

# **Social Sustainability Reporting Readiness in Software Services: Drivers and Challenges**

## **Outline of Bachelor Thesis**

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# **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 & 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, Hitz, and Lehmann 2022), and relevant standards 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, 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, 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 (Filho et al., 2025) , (Shabana, 2026).

## **3. Measurement approaches:**

Measurement approaches in CSR reporting have primarily relied on scoring methods aimed at compliance and performance rather than assessing readiness (Tobias, 2022), (Sardianou, 2021), (Papoutsi & Sodhi, 2020), (Gai, 2023), (Nicolo, 2025).

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

Research on CSR reporting readiness is still limited, confined largely to the national level, and primarily employs scoring-based methods (Nguyen, 2023), (Montero, 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, Schultze, and Vollmer 2024; Bochkay, Hales, and Serafeim 2025)
- investor and client ESG expectations, (Bonnefon et al. 2025; Dai, Liang, and Ng 2021)
- reputation enhancement, (Reitmaier, Schultze, and Vollmer 2024)
- benefits from CSR collaboration, (Dai, Liang, and Ng 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 & Rowbottom 2024; El Baz et al. 2022; Jona & Soderstrom 2023; Belal & Owen 2015)
- stakeholder power asymmetries in B2B (Dai et al. 2021)
- symbolic reporting and greenwashing risk (Reitmaier et al. 2024; Belal & Owen 2015)
- high costs and assurance expenses (Dai et al. 2021; Najjar & 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;
  - 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 RE-SEARCH**

### **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

| <b>Driver</b>   | <b>Theoretical Interpretation</b>   |
|---|---|
| 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 → 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.