasingly recognizing the importance of social sustainability. However, many still struggle with effective implementation and measurement.

2.4 Conceptualizations and Prior Approaches to Reporting Readiness

Paragraph 1: Definition of Reporting Readiness

Reporting readiness refers to the extent to which an organization possesses the capacity, systems, data, and commitment required to conduct high-quality, reliable SSR.

Paragraph 2: Prior Approaches to Reporting Readiness

1. Readiness frameworks in other sectors:

Prior research in sectors such as Industry 4.0 (El Baz et al. 2022), green innovation (Zhang et al. 2020), and sustainable manufacturing (Barletta et al. 2021) has widely applied readiness frameworks, ranging from stage-based models to maturity-to-readiness adaptations, and

in some cases structuring assessments around drivers and barriers (Govindan and Arampatzis 2023). However, these have not yet been used for SSR.

2. Readiness/preparedness in CSR reporting:

Prior research on CSR reporting has assessed readiness mainly through benchmarks such as ESRS and institutionalisation analyses rather than measuring readiness (Leal Filho et al. 2025; Shabana et al. 2017).

3. Measurement approaches:

Measurement approaches in CSR reporting have primarily relied on scoring methods aimed at compliance and performance rather than assessing readiness (Gerwing et al. 2022; Papoutsi and Sodhi 2020; Gai et al. 2023; Nicolo et al. 2025).

4. CSR reporting readiness measurement with score-based approaches:

Research on CSR reporting readiness is still limited, confined largely to the national level, focused on ESG reporting in general and primarily employs scoring-based methods (Nguyen et al. 2024; Milanés-Montero et al. 2025).

5. Rationale for this study's approach:

Given that SSR under ESRS/GRI is highly standardised and criteria-rich, a scoring-based approach is both feasible and enables transparent, reproducible readiness measurement.

2.5 Literature-Based Drivers and Barriers

Paragraph 1: Drivers of Social Sustainability Reporting

Drivers of social sustainability reporting include

- regulatory compliance, (Reitmaier et al. 2024; Bochkay et al. 2025)
- investor and client ESG expectations, (Bonnefon et al. 2025; Dai et al. 2021)
- reputation enhancement, (Reitmaier et al. 2024)
- benefits from CSR collaboration, (Dai et al. 2021)
- ethical practices and market valuation, (S. Chouaibi and J. Chouaibi 2021).

Paragraph 2: Barriers to Social Sustainability Reporting

Barriers to social sustainability reporting encompass

- undefined industry-specific standards (Bochkay et al. 2025)
- limited data infrastructure and ESG systems (Troshani and Rowbottom 2024; El Baz et al. 2022; Jona and Soderstrom 2023; Belal and Owen 2015)
- stakeholder power asymmetries in B2B (Dai et al. 2021)
- symbolic reporting and greenwashing risk (Reitmaier et al. 2024; Belal and Owen 2015)
- high costs and assurance expenses (Dai et al. 2021; Najjar and Yasin 2023)

3. RESEARCH METHODOLOGY

3.1 Research Design and Methodological Approach to Readiness Assessment

Research Design

The study adopts an exploratory mixed-methods approach, combining qualitative content analysis and descriptive statistics. A scoring-based framework for assessing SSR readiness was developed from ESRS and GRI.

Methodological Approach

The research proceeds in three phases:

1. Developing the framework, consisting of 7 main groups and 246 sub-criteria;
2. Collecting data from 30 European software companies in 2023;
3. Descriptive analysis to assess levels of readiness and identify key patterns.

3.2 SSR Readiness Framework: Development and Evaluation Strategy

Reference Standards

- ESRS S1 – Own Workforce;
- GRI 2 – General Disclosures, GRI 401–406;

Framework Structure

- A total of 246 sub-criteria (reporting items), partially derived from ESRS/GRI standards, and partially adapted to the software sector context.
- 7 main indicator groups based on SRN Framework, each containing 2–3 mid-groups, reflecting specific social dimensions including:

1. Workforce Characteristics
2. Collective bargaining and social dialogue
3. Compensation
4. Training
5. Health and Safety
6. Work Life Balance
7. Human Rights

- A brief description is given on how the full list of 246 sub-criteria was organized into mid-level thematic groups (mid-groups) for analysis.

Rationale for Grouping

The grouping rationale is to identify thematic strengths and weaknesses and to facilitate multi-level readiness assessment.

Scoring System

- Sub-criteria: scored 0 or 1 (No / Yes – information present);
- Mid-groups: scored from 0 to 3:

  0 = Not ready - No information reported;

  1 = Initial stage - Criteria mentioned but not quantified Criteria mentioned but not quantified with description or assumption or qualitative disclosure;

  2 = Partially ready - Specific data reported for one dimension (e.g., gender);

  3 = Fully ready - Comprehensive reporting, including bargaining across two or more dimensions
- Main groups: average of mid-group scores.
- Total score: average of all 7 main group scores.
- Each company's total score reflects a relative level of SSR readiness.

