UNIVERSITAT DE BARCELONA

Empirical Research on Firms' Social Responsibility: Labor Tax Avoidance and Asymmetric Labor Costs Behavior

Tabitha Aude Sidyida Ilboudo

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2024

PhD in Business | Tabitha Aude Sidyida Ilboudo

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BARC

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Thesis title:

Empirical Research on Firms' Social Responsibility: Labor Tax Avoidance and Asymmetric Labor Cost Behavior

PhD candidate:
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Date:
April 2024

UNIVERSITAT DE BARCELONA

Dedication

Je lève mes yeux vers les montagnes... D'où me viendra le secours? Le secours me vient de l'Éternel, Qui a fait les cieux et la terre. Il ne permettra point que mon pied chancelle; Celui qui me garde ne sommeillera point…

To

My family in Ouaga, France and Canada, for going the distance with me. Thank you, mama Joanna, you are the best mom a girl could wish to have. Thank you, Roland and Charlie, I am blessed to have you both as my brothers. Thank you, Tonton Paul, Pamela and Torbern, and Gecica you have heard mostly my downs and encouraged me. It took a village….

Acknowledgements:

I would like to thank the following people, without whom I would not have been able to complete this research and without whom I would not have made it through my Ph.D.

The Business Department at Universitat de Barcelona, especially my supervisor Dr. Josep-Maria Argilés-Bosch, whose insight and knowledge into the subject matter steered me through this research. Thank you for your moral support, patience and understanding. Thank you for taking the time to teach and train me.
Special thanks to Josepa (Fina) Alemany Costa for her contribution to the data collection.

Many thanks to my colleagues at the Department of Business for their moral support and input, you know yourselves. Special thanks to Herick Fernando Moralles for sparing the time to work with me during the Christmas break. Thank you, Jonathan Calleja-Blanco, Luis Francisco, Jessica Beltrán for your feedback on my articles.

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CHAPTER 1 . INTRODUCTION

1.1. Presentation and research objectives

Corporate social responsibility (CSR) has become an essential element of business practices, with an increasing number of companies recognizing its significance as a key component in their market positioning (Acabado *et al.*, 2020; Habib and Hasan, 2019). CSR is a powerful tool for enhancing enterprise competitiveness (Miethlich *et al.*, 2022), and firms' choice to emphasize a specific CSR category is relevant to their strategic decisions and responses to societal pressure (Acabado *et al.*, 2020; Margolis and Walsh, 2003). As a result, the survival of businesses now depends on their ability 'follow the current' and improve their CSR initiatives, as these are influenced by complex social preferences and market imperfections (Newman *et al.*, 2020).

The goal of this thesis is to analyze the relationship between corporate social responsibility (CSR) and labor tax avoidance (LTAV) and asymmetric labor cost behavior within Social Accounting, a field described by Mobley as "the ordering, measuring and analysis of the social and economic consequences of governmental and entrepreneurial behavior" (Mobley, 1970; p. 762). The discipline of accounting has a long history, dating back several centuries, with merchants utilizing accounting techniques in their business operations. While the origins of accounting are commonly attributed to Pacioli in 14th-century Northern Italy, its roots can be traced back to Arabia and were introduced to Venice by Arabian traders. Accounting has since evolved into a primary tool for representing business information, with numerous global professional associations dedicated to its practice (Merigó and Yang, 2017). Given the increased societal emphasis on firms' social and ethical responsibilities, there is a growing consensus among academics on the necessity of incorporating ethical considerations into accounting education (McNair and Milam, 1993; Poje and Zaman Groff, 2022). Scholars argue that simply establishing policies is insufficient to bring about behavioral and mindset changes. They believe it is essential to foster moral development and effectively address the ethical crisis within the accounting profession. Enhancing ethics education is seen as a viable solution to this issue (Jackling *et al.*, 2007).

This thesis adopts a stakeholder-centric perspective to define CSR using a pyramidal framework comprised of four components: economic, legal, ethical, and discretionary (or philanthropic) (Carroll, 1991). These four components serve as the foundation for businesses' decision-making processes and help

them meet their economic and social expectations. The economic responsibility of a corporation refers to its obligation to produce goods and services that society requires, and to sell them at a profit. Legal responsibility requires corporations to abide by societal laws and regulations while fulfilling their economic responsibilities. Ethical responsibility involves adhering to ethical norms and behaviors that are not explicitly stated in the law but are expected of corporations by other members of society. Discretionary responsibilities are voluntary in nature and represent societal expectations of businesses that are not required by law or ethics. Therefore, businesses have the discretion to decide whether to engage in these activities (Carroll, 1991).

In academic discourse, CSR is widely recognized as a corporation's responsibility towards its stakeholders, while ethics encompasses the ethical implications of a company's activities (Furlotti and Mazza, 2024). Although this thesis does not delve into the semantic intricacies of these concepts, it does implicitly acknowledge the interconnectedness between CSR and ethics. The focal points of this thesis, labor tax avoidance and labor cost behavior, can be viewed as aspects of a corporation's social, legal, and ethical responsibilities.
The analysis focuses on employees, who are a significant group of stakeholders that are frequently overlooked in the CSR literature (Furlotti and Mazza, 2024; Preuss *et al.*, 2009). Employees are essential stakeholders because they have a significant impact on a corporation and, in turn, are significantly affected by the company's success or failure (Greenwood, 2007). This analysis examines firms' social responsibilities toward their employees from the stakeholder perspective, which aims to determine which group of stakeholders should receive the attention of the firm's management (Mitchell et al., 1997). Furthermore, it addresses the negative consequences of LTAV on society.

1.2. Philosophical motivation

A philosophical understanding of human beings is essential to the study of employee social concerns in accounting, as presented in this thesis. Thus, the firm is understood as a *human community*, which departs from the theories of 'economism-based business ethos,' which has been the mainstream in business, assuming that human behavior only stems from a rational, self-interested individual, known as *homo economicus*, and advocates maximizing shareholder value as the objective of the firm (Melé, 2012). The concept of the firm as a human community can be found in various sources, including managerial

literature and business ethics scholars, which are discussed throughout this thesis, as well as in Catholic Social Teaching. From the Catholic Social Teaching perspective, scholars such as Melé (2012), Paderon (1991) and Zigarelli (1993) argued that recognizing *'the human factor'* in business practices is crucial. Evaluating economics should not only consider process efficiency, but also the ethical standards that impact individuals (Paderon, 1991). To study employee relations and business ethics, Melé's (2012) Paderon's (1991) and Zigarelli's (1993) analyses of Catholic Social Teaching were extended beyond Kant and Mill's utilitarian perspectives (Vogel, 1991). Their approach to business ethics adopted an Aristotelian-Thomistic normative approach to human beings. Thus, Paderon (1991) posited that human beings are *persons, social beings,* and *exist for a purpose*.

As *persons*, human beings should not be viewed as mere means to an end, but rather as ends in themselves. Production should be seen as a result of human effort, and employees should not be viewed solely as costs or means to increase financial performance (Melé, 2012; Paderon, 1991; Zigarelli, 1993). From a Catholic Social Teaching perspective, employers should enforce public policies that protect the rights and well-being of employees, such as social security, workplace safety, and fair compensation (Zigarelli, 1993). As *social beings,* it is natural for us to interact and exist alongside other human beings. This includes certain rights such as the right to private property, which acknowledges the right to private enterprises and the creation of wealth. Human beings have the right *to exist for a purpose*, and social organizations and structures of the political economy should respect human nature and promote human dignity and purpose (Melé, 2012; Paderon, 1991). Decisions concerning employees should be grounded in a personnel management model that considers the worker's dignity, their family's security, and the common good (Zigarelli, 1993).

1.3. Labor tax and labor cost: A CSR problem?

Labor taxes mainly consist of labor or personal income taxes and social security contributions (SSC). This analysis is centered on SSC, which can be observed in the profit and loss statement. Firms are typically responsible for avoiding SSC, while the avoidance of personal income taxes is mainly attributed to employees. This thesis also focuses on labor costs, including salaries and benefits, which are expenses that companies aim to minimize. It is commonly believed that a competent manager's goal is to effectively manage costs by decreasing them.

Consequently, cost behavior has traditionally been a key area of focus in management accounting when analyzing profits for decision-making purposes (Weiss, 2010).

Tax avoidance has been characterized as a CSR issue. In reality, as CSR encompasses both ethical and social aspects, tax avoidance raise questions about firms' CSR initiatives and may be perceived as potentially illegitimate from a public standpoint (Avi-Yonah, 2008; Preuss, 2010). While LTAV may decrease firms' expenses, as firms strive to align with the values of the societies in which they operate, LTAV as well as any kind of tax avoidance undermine the social commons by denying public systems the necessary financial support to function (Bird and Davis-Nozemack, 2018; Dowling and Pfeffer, 1975). Additionally, tax avoidance erodes the regulatory commons, which comprises mutual expectations, norms, and understandings shared between firms and the authorities who regulate them. Finally, tax avoidance erodes the organizational commons, which are shared spaces within organizations that rely on a foundation of mutually shared social capital such as trust, honesty, and integrity (Bird and Davis-Nozemack, 2018).

With respect to labor costs, it is important to acknowledge that labor is both a source of value and profit, and any changes in profit will naturally impact labor costs. However, if workers are treated unfairly or are replaced unexpectedly, it can lead to a contradiction and pose a risk for businesses. On one hand, businesses depend on labor as a source of value and profit, but on the other hand, they may engage in a precarious bargaining situation with labor, which can jeopardize their economic responsibility (Toms, 2010). The challenge with labor costs is that once a commitment has been made, it can be difficult to reduce resources and often leads to adjustment costs, which are the economic, social, contracting, or psychological costs that arise during the process of resource adjustment (Venieris *et al.*, 2015). These costs can affect employee morale and can be related to employee-related CSR costs (e.g., Bauman and Skitka, 2012). When businesses prioritize their employees' well-being by providing good working conditions, employee benefits, career progression, job security, and retirement plans, they often adopt a conservative financial policy to ensure that they can fulfill implicit claims that are not legally binding (Ghaly *et al.*, 2015).

1.4. Summary of main findings

Chapter 2 of the thesis is a bibliometric analysis, the goal of which is to highlight research trends and theories in empirical studies examining the relationship between CSR, tax avoidance, and LTAV. The bibliometric analysis revealed a lack of empirical studies investigating the relationship between CSR and LTAV. Furthermore, the analysis revealed that non-accounting theories, such as legitimacy theory, stakeholder theory, and Carroll's (1991) pyramid of corporate social responsibility, are commonly employed in the field. In light of these findings, chapter 3 investigates the relationship between CSR and LTAV using a sample of Spanish firms. To this end, the analysis in chapter 3 utilizes environmental, social, and governance (ESG) data from Refinitiv Eikon and consolidated accounting information from the SABI (Sistemas de Análisis de Balances Ibéricos) and reveals a negative association between CSR and LTAV. These results indicate that socially responsible firms tend to contribute more to social security, as demonstrated by the higher values of LTAV measures used in the analysis, which suggests a lower inclination toward LTAV. These findings hold across various model specifications and measures of CSR and LTAV. Additionally, in chapter 4 I examine whether companies that express social responsibility through their social pillar score and overall ESG score display an asymmetric labor cost (LC) behavior when their operational activities change. A sample of firms from France, Germany, Italy, and Spain was used for this analysis. The results reveal evidence of LC stickiness, suggesting that socially concerned firms exhibit a more significant increase in LC when sales rise and apply lower cuts to LC compared to non-socially concerned firms when sales decline. These results are consistent across different model specifications and CSR measures.

1.5. Contribution of the thesis

The thesis makes significant contributions to the understanding of the relationship between CSR and labor related taxes and costs, and to academic research in various ways. Firstly, the bibliometric analysis in Chapter 2 reveals that LTAV is largely overlooked in firms' CSR agendas, despite the extensive research conducted in income tax avoidance. Subsequently, Chapter 3 examines the relationship between CSR and LTAV, and to the best of our knowledge, it is the first study to explore this association, focusing specifically on a firm's

social responsibility to the government and employees through SSC. Additionally, given the mixed results of previous research on CSR and income tax avoidance, Chapter 3 also contributes to the ongoing academic debate on the topic. The analysis in Chapter 4 considers other aspects of employee-related costs and CSR in the European context. By using cross-country European data, this chapter investigates the impact of CSR on labor costs (LC) behavior. The chapter also furthers the academic discourse by directly assessing the influence of social concerns on LC behavior in light of changes in firms' activities. Consequently, Chapter 4 adds to the limited body of research on LC stickiness and to the scarce studies on the relationship between CSR and cost stickiness and CSR and LC stickiness.

1.5.1. Research reliability

To measure CSR, ESG scores from Refinitiv Eikon have been used. However, the research acknowledges the controversies surrounding ESG scores as valid metrics for CSR or sustainability factors. Doyle (2018) highlighted substantial discrepancies in ESG ratings across different agencies, attributing them to variations in methodology, subjective interpretation, and agency agendas. Inherent biases related to factors such as market capitalization, location, industry, or sector also contribute to these disparities due to the absence of standardized disclosure practices. The lack of uniform rules for Environmental and Social disclosures, coupled with the absence of a disclosure auditing process, forces agencies to rely on assumptions, further emphasizing the subjective nature of ESG ratings. Thus, if ESG scores from another rating agency were used, the results could have been different. Nevertheless, Creswell and Clark (2018) argue that quantitative validity, also known as construct validity, implies that the scores utilized effectively represent meaningful indicators of the measured construct. Moreover, the quantitative analyses in the thesis can be considered reliable because the scores used are consistent and stable over time (Bryman, 2012; Creswell and Clark, 2018) since it is from the same rating agency, therefore the same methodology has been used to produce the ESG scores.

1.6. Structure of the thesis

The remainder of this thesis is structured as follows. Chapter 2 offers a comprehensive review of the literature on CSR, tax avoidance, and LTAV,

utilizing a bibliometric methodology. Chapter 3 empirically analyses the relationship between CSR and LTAV of Spanish listed firms. Chapter 4 presents a cross-country examination of the impact of CSR on LC behavior. Finally, Chapter 5 summarizes the key findings, discusses the research implications and limitations, and provides avenues for future research.

CHAPTER 2 . TAX AVOIDANCE, LABOR TAX AVOIDANCE AND CORPORATE SOCIAL RESPONSIBILITY: A BIBLIOMETRIC ANALYSIS

Abstract

The relationship between tax avoidance and corporate social responsibility (CSR) has been widely studied in Accounting, Finance, and Business Ethics. However, these studies did not focus on the relationship between labor tax avoidance and corporate social responsibility. Thus, this study seeks to provide a comprehensive overview of the literature on tax avoidance, labor tax avoidance and CSR. Using bibliometric techniques and content analysis, this study highlights the research and theoretical trends used in the field of study. This study utilizes bibliographic data from the Web of Science database spanning two decades from 2003 to 2023. A total of 122 academic articles written by 317 authors from 73 sources were retrieved and used for analysis. Biblioshiny in R was used to run the performance analysis and highlight influential journals in the research field. Keyword co-occurrence analysis and bibliographical coupling in VOSviewer (data visualization software) and content analysis in Excel were used to identify the research trends. The identification of theoretical frameworks was achieved through co-citation analysis and content analysis of the ten most-cited articles performed in Biblioshiny. Potential research avenues are also discussed.

Keywords: Bibliometric, Tax Avoidance, Labor Tax Avoidance, Corporate Social Responsibility (CSR).

2.1. Introduction

Research on business ethics, particularly within the field of accounting, has increased since the persistent surge in accounting scandals (Özmen Uysal, 2010). Various academic studies (e.g., Hoi *et al.,* 2013; Huseynov and Klamm, 2012; Lanis and Richardson, 2015; Sikka, 2013; Watson, 2015) have specifically focused on the problem of tax avoidance in relation to corporate social responsibility, on the premise that tax avoidance poses a problem to firm social responsibility.

Indeed, tax avoidance, although not illegal, has been defined as illegitimate because it violates the spirit of law (Avi-Yonah *et al.*, 2011). Broadly defined, tax avoidance refers to any strategy (whether legal or in the gray area) that firms employ to reduce taxes (Dyreng *et al.*, 2008; Hanlon and Heitzman, 2010). Conversely, corporate social responsibility (CSR), as defined within Carroll's (1991) stakeholder's perspective, specifies that businesses should incorporate economic, legal, ethical, and discretionary (philanthropic) components into their decision-making processes to align with society's expectations. Ethical responsibility involves adherence to ethical norms and behaviors that are not explicitly stated in the law, but are expected of corporations as members of society. This responsibility entails the obligation of a firm to act in a right and fair manner, seeking to avoid or minimize harm to stakeholders while fulfilling its economic responsibility (Carroll, 1991). Consequently, tax avoidance is viewed as ethically and morally questionable, thereby compromising a firm's social responsibility (Preuss, 2012).

First, given the extensive body of research on Tax Avoidance and Corporate Social Responsibility (CSR), this study aims to provide a comprehensive overview of previous studies in this domain through a bibliometric analysis, with a specific emphasis on Labor Tax Avoidance (LTAV). LTAV refers to the avoidance of social security contributions (SSC), which are taxes enacted to provide social benefits to the population. These benefits encompass, but are not limited to, unemployment insurance, accident, injury and sickness benefits, old age, disability and survivors' pensions, family allowances, and reimbursements for medical and hospital expenses (Argilés-Bosch *et al.*, 2021; OECD, 2022b). We add LTAV to Tax Avoidance as the principle of both schemes is to reduce costs (Ravenda *et al.*, 2015), and most of the research has little focus on LTAV. Previous bibliometric analyses of taxation and tax avoidance activities have

covered assessments of tax compliance (Fauzan *et al.*, 2022), the research landscape in taxation (Costa *et al.*, 2023), research trends in earnings management and tax avoidance (Owusu *et al.*, 2023), and the development of an appropriate theoretical framework to conceptualize the determinants of the use of tax havens by multinational enterprises (MNEs) (Temouri *et al.*, 2022).

The second objective of this study is to highlight the dominant theories used in this line of research and identify potential new research avenues from the overall analysis. To achieve these goals, we aim to answer the following research questions:

- RQ1: What are the current research trends in tax avoidance, LTAV and CSR?
- RQ2: Which theoretical frameworks have been frequently used in studies of tax avoidance, LTAV, and CSR?

For our analysis, we used bibliographic data comprising 122 articles collected from the Web of Science (WoS), spanning the period from 2002 to 2022. We considered this timeframe because the year 2002 holds particular significance, as it marked a pivotal moment when the U.S. Department of Justice initiated federal prosecution against Enron Corp., which filed for bankruptcy in December 2001 due to accounting fraud. It was also the year of the WorldCom, Inc., and Tyco scandals. The scandals, including Enron Corp., WorldCom, Inc., and Tyco, led to global awakening regarding the consequences of accounting malpractices (Petra, 2006). They not only affected firms' stakeholders but also tarnished the reputation of these firms, eroding people's trust in accounting principles and investors' confidence in the quality of financial reporting (Ball, 2009; Petra, 2006). Since 2002, the world has witnessed a series of major scandals in various regions, including the USA (e.g., Lehman Brothers in 2008), Europe (e.g., Swiss Leak in 2015, Panama Papers in 2016, and Danske Bank in 2018), South America (e.g., Petrobras in 2014), and Africa (e.g., Zuma in 2016). Following these scandals, the importance of ethics gained prominence in accounting. They have exposed a lack of ethical considerations in both financial reporting, which is intended to provide a true and fair representation to external users of financial statements, and accountability to the public (Poje and Zaman Groff, 2022).

The information collected from the WoS is analyzed through different bibliometric methodologies because different bibliometric methodologies can

be combined to determine the value of a collection of academic articles (Merigó and Yang, 2017). Therefore, to offer a comprehensive overview of the bibliographic data, our primary focus lies in the analysis of publication-related metrics to highlight research production trends and influential journals with high research output. To address the first question, we conducted co-occurrence analysis and bibliographic coupling to outline research trends. Furthermore, in response to the second question, which focuses on uncovering theoretical frameworks, we used co-citation and citation analyses to identify the predominant theories commonly used in tax avoidance, LTAV and CSR research.

2.2. Research methodology

2.2.1. Literature search

The bibliographic data were collected from the WoS database, which is widely regarded as one of the most influential databases in academic research because it includes journals known for their high standards (Merigó and Yang, 2017). The WoS is also preferred for its data quality, featuring standardized reference items and minimal missing data (Bibliometrix, 2023).

We selected articles for analysis within the following editions of the WoS core collection: Science Citation Index Expanded (Sci-Expanded), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (AHCI), and Emerging Sources Citation Index (ESCI). In the "Topic" search field, we used the keywords *"tax avoidance" OR "labor tax avoidance" OR "labour tax avoidance,"* limiting the timeframe from 2002 to 2022. This timeframe was chosen because of the pivotal year 2002, which marked a global awakening regarding the consequences of accounting malpractices. The initial search yielded 1,843 articles matching all three keywords.

Subsequently, we refined the search by adding AND "*corporate social responsibilit**" OR "*CSR*" to the "Topic" search field. This narrowed down the results to 126 articles. We further filtered the results by including specific "Document Types" such as "Articles," "Early access," and "Review," and we "Limited" the "Language" to "English." The final sample of articles selected for bibliometric analysis included 122 articles. The detailed steps of the search process are shown in **Figure 1**.

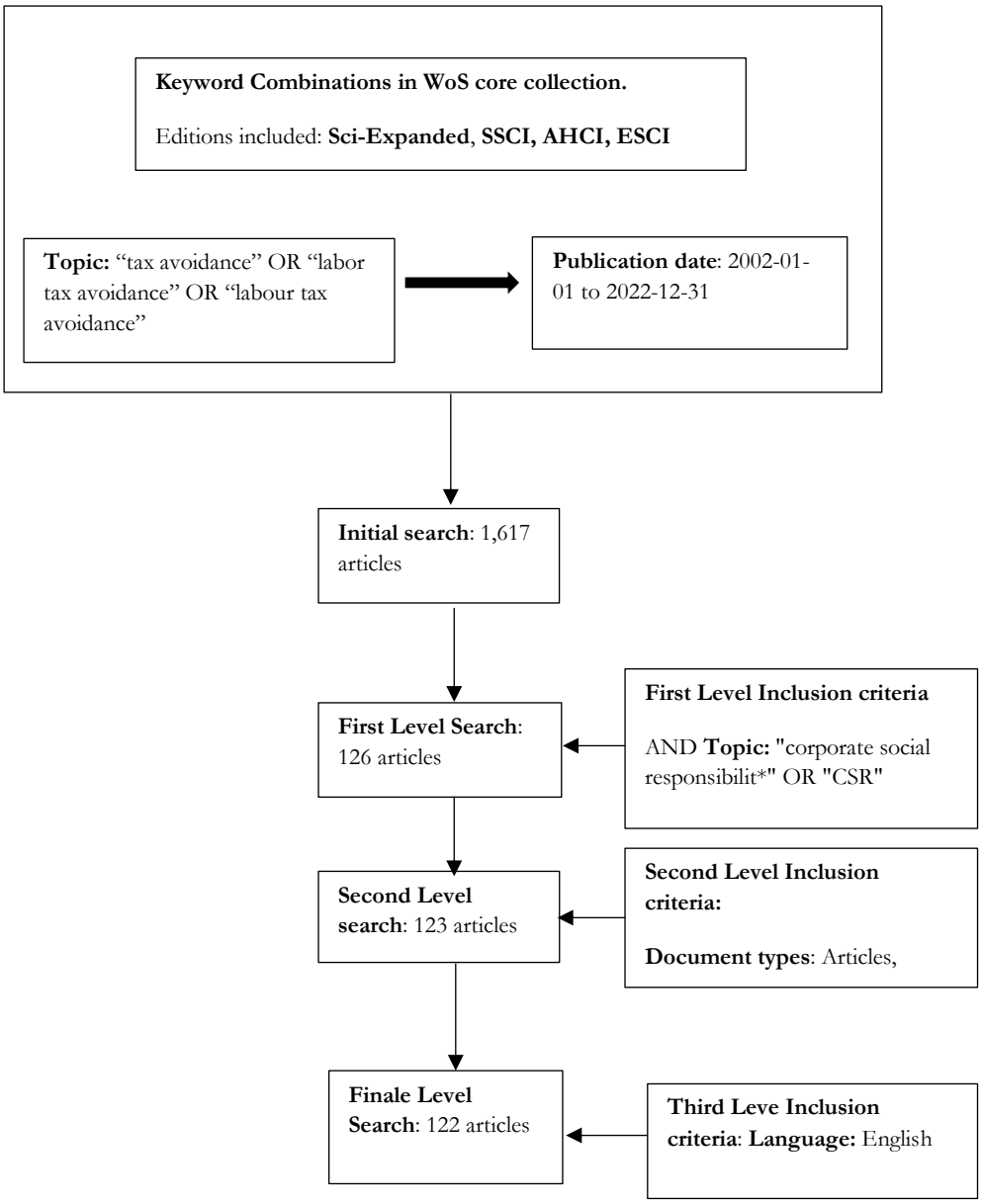


Figure 1. Stages of data collection process (designed by author)