Data Analysis

The research includes descriptive statistics (mean, SD, frequency), thematic comparison, and radar/bar chart visualizations.

4. FINDINGS AND ANALYSIS FROM EMPIRICAL RESEARCH

4.1 SSR Readiness by Organizational Characteristics

Company characteristics are examined to address Research Question 1, which focuses on describing observable patterns in SSR readiness. These characteristics include both attributes that are later explored as potential drivers or barriers to reporting readiness, as well as other traits that do not exhibit explanatory power and remain solely descriptive in nature.

4.2 Thematic Readiness by Framework Dimensions

1. Readiness by Main Groups

The overall readiness scores were analyzed across the seven main thematic groups in the assessment framework.

2. Readiness by Mid-Groups

- Each main group is further divided into mid-groups, which provide more granular insights into specific reporting areas.
- Mid-groups reveal strengths and weaknesses within each thematic category, highlighting areas for improvement.

3. Top and Bottom Sub-Criteria

A focused analysis of the five most and least frequently reported sub-criteria illustrates where companies are most confident in their disclosures and where significant challenges persist.

4.3 Empirical Drivers and Challenges of SSR Readiness

To distinguish between mere organizational characteristics and explanatory factors, this study draws on three theoretical lenses: Institutional Theory, the Resource-Based View, and Stakeholder Theory.

Not all company characteristics observed in the sample qualify as explanatory factors. For example, company age or location, while descriptively relevant, show no consistent patterns and lack theoretical grounding, thus are not considered drivers or barriers.

4.3.1 Key Drivers

Table 4.1: Drivers of SSR Reporting and Theoretical Interpretation

Driver	**Theoretical Interpretation**
Regulatory pressure from CSRD, EFRAG, SEC; early or strict ESG adoption in firm's country of headquarters	Institutional Theory: Coercive pressure driving behavioral change
Demands from customers and large investors, reflected in B2C or B2B model	Stakeholder Theory: Stakeholder expectations incentivize transparency and reporting quality
Talent shortage $\rightarrow$ SSR used for employer branding, especially among companies highlighting DEI, training, or work-life balance	Stakeholder & RBV: SSR becomes a competitive advantage in recruitment and reputation

4.3.2 Key Challenges

Table 4.2: Industry-Specific Challenges and Theoretical Interpretation

Challenge	**Theoretical Interpretation**
Difficulty in collecting and standardizing non-financial data	RBV: Reflects lack of systems, tools, and personnel—organizational capabilities not yet developed
Informal labor, globalization, remote work	Institutional Theory: Fragmented settings weaken legal coherence and coercive pressure
Lack of sector-specific social standards	Institutional Theory: Normative pressure is underdeveloped; no established ”social norms” for the sector
SMEs lack ESG budget/personnel	RBV: SMEs often lack the strategic resources to build internal reporting capabilities

5. DISCUSSION AND IMPLICATIONS

5.1 Implications for Practice

For Businesses

- SSR should be viewed not merely as compliance but as a strategic investment in long-term

For Policymakers

- Policymakers should encourage SSR through sector-specific guidance, training, financial incentives, and open data standards (e.g., SRN) to support transparency.

For Standard-Setters and Rating Agencies

- Social indicators should be tailored to digital industries, with clearer materiality thresholds to reduce ambiguity.

5.2 Academic Contributions and Theoretical Reflections

Contributions

This study expands ESG literature to the under-researched software services sector, proposes a transferable SSR readiness framework, and demonstrates how Institutional Theory, Stakeholder Theory, and RBV can jointly explain differences in reporting behavior

Critical Reflection

While this study integrates multiple organizational theories to explain SSR readiness, their application is not universally appropriate in all cases.

6. SUMMARY AND CONCLUSIONS

Research Summary and Conclusions

This study developed and applied an SSR readiness framework for 30 European software companies.

Contributions of the Study

- The study presents key conclusions regarding overall readiness levels, thematic strengths and weaknesses, and the main drivers and barriers.
- It identifies significant patterns in SSR readiness, highlighting the influence of regulatory pressures, stakeholder demands, and organizational capabilities.

Recommendations

The study offers practical recommendations for companies, policymakers, and standard-setters.

Methodological Limitations, Research Ethics, and Future Directions

Limitations

This study is limited by its European-only sample of 30 companies, reliance on publicly available data, and use of a preliminary SSR readiness framework that has not yet been externally validated.

Research Ethics

The research adheres to ethical standards by using only publicly available data, ensuring no individual company is criticized or singled out.

Future Research Directions

Future research should expand the sample geographically, apply the framework across industries, and explore validation through interviews or case studies.

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