2.2.2. Method of analysis

Bibliometric analysis, a method that is relatively new to business research, has gained popularity in recent years. This increase in popularity is primarily due to advancements in technology, the increased availability of bibliometric software such as Rstudio (Bibliometrix package) and VOSviewer, and the accessibility of scientific databases, such as Scopus and Web of Science. The rise in popularity can also be attributed to the cross-disciplinary transfer of bibliometric methodologies from information science to business research (Donthu *et al.*, 2021). Bibliometric analysis is a variant of a systematic literature review that applies quantitative and statistical techniques, such as descriptive statistics analysis or cluster analysis, to bibliographic data (e.g., publications and citations) (Mering, 2017; Mukherjee *et al.*, 2022). It provides a summary of the bibliometric and intellectual structure of a field by examining the social and structural relationships between different research units such as authors, journals, and topics (Donthu *et al.*, 2021). Compared to other types of literature reviews, bibliometric research is considered more objective and comprehensive in scope (Fan *et al.*, 2022; Mukherjee *et al.*, 2022). The value of bibliometric research is evident, as demonstrated by Mukherjee *et al.* (2022), who found that out of the 50 premier business journals listed by the Financial Times (2016; FT50), 38 (76%) published bibliometric research. Moreover, bibliometric analyses of leading academic journals have attracted scholarly interest in business research (Baker *et al.*, 2023; Ohlan *et al.*, 2022).

First, to provide a general overview of the research on tax avoidance, LTAV and CSR, we conducted a performance analysis using bibliographic data. This analysis allowed us to outline the influential journals that have shaped the research field. The performance analysis, primarily descriptive, aims to explain the performance of research constituents, such as journals (Donthu *et al.,* 2021). We conducted a performance analysis using Biblioshiny, the web interface of the Bibliometrix package, an R-Studio tool designed for bibliometric analysis (Aria and Cuccurullo, 2017). This analysis includes publication-related metrics to determine productivity of constituents (e.g., journal ranking based on the number of published articles in the WoS), citation-related metrics to determine the impact of constituents (e.g., the number of citations), and metrics that are related to both citations and publications (e.g., *h*-index) to assess journals' impact relative to productivity (Mukherjee *et al.,* 2022).

Second, to address RQ1 and outline research trends, we conducted a science mapping analysis. Science mapping reveals the structure and dynamics of scientific fields and is useful for reviewing specific lines of research (Zupic and Čater, 2015). This part of the analysis includes co-word or co-occurrence analysis and the bibliographic coupling of documents. Co-occurrence analysis is a content analysis that utilizes text data (e.g., keywords) to construct a bibliometric network of links between terms found in titles and abstracts. Co-occurrence analysis enables us to establish a conceptual structure of topic based on the strength of connections between concepts or keywords (He, 1999).

Bibliographic coupling occurs when publications have overlapping references. Two articles are considered bibliographically coupled if they cite the same third article. The strength of the bibliographic coupling relationship between two articles is determined by the extent of overlap in their references (van Eck and Waltman, 2014). In this analysis, we conducted bibliographic coupling to map the research trends and explore thematic associations between documents. This approach is based on the assumption that articles that share references are likely to discuss similar themes or ideas (Baker *et al.*, 2023).

Co-occurrence analysis and bibliographic coupling were conducted using VOSviewer, a powerful tool for visualizing bibliometric networks (van Eck and Waltman, 2010, 2014). VOSviewer creates a network using *items* or *terms* such as publications or keywords. The *Link* attributes (connection between two *terms)* are then established based on keywords for co-occurrence analysis or articles for bibliographic coupling, indicating the number of links an item has with other items. The *Total link strength* attribute represents the total strength of the links between an item and other items. The strength of a link represents the number of cited references shared by two publications (in the case of bibliographic coupling links), or the number of publications where two terms appear together (in the case of co-occurrence links). In VOSviewer, links with a strength of one are not displayed because they are considered relatively weak (van Eck and Waltman, 2023).

Third to address RQ2, establish a knowledge base and highlight dominant theories in our bibliographic sample, we performed co-citation and citation analyses, both of which are science mapping methods. Co-citation analysis, similar to bibliographic coupling, uses bibliographic data from the WoS databases to construct structural images of scientific fields (Zupic and Čater,

2015). Unlike bibliographic coupling, the co-citation analysis focuses on cited articles. It establishes relationships among cited articles (base knowledge) because it assumes that co-cited articles share textual similarities (Vogel, 2012). In this analysis, co-citation analysis identifies the 10 most cited articles, providing insight into the intellectual structure of the research field based on their co-occurrence profiles (Donthu *et al.*, 2021; Özmen Uysal, 2010). These articles were then subjected to qualitative content analysis, which enabled us to highlight the dominant theories.

The citation analysis of authors complements the co-citation analysis of articles. It highlights the 10 most cited authors, which allows us to estimate their influence through the citation rates (Zupic and Čater, 2015). Citation analysis is based on the logic that authors tend to cite articles and authors they consider critical in supporting their arguments, as well as frequently citing authors and articles that are considered useful (Özmen Uysal, 2010). Additionally, this analysis included the *h*-index of the authors and the number of articles that they published. These analyses were performed using Biblioshiny. **Figure 2** summarizes the methodological steps used to address the research questions.

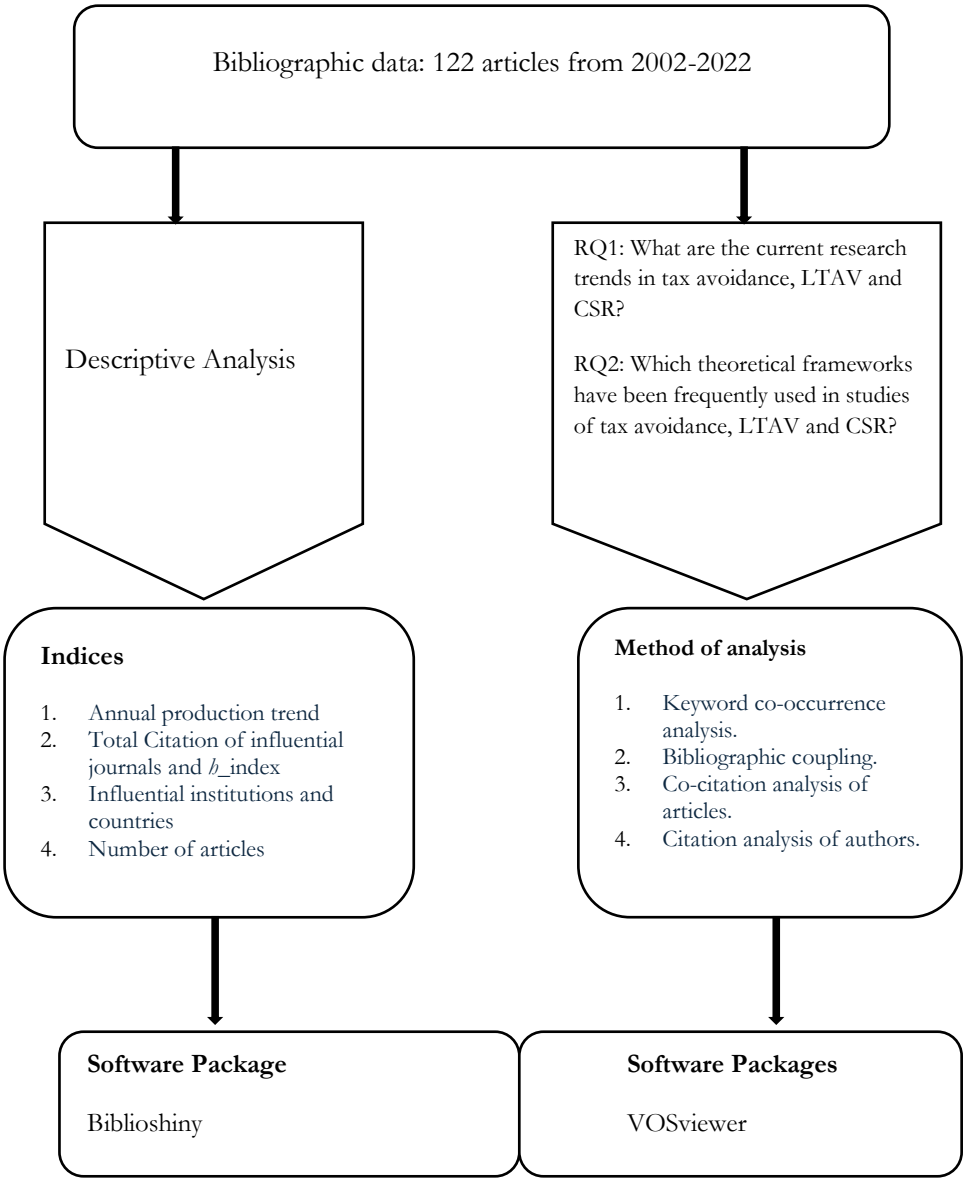


Figure 2. Method of analysis

2.3. Results

2.3.1. Description of the bibliographic data

Table 1 presents the primary information on the bibliographic data, analyzed using Biblioshiny. The data included 122 journal articles and review articles spanning from 2003 to 2023, sourced from 73 academic journals. However, it did not include any articles related to the topic published in 2002. The inclusion of the year 2023 is due to the presence of four early access journal articles, accessible in 2021 and 2022 but officially attributed to 2023 in terms of their publication date, according to the WoS database. The bibliographic data were comprised of 6,515 references and 317 authors. Most articles (84%) were written by multiple authors, and there was an international co-authorship rate of 29.51%. This suggests that the bulk of the co-authored articles were written by scholars residing in the same country.

Table 1. Descriptive Analysis: Main Information about the Bibliographic Data

Description	**Results**	
Timespan	2003:2023	
Sources (Journals)	73	
Documents	122	
Annual Growth Rate %	8.38	
Document Average Age	3.52	
Average citations per document	24.47	
References	6515	
Authors		
Total authors	317	
Single-authored documents	19	16%
Multi-authored documents	103	84%
Co-Authors per document	2.84	
International co-authorships %	29.51	
Document Types		
Article	115	94%
Article; early access	4	3%
Review	3	2%

2.3.2. Overview of the bibliographic data

To gain a comprehensive overview of the bibliographic data, a performance analysis was conducted using Biblioshiny. **Figure 3** illustrates the publication trend and growth of research on tax avoidance, LTAV and CSR from 2003 to 2023. The first article, indexed in the WoS, was published in 2003. Between 2004 and 2010, journal articles indexed in the WoS did not analyze tax avoidance or LTAV concurrently with CSR. However, there was a noticeable increase in publication trends from 2011 to 2016. Significant growth occurred from 2017 to 2022, when the number of articles increased from 10 in 2017 to 31 in 2022. This count reaches 36 when including early access articles and those whose issue or publication year is labeled 2023 by the WoS. The increase in the publication trend may also be attributable to an increase in the number of journals indexed in the WoS, leading to a higher volume of articles.

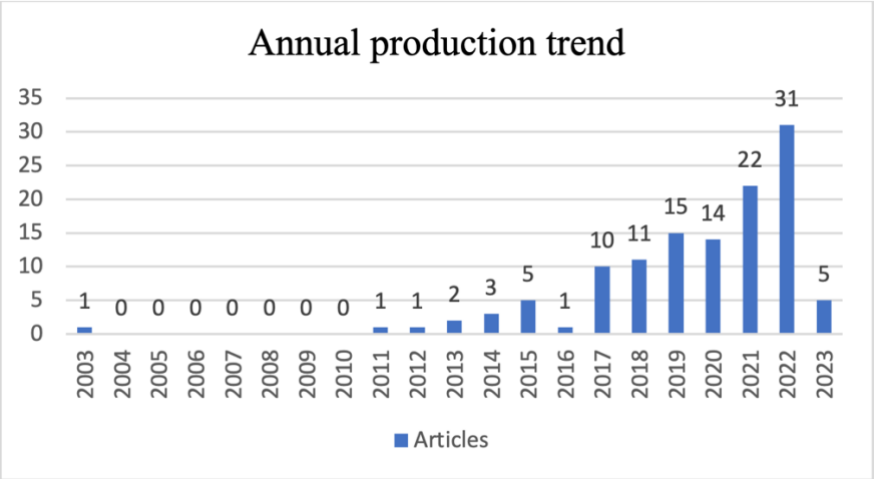


Figure 3. Annual research production trend

2.3.3. Influential journals

In the performance analysis aimed at providing an overview of the bibliographic data, **Table 2** lists the top 10 influential journals in tax avoidance, LTAV and CSR research. It ranks them based on Total Citations (TC) and includes their *h*-index, the number of articles published, and the Year in which the first article on the topic was published, according to bibliographic data. The Total Citations

(TC) metric reflects the total number of citations received by an article included in our bibliographic data from other articles indexed in the WoS database (Bibliometrix, 2023). The *h*-index, introduced by Hirsch (2005) along with the total number of citations, is a modern measure used to assess the quality of a set of articles. For instance, an *h*-index of 10 indicates that at least 10 articles received 10 or more citations each. While the number of papers denotes productivity and the number of citations indicates the influence of a journal in the research field, the *h*-index is a combination of both (Merigó and Yang, 2017).

In **Table 2**, the *Journal of Business Ethics* stands out as the journal with the oldest article in the search (2003), the highest number of Total Citations (633), the highest *h*-index (10), and the highest Number of Papers (14). The *h*-index indicates that at least 10 articles published in the *Journal of Business Ethics* have received 10 or more citations.
The Accounting Review and the *Journal of Corporate Finance* hold the second and third highest Total Citations with 560 and 297, respectively. However, both journals have a lower *h*-index (3). This discrepancy highlights one of the limitations of the *h*-index: it often overlooks citations and papers outside the *h*-core (i.e., the set of records that contribute to the *h*-index). This can lead to imprecise measurements. The *h*-index also tends to be insensitive to highly cited articles and changes in their citation numbers (Ding *et al.*, 2020; Jacsó, 2011).

Table 2. Top 10 influential Journals ranked according to the Total Citation.

Rank	Element	Total Citation	*h*_index	Number of articles	Year
1	Journal of Business Ethics	633	10	14	2003
2	Accounting Review	560	3	3	2013
3	Journal of Corporate Finance	297	3	3	2012
4	Journal of Financial and Quantitative Analysis	201	1	1	2017
5	Business Strategy and The Environment	118	2	2	2018
6	Journal of the American Taxation Association	102	4	5	2015
7	Social Responsibility Journal	80	5	5	2018
8	Sustainability	77	5	9	2017
9	International Review of Law and Economics	63	1	1	2018
10	Journal of International Business Studies	59	1	1	2018

2.3.4. Influential institutions and countries

Table 3 displays the institutions that have contributed to academic research in CSR, tax avoidance and LTAV within the chosen timeframe. The table includes the top 10 institutions that have produced two or more articles indexed in the WoS and featured in the bibliographic data. *Institut Quimic de Sarria, Universitat Ramon Llull,* and *University of Barcelona* are identified as leading contributors, with each institution having published four articles.

Table 3. Influential institutions in CSR, tax avoidance and LTAV research

Rank	Affiliation	Articles
1	Institut Quimic de Sarria	4
2	Universitat Ramon Llull	4
3	University of Barcelona	4
4	Egyptian Knowledge Bank (EKB)	3
5	Rensselaer Polytechnic Institute	3
6	Shanghai Jiao Tong University	3
7	Université de Sfax	3
8	University of Texas System	3
9	Rochester Institute of Technology	3
10	Auburn University	2

Table 4 shows the most prolific countries in terms of frequency of scientific production. The table includes the top 10 countries whose institutions have published articles indexed in WoS. The top five ranked countries are the United States of America (70), China (35), Spain (23), Australia (20) and the United Kingdom (17). These findings echo those of a previous bibliometric study on earnings management and tax avoidance conducted by Owusu *et al.* (2023), where the USA and China were identified as the first and second most productive countries, respectively.

Table 4. Countries with the highest production of articles

Rank	Region	Frequency of production
1	USA	70
2	China	35
3	Spain	23
4	Australia	20
5	UK	17
6	Canada	10
7	Tunisia	10
8	Italy	9
9	South Korea	9
10	Germany	7

Comparing **Tables 3** and **4**, reveals an interesting observation: the most influential institutions in the research topic are not necessarily situated in the countries with the highest overall research output. For example, while Spanish institutions are prominent in this field of study, their overall productivity does not match that of institutions in the United States or China. This apparent paradox could be attributed to various factors, such as the size or prominence of the country and its institutions, the availability of research funding, and the prevalence of collaborative efforts among researchers within a country. This can also be explained by the fact the metrics used in **Tables 3** and **4** are distinct. **Table 3** focuses on publications by authors affiliated with individual institutions. In contrast, **Table 4** shows the frequency of scientific production at the country level, encompassing all authors and institutions within the country.

2.3.5. Research trends

2.3.5.1. The co-occurrence analysis

To address the first research question, we employed two methods: co-occurrence analysis and bibliographic coupling using VOSviewer. The co-occurrence analysis, based on 'Author Keywords' as the unit of analysis (Donthu *et al.*, 2020), aimed to uncover thematic similarities and extensively researched areas within tax avoidance, LTAV and CSR. It also helped identify areas that

have not been thoroughly studied. Keywords were selected from 122 articles collected from the WoS.
We set our occurrence threshold to 2 in VOSviewer, meaning that a keyword must appear in at least two publications to be included in our analysis. Of the 335 keywords, 42 met this criterion. This threshold indicates that these keywords appear together in a minimum of two publications. According to van Eck and Waltman (2023), the more frequently keywords co-occur in publications, the stronger their interconnection.

Figure 4 displays the co-occurrence visualization of the 'author keywords.' In this visualization, 'tax avoidance' is the most frequently occurring term, appearing 67 times, followed by 'corporate social responsibility' at 56 occurrences. Other notable keywords include 'corporate tax avoidance' (11 times), 'CSR' and 'corporate governance' (10 times each). **Table 5** further details the link strengths associated with these keywords: 'tax avoidance' leads with a link strength of 111, 'corporate social responsibility' follows with 102, and 'corporate tax avoidance' and 'CSR' with 21 each. However, 'labour tax avoidance' occurs twice, and its total link strength is 2.

The visualization network indicates a lack of connection between the keywords 'corporate social responsibility' and 'labour tax avoidance'. This observation suggests that the relationship between these two concepts has not been extensively explored in existing literature. This finding addresses the first research question by highlighting trends in previous research. It can reasonably be inferred that 'corporate social responsibility' has been thoroughly studied in relation to 'tax avoidance' or 'tax aggressiveness' or 'corporate tax avoidance,' given the strong linkages observed in the co-occurrence analysis. It is important to note that the definitions of the keywords 'tax avoidance', 'tax aggressiveness' or 'corporate tax avoidance' are similar, and these terminologies are sometimes used interchangeably by academic scholars.

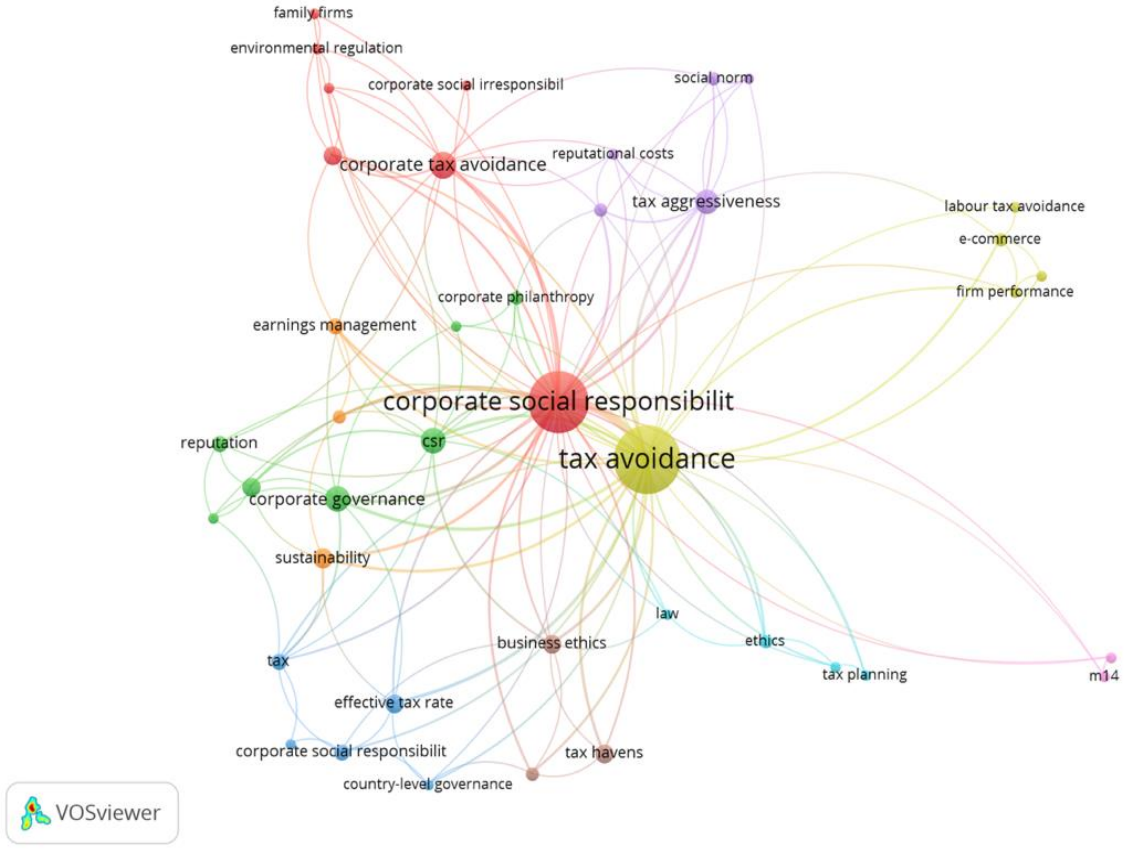


Figure 4. VOSviewer visualization of keywords co-occurrence network.

Table 5. Table of keywords co-occurrences and corresponding total link strength generated by VOSviewer

Rank	Keywords	Occurrences	Total Link strength
1	Tax avoidance	67	111
2	Corporate social responsibility	56	102
3	Corporate tax avoidance	11	21
4	CSR	10	21
5	Corporate governance	10	18
6	Tax aggressiveness	9	17
7	Business ethics	5	13
8	Sustainability	6	12
9	China	5	11
10	Effective tax rate	5	11
11	Tax	4	11
12	Corporate culture	3	9
13	Earnings management	4	9
14	ESG	5	9
15	Tax evasion	3	9
16	Tax heavens	5	8
17	Corporate social responsibility (CSR)	4	7
18	e-commerce	3	7
19	Ethics	3	7
20	Firm value	3	7
21	Social norm	3	7
22	Corporate Philanthropy	3	6
23	Country-level governance	2	6
24	Law	2	6
25	Environmental regulation	2	5
26	Firm performance	2	5
27	Political connections	3	5
28	Reputation	4	5
29	Reputational costs	2	5
30	Social capital	2	5
31	Sustainability reporting	2	5
32	Sustainable development	2	5
33	Tax enforcement	2	5
34	Tax management	2	5
35	Taxation	2	5
36	M14	2	4
37	M41	2	4
38	Family firms	2	3
39	Tax planning	2	3

40	Corporate social irresponsibility	2	2
41	Corporate tax	2	2
42	Labour tax avoidance	2	2

2.3.5.2. Bibliographic coupling

Bibliographic coupling was also used to explore the thematic associations between articles based on the number of references they share (Zupic and Čater, 2015). The process was conducted using VOSviewer, which requires setting a threshold for the minimum number of publications that researchers must share to be included in the bibliographic coupling network. We opted for a threshold of 10 publications to ensure strong thematic closeness between articles. Of the 122 articles, 54 met this threshold, and the results generated five thematic clusters (**Figure 5**).

Following the logic of the manual qualitative analysis realized by Poje and Zaman Groff (2022), we assumed that the 54 articles included in the bibliographic coupling network were representative of the entire sample of 122 articles. Consequently, we conducted further analyses on these articles. The clusters identified through the bibliographic coupling network presented in **Figure 5** were further analyzed through content analysis. The content analysis aimed to pinpoint thematic similarities within each cluster, going beyond the common themes of 'corporate social responsibility' and 'tax avoidance.'
For content analysis, we used Excel, which allowed us to exert more control over the article and extract a deeper understanding through a detailed concept matrix. A concept matrix typically includes important information such as the title, authors, year of publication, research questions, abstract, methodology, article category, theory, and research trends (Maditati *et al.*, 2018; Mugwira, 2022). **Table 6** aligns with the data from **Figure 5**, produced by VOSviewer. It includes the 'cluster number (color)' and further details the 'Research field' based on the WoS categories. The 'Major themes explored' are derived from the content analysis of the articles' abstracts and keywords. Moreover, 'Representative articles' from each cluster, as identified by VOSviewer, are listed. Thematic findings from the analysis of these clusters are presented in **Table 6**.

The results from the bibliographic coupling showed that among the selected articles, only one single article by Ravenda *et al.* (2015) addressed the topic of

LTAV within the context of mafia firms in Italy. This finding underscores a notable gap in the existing literature: while the relationship between 'tax avoidance' and 'corporate social responsibility' has been extensively studied, there is an obvious lack of empirical studies exploring the relationship between CSR and LTAV. This lack of research highlights the necessity for empirical investigations into the relationship between CSR and labor tax avoidance, indicating a potential avenue for future scholarly investigations.

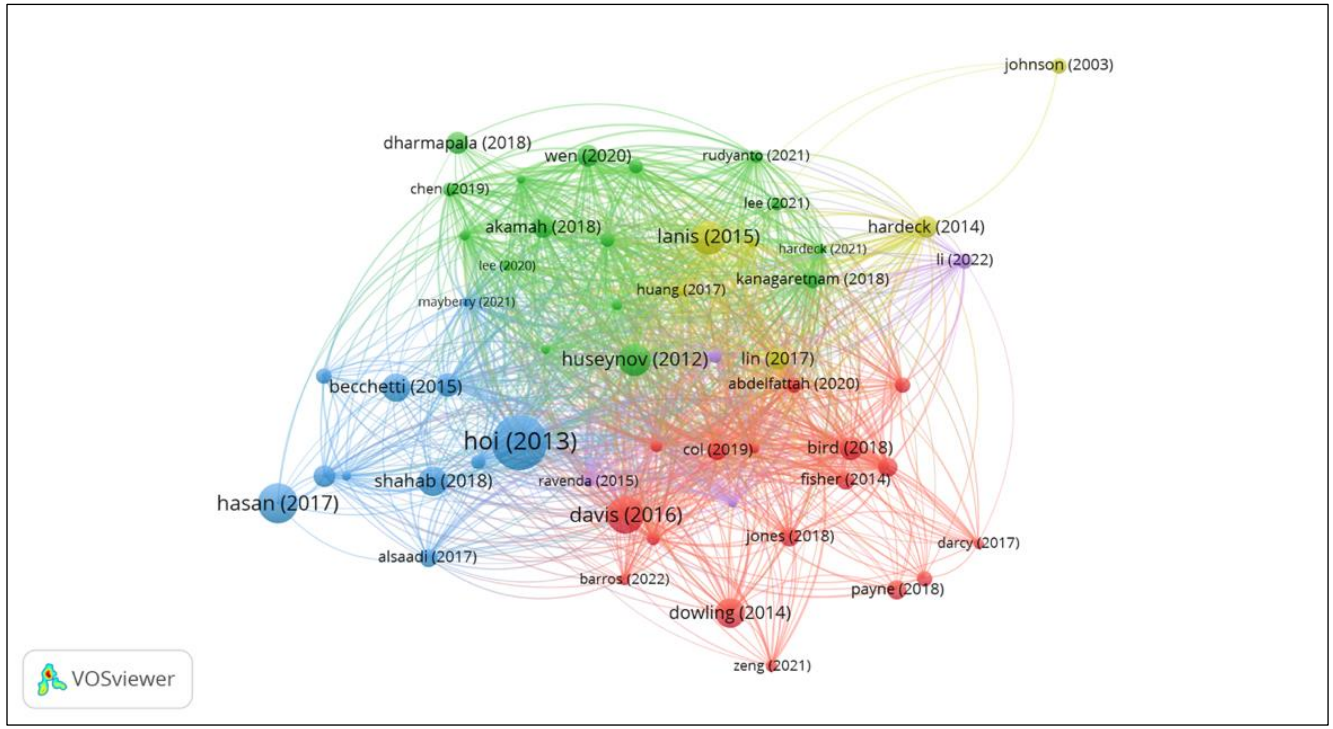


Figure 5. VOSviewer visualization of researchers bibliographic coupling network

Table 6. Thematic cluster according to bibliographic coupling

Clusters number (color)	Research field	Thematic similarity	Representative articles
Cluster 1 (red)	Business, Ethics, Finance, Law, Regional & Urban Planning, Development studies, Environmental studies, Management.	Corporate governance and financial reporting.	Abdelfattah and Aboud, (2020); Alsaadi, (2020); Antonetti and Anesa, (2017); Barros et al., (2022); Bird and Davis-Nozemack, (2018); Col and Patel, (2019); Darcy, (2017); Davis *et al.*, (2016); Dowling, (2014); Fisher, (2014); Jenkins and Newell, (2013); Jones *et al.,* (2018); Kiesewetter and Manthey, (2017); López-González *et al.,* (2019); Payne and Raiborn, (2018); Ylönen and Laine, (2015); (Zeng, 2021).
Cluster 2 (green)	Business, Management, Finance, Ethics, Green & Sustainable Science & Technology, Environmental Sciences, Environmental Studies, Economics, Law.	Corporate governance, sustainability disclosure and reputation management.	Akamah *et al.,* (2018); Alharbi *et al.,* (2022); Chen *et al.,* (2019); Dharmapala and Khanna, (2018); Geng *et al.,* (2021);Gulzar *et al.,* (2018); Hardeck et al., (2021); Huseynov & Klamm, (2012); Inger and Vansant, (2019); Kanagaretnam *et al.,* (2018); Lee, (2020); Lee *et al.,* (2021); Rudyanto and Pirzada, (2020); Salhi *et al.,* (2020); Wen *et al.,* (2020); Yoon *et al.,* (2021).
Cluster 3 (blue)	Business, Finance, Ethics, Economics, Management, Environmental Studies.	Country specific analysis of tax avoidance and CSR and earnings management.	Alsaadi *et al.,* (2017); Becchetti *et al.,* (2015); Christensen *et al.,* (2018); Hasan *et al.,* (2017); Hoi *et al.,* (2013); Hoi *et al.,* (2018); Liu and Lee, (2019); Mayberry and Watson, (2021); Shahab et al., (2018); Wang *et al.,* (2021); Watson, (2015).

Cluster 4 (yellow)	Business, Finance, Ethics, Green & Sustainable Science & Technology, Environmental Sciences, Environmental Studies.	Corporate tax expatriation and corporate social responsibility.	Hardeck and Hertl, (2014); Huang *et al.,* (2017); Johnson and Holub, (2003); Lanis and Richardson, (2015); Li *et al.,* (2019); Lin *et al.,* (2017).
Cluster 5 (purple)	Business, Ethics, Management, Green & Sustainable Science & Technology, Environmental Sciences, Environmental Studies.	Corporate country-level governance and corporate social responsibility toward employees.	Li *et al.,* (2022); Montenegro, (2021); Ravenda et al., (2015); Zeng, (2019)

The content analysis conducted on the selected articles also sheds light on the different methodologies employed in this research area. **Table 7**, guided by the framework defined by Coyne *et al.* (2010), provides an overview of the research methodologies used in the articles that are part of bibliographic coupling. The finding from this analysis was that a substantial 78% of the 54 articles relied on archival data (secondary data) for their research. The distribution of research methodologies offers insights into the prevalent approaches for studying the relationship between CSR and tax avoidance. The significant reliance on archival research within this field is indicative of trends and preferences in methodological choices among researchers exploring these topics.

Table 7. Research methodologies of the 54 articles included in the bibliographic coupling.

Research methods	**Number of articles**	**Percentage**
Analytical	4	7%
Archival	42	78%
Case Study	1	2%
Experiment	4	7%
Mixed methods	2	4%
Survey	1	2%
Total publication	54	100%

2.3.6. Theoretical trends

2.3.6.1. The co-citation analysis

To address RQ2 and explore theoretical trends, co-citation and citation analyses were performed. Co-citation analysis uses co-citation counts to measure the similarity between articles that have contributed to the establishment of a knowledge base in the field of research (Zupic and Čater, 2015). **Table 8**, generated through Biblioshiny, lists the 10 most co-cited articles in tax avoidance, LTAV and CSR research. It includes three types of citation counts: Local Citations (LC), Global Citations (GC), and LC/GC ratio. In Biblioshiny, LC refers to citations received from articles included in our bibliographic data. GC represents the total number of citations an article, included in our

bibliographic data, has received from other articles indexed in the WoS database (Bibliometrix, 2023). According to Batista-Canino *et al.* (2023), the LC ratio, which indicates the percentage of LC in relation to GC, enables us to determine the contribution of each document to the research topic based on its actual significance within this specific research field.

The article by Hoi *et al.* (2013) titled 'Is Corporate Social Responsibility (CSR) Associated with Tax Avoidance? Evidence from Irresponsible CSR Activities', stands out with the highest LC (73) and GC (369). Given the citation count and timeframe of our bibliographic data, the work by Hoi et al. (2013) can be considered a seminal publication and foundational piece of knowledge (e.g., Donthu *et al.,* 2021) in tax avoidance and CSR research. Moreover, the LC/GC ratio, which we refer to as the LC rate, provides further insight. The highest LC/GC ratio in our data (35.21) is observed for Watson's (2015) article 'Corporate Social Responsibility, Tax Avoidance, and Earnings Performance.' This indicates that Watson (2015) was the most cited article in our bibliographic data. Consequently, while Hoi *et al.* (2013) is the most cited article in the WoS, suggesting broader citations beyond articles specifically analyzing the conjoint relationship between tax avoidance and CSR, Watson (2015) was cited in articles specifically analyzing the relationship between tax avoidance and CSR.

The co-citation analysis was complemented by content analysis, enabling us to identify the theoretical trends among the 10 most co-cited articles. Using a sample of 10 articles is an effective way to identify the main theoretical frameworks prevalent in the study of tax avoidance, LTAV and CSR. The prominent theories used in these studies are legitimacy theory, corporate culture theory, stakeholder theory and Carroll's (1991) CSR pyramid. Theories specific to the accounting field, such as the agency and risk management theories are also included.

The reliance on non-accounting theoretical frameworks in these studies suggests that the authors' intention is to stress the significance of stakeholders beyond shareholders. This choice is notable, particularly in accounting studies, which often lean towards agency theory and prioritize the interests of shareholders over other stakeholders. By employing non-accounting theoretical frameworks in accounting studies, researchers not only highlight a firm's social and ethical responsibilities to stakeholders beyond shareholders but also reflect the broader societal and ethical considerations inherent in the study of tax avoidance and

CSR. Moreover, it advocates that tax avoidance contradicts the rhetorical commitment of firms, positioning themselves as socially responsible entities.

When analyzing the relationship between tax avoidance and CSR from the perspective of corporate culture, it is argued that a firm's set of shared beliefs guides its behavior, or the 'optimal' course of action that takes into account not only economic but also social, environmental, and other external impacts of the firm's activities. According to this view, what constitutes appropriate behavior within a firm is shaped by its corporate culture, which can have either a positive or negative impact on the firm's shareholders (Hoi *et al.,* 2013). These authors further argue that, from a risk-management perspective, a firm may increase its CSR initiatives or decrease its irresponsible CSR activities to enhance its CSR reputation and mitigate potential negative repercussions associated with engaging in tax avoidance practices. However, from a critical standpoint, we propose that if CSR is predominantly used as a risk management strategy and a means to reinforce corporate legitimacy, the ESG scores commonly employed to evaluate CSR performance in many of these studies may not accurately capture a firm's true CSR practices. This is because such scores might not reflect the actual nature of corporate practices, especially when CSR activities are strategically geared towards managing risks and projecting legitimacy rather than genuine social and ethical responsibilities.

Table 8. 10 most cited articles

Rank	Article title	Journal	Theory	Research method	Author (s)/ Year	LC	GC	LC/GC Ratio (%)
1	Is Corporate Social Responsibility (CSR) Associated with Tax Avoidance? Evidence from Irresponsible CSR Activities.	The Accounting Review	Corporate culture perspective; risk management theory	Archival/ quasi-experimental	Hoi C. K.; Wu Q; Zhang H (2013)	73	369	19.78
2	Do Socially Responsible Firms Pay More Taxes?	The Accounting Review	Corporate social performance (Carroll, 1979)	Archival	Davis A. K, Guenther D. A, Krull L. K, Williams B. M (2016)	48	171	28.07
3	Is Corporate Social Responsibility Performance Associated with Tax Avoidance?	Journal of Business Ethics	The 'real entity' view	Archival	Lanis, R., Richardson, G (2015)	39	137	28.47
4	Tax avoidance, tax management and corporate social responsibility	Journal of Corporate Finance	Carroll's Pyramid of CSR (Carroll, 1991)	Archival	Huseynov F; Klamm B. K, (2012)	38	131	29.01
5	The Curious Case of Corporate Tax Avoidance: Is it Socially Irresponsible	Journal of Business Ethics	Corporate social performance	Analytical	Dowling, G.R (2014)	28	113	24.78

6	Corporate Social Responsibility, Tax Avoidance, and Earnings Performance	Journal of the American Taxation Association	Slack resource theory	Archival	Watsons, L, (2015)	25	71	35.21
7	Tax Avoidance as a Sustainability Problem	Journal of Business Ethics	Common pool resource theory; stakeholder theory	Analytical	Bird, R., Davis-Nozemack, K (2018)	17	68	25.00
8	Corporate Social Responsibility, Institutional Environments, and Tax Avoidance: Evidence from a Subnational Comparison in China	The International Journal of Accounting	Legitimacy theory; stakeholder theory; institutional theory	Archival	Lin, K Z, Cheng, S, Zhang, F (2017)	15	51	29.41
9	Consumer Reactions to Corporate Tax Strategies: Effects on Corporate Reputation and Purchasing Behavior	Journal of Business Ethics	Carroll's Pyramid of CSR (Carroll 1991); legitimacy theory	Experimental	Hardeck, I., Hertl, R (2014)	13	60	21.67
10	Going to Haven? Corporate Social Responsibility and Tax Avoidance	Journal of Business Ethics	Corporate culture theory; risk management theory	Archival	Col, B., Patel, S. (2019)	12	47	25.53

2.3.6.2. The citation analysis

Citation analysis, performed with Biblioshiny, provides insights into the relative influence of authors within the bibliographic data. **Table 9** presents an overview of the 10 most influential authors on tax avoidance, LTAV and CSR. The table includes various metrics: *h*-index, Total Citations (TC), number of published articles (NP), and Year of publication. Authors' *h*-index attempts to measure both the productivity and citation impact of their publications (Hirsch, 2005). However, it is important to note that in this case, the *h*-index value is limited to the bibliographic data being analyzed. The TC metric reflects the number of citations received by a particular author within the WoS; NP denotes the number of articles authored by a researcher within the bibliographic data; and Year indicates the year in which the researcher's article was published within the bibliographic data.

The authors are ranked by their TC in **Table 9**. *Hoi CK*, *Wu Q,* and *Zhang H* (Hoi *et al.*, 2013) emerged as the group of authors with the highest TC (632), coinciding with their association with the most cited article in **Table 8**. It is worth noting that most of the authors listed in **Table 9** are the same as those listed in **Table 8**, indicating their significant impact on research in this area. *Hasan I* is the second most cited author, and *Davis A.K*, *Guenther D.A*, *Krull L.K*, and *Williams B.M* (Davis *et al.,* 2016) were identified as the third most cited group of authors (TC= 171). Davis *et al. (*2016) is also associated with the second-highest-cited article in **Table 8**. These metrics reinforce the substantial influence that these authors have had on the scholarly discourse surrounding tax avoidance, LTAV, and CSR.

Table 9. 10 influential authors

Element	*h*_index	TC	NP	Year
Hoi CK	3	632	4	2013
Wu Q	3	632	4	2013
Zhang H	3	632	4	2013
Hasan I	2	305	2	2015
Davis AK	1	171	1	2016
Guenther DA	1	171	1	2016
Krull LK	1	171	1	2016
Williams BM	1	171	1	2016
Lanis R	1	137	1	2015
Richardson G	1	137	1	2015

2.4. Discussion and Conclusions

The goal of this bibliometric analysis is to offer an overview of previous research trends in tax avoidance, LTAV and CSR, and pinpoint the predominant theoretical frameworks employed in this area of research. This study reviews the literature of the past two decades collected from the WoS. First, we performed a performance analysis to provide an overview of bibliographic data. We observed that most articles were authored collaboratively, yet the prevalence of international co-authorship was relatively low. This suggests that co-authorship occurs predominantly among scholars residing in the same country. The analysis also indicates that the most productive journals are the Journal of Business Ethics, Accounting Review, and the Journal of Corporate Finance. Spanish universities were listed as influential in the research field. However, in terms of the frequency of research production, the USA and China come first and second, respectively, followed by Spain, Australia, and the UK.

The bibliographic coupling and content analysis revealed that the research area is circumscribed in Business, Ethics, and Finance and research trends primarily revolve around the analysis of tax avoidance/ tax aggressiveness/ corporate tax avoidance in relation to corporate social responsibility. The analysis also highlights a research gap, indicating the necessity to study the relationship between corporate social responsibility and labor tax avoidance as an empirical study of the relationship between CSR and LTAV is nonexistent. Investigating

this topic will make a valuable contribution to the fields of Business Accounting and Business Ethics.

The co-citation analysis shows that the top 10 most cited articles in our sample have relied heavily on non-accounting theoretical frameworks, such as legitimacy theory, corporate culture theory, stakeholder theory, and Carroll's (1991) CSR pyramid, to consider the needs of all stakeholders besides shareholders, including employees. Given that non-accounting theories have been used to analyze the relationship between tax avoidance and CSR, we propose that future research should consider a similar theoretical approach. This approach would facilitate a more inclusive analysis that considers firms' social and ethical responsibilities towards a broader spectrum of stakeholders. Moreover, because archival research is the prevalent method in our bibliographic data, we suggest adopting a mixed-methods approach. Integrating qualitative methods, such as surveys or interviews with employees, to complement the archival/quantitative approach could provide richer insights into firms' behavior in the relationship between CSR and LTAV.

We anticipate that the results obtained from the subsample of 10 articles can be cautiously extended to the whole sample. Thus, the analysis provides insights into articles that are influential on this research topic, as well as those whose impact extends to a wider research topic through the Global Citation count. Therefore, the LC/GC ratio, which was calculated by articles, allowed us to distinguish between articles that were cited in this specific research topic and those that were not. Considering the LC/GC ratio, Watson (2015) was cited in articles that specifically analyzed the relationship between tax avoidance and CSR, while Hoi *et al.* (2015) was not necessarily cited in articles analyzing that specific relationship.

The bibliometric analysis has certain limitations, primarily stemming from our reliance on the WoS database exclusively, our restrictions on the timeframe of published articles, and our focus on specific document types, namely, articles. Nevertheless, it is also important to recognize that bibliometric analyses are subjective and influenced by the research goal and authors' decisions regarding search terms and the inclusion or exclusion criteria for documents. Consequently, future research endeavors could consider incorporating other databases (e.g., Scopus) and different types of documents, or extending the timeframe to broaden inclusivity and enhance the robustness of the findings.

CHAPTER 3 . CORPORATE SOCIAL RESPONSIBILITY AND LABOR TAX AVOIDANCE: EVIDENCE FROM SPAIN

Abstract

This study expands on the scope of firms' social responsibility and analyzes the relationship between Environmental Social Governance (ESG) and a commonly neglected aspect of Corporate Social Responsibility (CSR), which is tax payment – specifically, the payment of labor taxes. To test the research hypothesis, this study utilizes ESG data from Refinitiv Eikon and consolidated accounting data collected from Sistemas de Análisis de Balances Ibéricos (SABI) and applies panel data estimation. The regression results indicate that CSR has a negative and significant relationship with Labor Tax Avoidance (LTAV). This negative relationship remains robust and significant across different estimation methods and measures of CSR and LTAV. Our research suggests that managerial and practical concerns regarding social responsibility awareness are related to firms' decisions, impacting both society and employees, particularly concerning the avoidance of labor taxes.

Keywords: Corporate Social Responsibility, Labor Tax Avoidance, Tax Avoidance, Social Security Contributions, Stakeholder Theory.

3.1. Introduction

This study analyzes the relationship between Corporate Social Responsibility (CSR) and Labor Tax Avoidance (LTAV). LTAV specifically refers to the avoidance of social security contributions (SSC), which are taxes enacted to provide social benefits to the population. These benefits encompass, but are not limited to, unemployment insurance, accidents, injury and sickness benefits, old age, disability and survivors' pensions, family allowances, and reimbursements for medical and hospital expenses (Argilés-Bosch *et al.*, 2021; OECD, 2022a).

According to conventional wisdom, tax avoidance is legal, although it may involve the use of strategies to reduce payable taxes that are not necessarily in line with the spirit of the law (Avi-Yonah *et al.*, 2011). Tax evasion, however, is illegal and refers to the non-disclosure, deception, concealment, or destruction of tax revenue records from tax authorities (Fisher, 2014; Freedman, 2006). LTAV can be carried out legally by avoiding SSC, infringing certain labor market standards such as minimum wages, underreporting employee work hours, disregarding safety standards, and employing practices such as employee discounts and fringe benefits (Feld & Schneider, 2010). In some cases, employers resort to illegal means, such as paying salaries or wages through undeclared "black" payments or employing undeclared workers, in order to evade taxes and social security payments owed mostly by the employer but also by the employee (Ravenda *et al.*, 2020). Previous research highlights the absence of universally accepted definitions of tax avoidance, as the concept may have different meanings for different individuals (Hanlon & Heitzman, 2010). However, this study did not consider the semantics of the concept. Instead, it aligns with Dyreng *et al.* (2008) and Hanlon and Heitzman's (2010) definition of tax avoidance, defining it broadly as any strategy (whether legal or in the gray area) that firms employ to reduce labor taxes. This behavior easily permeates non-standard forms of employment (NSE), where employment is neither full-time nor indefinite and there is no direct subordinate relationship between an employee and an employer. NSE can have a prejudicial effect on employees' social security coverage, as employees can be legally excluded due to a lack of continuity in employment or insufficient working hours (International Labour Organization, 2016).

In the empirical study of tax avoidance, the researcher's measurement of tax avoidance is a key concern, as there are limitations to the inferences that can be

made considering the measurement of proxies and attributes of the sample (Hanlon & Heitzman, 2010). Previous studies (Argilés-Bosch *et al.*, 2021; Ravenda *et al.*, 2015, 2020, 2021) measured LTAV based on accounting information available in firms' financial statements. Accordingly, in this study, LTAV is represented by abnormal values of the ratio of SSC paid to employees. The use of residuals as a proxy for LTAV implies that firms (and managers) in our Spanish sample intentionally reduced labor taxes (e.g., Hanlon and Heitzman, 2010).

When corporations measure social benefits and losses through financial statements, costs tend to be overemphasized. This is often because they fail to consider the tax impact of government expenditures on providing social benefits (Crumbley *et al.,* 1977). As a result, firms that include SSC in their financial statements are likely to overstate the significance of their labor costs. In fact, the motivations behind firms engaging in LTAV are similar to those for Income Tax avoidance (ITAV) (Ravenda *et al.*, 2015), primarily the need to reduce costs. Consequently, some stakeholders perceive tax (or SSC) payments as irrelevant to CSR, and their decision to engage in either CSR or tax avoidance is likely to be influenced by how participation in one activity affects the costs and benefits of the other (Davis *et al.*, 2016). Drawing from stakeholder theory, we argue that firms have a social responsibility to fulfill their fair share of SSC payments.

However, research on LTAV is limited. The first study on LTAV revealed significant unexplained variations in labor taxes, measured through abnormal SSC, within Italian mafia firms, which are inherently irresponsible (Ravenda et al., 2015). Meanwhile, research on CSR and tax avoidance has primarily focused on the relationship between CSR and corporate income tax avoidance (Lanis and Richardson, 2012, 2015; Watson, 2015; Zeng, 2019a). However, in many developed countries, SSC have greater economic significance than corporate income tax. In 2020, SSC accounted for 13.71% of Spain's GDP, 14.85% of France's GDP, and 15.20% of Germany's GDP. These percentages corresponded to €153,862 billion, €348,777 billion, and €512,122 billion, respectively. By contrast, corporate income taxes for the same countries were €22,055 billion, €53,611 billion, and €55,553 billion in 2020 (OECD, 2022a, 2022b). Therefore, when activities are undertaken to avoid taxes and social contributions that benefit employees, or circumvent legal requirements related to minimum wages, working hours, and health and safety regulations, they

diminish state revenues and distort the indicators of growth, unemployment, and income distribution (Dell'Anno *et al.*, 2007). Thus, the economic significance of SSC and the substantial social loss attributed to LTAV, a key aspect of socially responsible behavior, both motivate this study and highlight the importance of researching LTAV. Furthermore, LTAV are often overlooked in CSR agenda. Informal studies by Christensen and Murphy (2004) show that published CSR statements often omit tax payments as part of a firm's CSR agenda. Consequently, we may infer that LTAV is also neglected in firms' CSR agenda. Therefore, this study aimed to address this gap.

To analyze the relationship between ESG scores and a commonly neglected aspect of CSR, which is tax payment – specifically, the payment of labor taxes– we collected ESG data from Refinitiv Eikon and consolidated accounting data from the SABI for 33 Spanish listed companies during the period 2008-2018. Our findings reveal a negative relationship between CSR and LTAV. Socially responsible firms tend to pay more SSC, as evidenced by the higher values of abnormal SSC per employee, indicating a lower inclination toward LTAV. These results hold across different model specifications and measures of CSR and LTAV.

This study contributes to the limited existing literature on LTAV. It specifically adds to the literature on CSR and LTAV by being, to the best of our knowledge, the first paper to explore this relationship. It also examines another dimension of firms' social responsibility, focusing on their commitment to the government and employees through SSC. Furthermore, research on CSR and tax avoidance has yielded mixed results. Therefore, our study contributes to the ongoing academic debate on CSR and tax avoidance.

The remainder of this paper is organized as follows. The next section details the Spanish legal context. Section 3 reviews the literature and presents the hypothesis. Section 4 presents the research design of the study. Section 5 describes the sample selection and provides descriptive statistics. The results are presented in Section 6, followed by discussion and conclusions in Section 7.

3.2. The legal context of Spain

In Spain, while small- and medium-sized firms can report aggregate data on payroll expenses, only large firms are required to disclose wage and SSC

information separately in their financial statements (Argilés-Bosch *et al.*, 2021). These firms must meet at least two of the following requirements[1] at the fiscal year-end: 1) their total assets should not exceed 11,400,000 euros; 2) their annual turnover should not exceed 22,800,000 euros; and 3) their average number of employees should not exceed 250.

The Spanish decree-law n° 2064/1995 of December 22, 1995 (RLD, 1995) established general regulations for SSC, including their computation and payment. According to this law, both employers and employees are legally required to pay SSC to the General Treasury of Social Security by deducting the prescribed rates from the gross salary or wage[2] set annually by the State Budget Law (Article 10, RLD, 1995). There are four categories of SSC imposed on employers: contributions to common contingencies (such as pension, disability, and health insurance), contributions to unemployment insurance, contributions to FOGASA (insurance against employer insolvency), and contributions to occupational training (Article 26, RLD, 1995).

In Spain, the social security tax base is regulated within a range that extends from the legal minimum wage to the legal maximum wage. The Spanish government determines the social security tax base on an annual basis. In 2022, the maximum rate in the common system (regimen general) was 29.9%. However, various specific circumstances can lead to variations in taxable wages and applicable rates. Any portion of the remuneration that exceeds certain thresholds is neither taxable nor is it subject to SSC. These thresholds depend on factors such as the nature of the activity, professional category, and specific characteristics such as the number of hours worked and the type of employment agreement, including cases involving multiple employment contracts. Under certain contracts, such as new occupational, training, temporary, or permanent contracts, firms may benefit from significant reductions in their SSC (Article 9, RLD, 1995).

This legal framework grants employers the flexibility to reduce the social security tax base below the reported gross salary of their employees while still conforming to labor tax laws. This allows for various discretionary measures, including NSE arrangements, replacement of older employees with younger or

[1] Real Decreto 602/2016 de 2 de Diciembre de 2016 (RLD, 2016).
[2] For simplicity, we use the term wage in the remaining of the paper.

new hires, and changes in employment categories. Moreover, self-employment is a common strategy that facilitates SSC avoidance and may be adopted by companies in our sample. Employers can also avoid SSC by substituting a portion of the taxable gross salary with alternative remuneration elements, such as expense reimbursement, travel and transport allowances, or fringe benefits (Ravenda *et al.*, 2020). Freedman (2006) refers to such schemes as 'salary sacrifice schemes,' which can be challenging to quantify. In a salary sacrifice scheme, employees agree to relinquish certain future salary rights in exchange for non-taxable benefits in kind. This allows employers to save on national insurance contributions and potentially reduce pension contributions paid on behalf of their employees when they retire. Salary sacrifice schemes, along with other forms of LTAV, result in costs to governments as they diminish available funds for public expenditures, reduce pension contributions, and can have negative consequences for workers in terms of reduced future benefits from the state and employers (Freedman, 2006; Ravenda *et al.*, 2015).

3.3. Literature review and hypothesis development

Defining CSR has proven to be challenging for both the corporate and academic worlds (Dahlsrud, 2008). Indeed, some tax-avoidant firms increase their CSR reporting to project an image of ethical conduct and responsibility in line with societal expectations (Abdelfattah and Aboud, 2020). To define CSR, Carroll (1991) presents a stakeholder's perspective using a pyramid framework comprising four components – economic, legal, ethical, and discretionary (philanthropic) – that businesses incorporate into their decision-making processes to meet society's expectations. The economic component pertains to a company's primary role and responsibility to produce the goods and services that society requires and sells at a profit. Ethical responsibility encompasses ethical norms and behaviors that are not explicitly stated in the law but are expected of corporations as members of society. It involves a firm's obligation to act in a manner that is right and fair and to avoid or minimize harm to stakeholders while fulfilling its economic responsibility.

The stakeholder perspective enables us to consider the interests of various stakeholders such as fiscal authorities and employees in CSR research (Emshoff and Freeman, 1978; Freeman, 1984; Margolis and Walsh, 2003). This aligns with the views of Moser and Martin (2012), who encourage researchers to analyze CSR to adopt a broader perspective, being open to the possibility that CSR

activities might be related to both shareholders and other stakeholders. Consequently, when we analyze CSR from a perspective that includes all stakeholders, it allows us to consider large social losses due to LTAV, which is arguably a component of CSR, albeit not often considered in CSR studies. Therefore, LTAV can be viewed as irresponsible, inconsistent with CSR activities and corporate ethics, and fundamentally damaging to society, employees, and public health (e.g., Hoi *et al.,* 2013).

Considering that businesses and societies are interdependent on their existence, continuity, and growth, with society engaging with businesses through social demands (integrative approach), businesses are expected to act ethically and align themselves with their societal obligations (ethical approach). Hence, to contribute to a better society, firms should identify, analyze, and respond to social demands to establish social legitimacy, gain greater social acceptance, and enhance their reputation (Garriga and Melé, 2004).

While the literature on LTAV is scarce, research analyzing the relationship between CSR and LTAV is non-existent. Therefore, our research on CSR and LTAV draws mainly from previous research on CSR and tax avoidance, which deals almost exclusively with ITAV (e.g., Abdelfattah and Aboud, 2020; Goerke, 2019; Hoi *et al.,* 2013; Landry *et al.,* 2013; Lanis and Richardson, 2015; Muller and Kolk, 2015). Many scholars (e.g., Avi-Yonah, 2014; Bird and Davis-Nozemack, 2018; Lanis and Richardson, 2012, 2015; Preuss, 2010; Watson, 2015) argue that tax avoidance is a sustainability and CSR problem, as it goes against corporations' societal obligations and society's expectations (Christensen and Murphy, 2004; Sikka, 2003). Although Hanlon and Heitzman (2010) neglected the role of CSR in taxes, they reviewed the role of corporate governance on taxes and that of taxes on business decisions. Given the evidence of a relationship between corporate governance and CSR (Jamali *et al.*, 2008) and the implications of CSR on firm decisions and performance (Orlitzky *et al.*, 2003), CSR may also be related to a component of a broader dimension of socially responsible behavior, such as tax avoidance (Huseynov and Klamm, 2012), namely, labor tax payments.

However, some scholars argue that CSR and tax avoidance are unrelated, as CSR is seen as a means of increasing shareholder wealth (Friedman, 2007), whereas taxation is considered an avoidable cost rather than a contribution to society (Sikka and Willmott, 2010). Additionally, tax avoidance is discussed as

an agency concern because it enables managers to create value and align their interests with those of shareholders through compensation incentives (Hanlon and Heitzman, 2010). However, the artificial view of the firm considers it as an entity of the state with certain privileges and believes that corporations should fulfill their tax obligations like any other state entity, rather than employing shrewd accounting techniques to reduce their tax liabilities (Avi-Yonah, 2008). Research holds that the reasons behind ITAV also lead firms to engage in LTAV. From a cash flow perspective, reducing corporate taxes through special provisions can be significant for managers (Crumbley *et al.*, 1977). Consequently, managerial decisions related to firm profitability, such as increasing stock prices (Lanis and Richardson, 2011, 2012), improving earnings performance (Watson, 2015), and optimizing the allocation of costs and revenues among corporate divisions (Sikka and Willmott, 2010), serve as motivations for ITAV. Similarly, the limited literature on labor taxes also reveals the presence of avoidance activities in the digital economy, where taxes are considered costs. E-commerce firms, driven by aggressive capitalist principles and profit maximization with little regard to ethics and social responsibility, use NSE agreements to exploit the expanding possibilities offered by the digital economy and avoid scrutiny by authorities (Argilés-Bosch *et al.,* 2021). Additionally, labor-intensive firms with substantial labor costs tend to engage in LTAV. For example, Ravenda *et al.* (2021) found a correlation between a high concentration of non-EU immigrant workers in the construction and agricultural sectors in certain Italian provinces and high levels of LTAV. In Spain, LTAV is prevalent in various industries, where tax-avoidant offending firms fraudulently underreport employees' work hours and fail to declare related salaries, resulting in abnormally low SSC (Ravenda *et al.,* 2020).

Thus, in Spain, the labor reforms[3] implemented in 2010 and 2012 reduced employment protection, resulting in employees losing certain advantages previously gained through collective bargaining at both the industry and national levels. These reforms forced employees to accept less favorable working conditions and allowed companies to convert full-time contracts to part-time contracts, thereby promoting NSE and reducing firms' SSC for certain contracts, relieving firms of some of their social and working obligations in pursuit of their economic goals (Argilés-Bosch *et al.*, 2023). However, self-

[3] Spanish laws 10/2010, 35/2010 and 3/2012 (*Ley* and *Real Decretos-Leyes,* respectively).

employment in its various forms (e.g., gig economy) exposes individuals to social risks and precarity, as the responsibilities typically associated with employment, such as wages, working conditions, and in-work benefits (e.g., paid leave), no longer rest with the state and employer, but solely with the employee. This situation is considered as a transfer of social risk from the unemployed to the individual through entrepreneurship. Moreover, many individuals may enter self-employment from poverty without policies that mitigate the risk of poverty through financial support and human capital development. Consequently, there is a risk that self-employment could lead to unsustainable business activities (Danson *et al.*, 2021). This situation reflects the negative consequences of firms' LTAV activities on individuals. Froud *et al.* (2000) argue that even in well-established companies, management focuses on finding financial strategies to achieve short-term targets, such as ending defined benefit pension schemes to save on labor costs or leasing assets to shift capital off the balance sheet. Labor taxes, including personal income tax and SSC, are direct costs that reduce the expected after-tax returns on firms' activities. From an economic perspective, it is rational for companies to reduce costs and maximize profits (Argilés-Bosch *et al.*, 2021; Stenkula, 2012). Therefore, some companies appear unable or unwilling to align their CSR commitments with their tax planning. For them, investment in tax is feasible when the value of the marginal benefit to shareholders exceeds the marginal cost (Hanlon and Heitzman, 2010) and when slack resources are available (Waddock and Graves, 1997). In the case of LTAV, these firms avoid compliance with market standards and other administrative obligations, and employ deceptive practices, such as manipulating employee numbers and accounting profits, to minimize their labor tax liabilities. These avoidance actions hinder local governments' ability to finance public goods, including social security services, such as healthcare and retirement funds (Avi-Yonah, 2014; Desai and Dharmapala, 2006; Feld and Schneider, 2010; Fisher, 2014). However, Freeman (1984) argues that businesses exist to serve various stakeholders, including governments (i.e., tax authorities). Therefore, if corporate engagement in ITAV is considered a CSR problem, LTAV can also be seen as a CSR problem, as both types of avoidance are driven by cost reduction and profitability incentives and have negative effects on society.

Previous research has yielded mixed findings on the relationship between CSR and ITAV. Some scholars suggest that responsible firms exhibit lower tax aggression (Hoi *et al.*, 2013; Lanis and Richardson, 2012, 2015; Muller and Kolk, 2015), whereas Mao (2019) finds that firms with high CSR are more tax-

aggressive. Landry *et al.* (2013) reveal that companies with either low or high CSR scores are more likely to engage in tax avoidance than those with moderate CSR scores. Furthermore, evidence suggests that CSR and tax avoidance activities act as substitutes, with aggressive tax-avoidant firms tending to increase their CSR activities (Davis *et al.,* 2016; Goerke, 2019; Preuß and Preuß, 2017). These results suggest that while corporate tax payments enable governments to invest in social welfare, tax-avoidant firms that focus on after-tax profitability tend to allocate resources to social welfare through other means, such as job creation (Davis *et al.,* 2016). Companies that deviate from societal expectations neglect their basic economic contribution to society. They assert their social responsibility by engaging in other, less costly CSR activities that aim to address community concerns regarding tax avoidance strategies (Davis *et al.,* 2016; Lanis and Richardson, 2013; Preuss, 2010).

Based on previous studies on CSR and ITAV, we posit that socially concerned firms that are aware of the sustainability of the social security system and respect the interests of their main stakeholders (e.g., employees and fiscal authorities) would not avoid their SSC. Meanwhile, firms with few social commitments that are unsupportive and disrespectful of environmental and social issues are more prone to avoid taxes. Avoiding SSC puts the well-being of employees at risk in both the short and long term. This may produce a vulnerable population of retirees and unemployed young adults who struggle to meet their basic needs or cover essential healthcare costs. Danson *et al.* (2021) argue that firms should prioritize decision quality over economic performance, as any group of individuals can face public and social risks requiring government intervention. Given the current and future demographic challenges in many developed countries, including Spain, securing funding social security benefits for retirees and non-working individuals would become increasingly difficult without policy reforms (e.g., Kitao, 2014). Hence, it can also be argued that LTAV is unsustainable for both employees and tax authorities.

When firms engage in tax avoidance, they often concurrently increase their investment in CSR, a phenomenon that can be interpreted as mere window-dressing (Goerke, 2019; Preuss, 2010). This tactic has been used to mitigate potential public backlash (Hanlon and Slemrod, 2009; Mao, 2019). Therefore, window dressing may be evident in the case of ITAV because many studies have used effective tax rates to measure ITAV. However, in the context of LTAV, many countries do not require the disclosure of SSC in the consolidated

financial statements of multinational companies. Even when SSC are reported, defining LTAV measures can still be challenging, unlike the effective tax rates used for ITAV. Consequently, companies may divert their tax avoidance strategies towards LTAV practices, which can be easily concealed. This tendency reduces the likelihood of firms making conspicuous CSR efforts to legitimize their LTAV practices. This shift may lead to a positive association between CSR and LTAV.

In Spain, large firms are legally required to disclose their SSC, and investors can access comprehensive SSC information from their records in the Spanish stock market. Theoretical analysis also suggests that direct taxes and social contributions are more visible than indirect taxes, which often suffer from fiscal opacity. Therefore, any discrepancies between national expenditure and income statistics, or discrepancies between the official and real labor force statistics, for example, would enable researchers to assess LTAV in Spain (Dell'Anno *et al.,* 2007). Given our research focus on large firms, it is important to note that multinational corporations, in particular, face greater pressure to demonstrate social responsibility and transparency in tax management (Kolk, 2010). Therefore, firms' avoidance of SSC through schemes such as NSE contracts can be seen as avoiding fair tax contributions and hindering government financing of public goods (Freedman, 2003; Friese *et al.*, 2008; Ginesti *et al.*, 2020). Such behavior poses reputational risks, loss of corporate legitimacy, and harm to society (Freedman, 2003; Lanis and Richardson, 2013; Slemrod, 2004). In this research, due to Spanish law's requirement for SSC disclosure, we can measure LTAV and anticipate that socially responsible firms will be less inclined to engage in avoidance. Therefore, we propose the following hypothesis:

Hypothesis 1. The higher the CSR level of a firm, the lower the likelihood of LTAV.

3.4. Research design

3.4.1. Measurement of Labor tax avoidance (Dependent variables)

LTAV is estimated using two different measures: SSC per employee (*SSCE*) and abnormal *SSCE* (*ABNSSCE*). *SSCE* provides an indication of LTAV, as it considers the specific SSC that firms are required to pay for each employee. By contrast, *ABNSSCE* captures the social contributions that firms should pay based on their characteristics. To calculate *ABNSSCE*, we follow previous

studies on LTAV (Argilés-Bosch *et al.,* 2021; Ravenda *et al.,* 2020) and earnings management (Cohen *et al.*, 2008; Roychowdhury, 2006) and treat it as the residual of the following equation:

$$\begin{aligned} SSCE_{i,t} = \alpha_0 + \alpha_1 \frac{1}{TA_{i,t-1}} + \alpha_2 \,.\, WAGE\_EM_{i,t} + \alpha_3 \,.\, WAGE\_REV_{i,t} \\ + \alpha_4 \,.\, REV\_TA_{i,t} + \alpha_5 \,.\, INCREV\_TA_{i,t-1} \\ + \alpha_6 \,.\, FIRM_i + \varepsilon_{i,t} \end{aligned} \quad (3.1)$$

where *i* is firm, α is the parameter to be estimated, *TA* is total assets in year t-1, *WAGE_EM* is wage per employee, *WAGE_REV* is the ratio of wages to revenues, *REV_TA* is the ratio of revenues to total assets, *INCREV_TA* is the increase in revenue to total assets in year t-1, *FIRM* is firm fixed effects, and ε is the error term.
High values of both *SSCE* and *ABNSSCE* indicate a low LTAV, whereas low values of these measures indicate a high LTAV.

3.4.2. Empirical model of LTAV depending on CSR and Control Variables

Based on previous empirical research on LTAV (Argilés-Bosch *et al.,* 2021; Ravenda *et al.,* 2015) and ITAV (Mao, 2019; Zeng, 2019b), we formulate a model in which LTAV is dependent on CSR and other control variables (*CONTROLS*), as defined in the appendix and this subsection:

$$\begin{aligned} LTAV_{i,t} = \beta_0 + \beta_1 \cdot CSR_{i,t} + \sum_{k=1}^{K} \gamma_k \cdot CONTROLS_{i,t} \\ + \beta_3 \,.\, FIRM_i + \varepsilon_{i,t} \end{aligned} \quad (3.2)$$

where *i* = firms, *t* = year, β *and* γ are parameters to be estimated, *FIRM* is firm fixed effects, and ε is the error term.

To test the hypothesis outlined in Eq. (3.2), we used two indicators: ESG score (*ESG*) and social pillar score (*SOCP*), both of which were obtained from Refinitiv EIKON. These indicators are explained in the next section. ESG refers to the incorporation of environmental, social, and governance considerations by firms and investors into business models. However, CSR typically refers to firms' efforts to be more socially responsible or better

corporate citizens. One distinction between the two is that ESG expressly incorporates governance issues, whereas CSR includes governance issues indirectly through environmental and social factors. Consequently, ESG is a more general term than CSR (Gillan *et al.*, 2021) and is commonly used in accounting research as a reliable proxy for CSR activities.

Johnson and Greening (1999) argue against combining all dimensions of corporate social performance into a single construct, citing distinct dimensions such as the people dimension and product quality dimension. To comprehend CSR, it is essential to acknowledge that it encompasses social, environmental, and economic dimensions, and that businesses have an impact on all these aspects (Dahlsrud, 2008). Hence, ESG data from Eikon Refinitiv provides a multi-category CSR proxy, distinguishing environmental, social, and governance scores, and offering an aggregated ESG score. Previous research indicates that a higher social dimension is associated with a lower likelihood of tax avoidance (Laguir *et al.*, 2015; Ortas and Gallego-Álvarez, 2020). Since SSC falls within the social dimension of ESG, the *SOCP* truly captures the social commitments of firms, as it includes metrics such as workforce, human rights, community, and product responsibility. Thus, *SOCP* is an important variable in our study, ensuring a more precise assessment of our hypothesis. Nevertheless, the overall ESG score was included because of its broad coverage of social aspects (albeit not exclusively) and its prevalent use in business research. The positive and significant coefficients for both *ESG* and *SOCP* support our hypothesis.

Eq. (3.2) includes several control variables related to the dependent variable. *REVE* measures a company's workforce intensity. An increase in *REVE* is expected to lead to an increase in SSCE, indicating a positive relationship for this variable. We use the natural logarithm of revenue (*lnREV*) to account for size. However, the expected effect of size on SSC is uncertain. On the one hand, larger firms possess the skills and resources to efficiently navigate labor contracts with different tax regimes, potentially allowing them to benefit from a more advantageous mix and reduce their *SSCE*. On the other hand, larger firms may be less motivated to reduce costs, including SSC, compared to smaller firms, as they can leverage cost advantages from economies of scale (Argilés-Bosch *et al.,* 2021). *ROA* measures a firm's profitability. Similar to size, its effect on LTAV is also uncertain. Firms with high profitability tend to have lower costs, including SSC; therefore, profitable firms may be less motivated to actively reduce their SSC. Capital-intensive firms (*PPETOTA*) may require

highly skilled workers with higher wages, resulting in higher *SSCE*. Capital-intensive firms also generate depreciation costs, which may facilitate cost reduction through SSC and a higher LTAV. Therefore, the overall effect of *PPETOTA* on LTAV remains uncertain. Inventory intensity (*INVTOTA*) generates higher operating costs, which can incentivize cost reductions and subsequently lead to tax avoidance. We expect a negative sign for *INVTOTA* (Gupta and Newberry, 1997; Richardson and Lanis, 2007; Stickney and Mcgee, 1982; Zeng, 2019a). *TAtREV* typically involves high operating costs and is likely to be related to firms' engagement in tax avoidance. Thus, we anticipate a negative sign for *TAtREV*. *DEBTTA* can result in financial costs, prompting firms to reduce SSC. Therefore, we also expect a negative sign for *DEBTTA*. *WAGE_REV* represents personnel expenses in a firm's operations and determines the SSC that firms must pay. Firms with higher wages have stronger incentives to reduce costs through LTAV. Hence, we expect a negative sign for *WAGE_ REV*. We also include controls for *INTFATA* and *REVGROWTH* because both are commonly associated with opportunities for tax avoidance (Atwood *et al.*, 2012; Hoi *et al.*, 2013; Mao, 2019) and we anticipate negative signs for these variables. *LOSPRY* increases firms' incentives to reduce their SSC and is thus associated with LTAV. Additionally, we incorporated year dummies (*YEAR*) into the model to account for contextual factors that can be related to a firm's SSC. Consequently, an observation belonging to a specific year (*YEAR*) takes the value of 1 and 0 otherwise. *INDG* dummies are also included to control for industry characteristics, with a value of 1 assigned to observations belonging to a particular industry and 0 otherwise.

3.4.3. Data and sample selection

Refinitiv Eikon is the data source for our variables of interest, *ESG* and *SOCP*. ESG scores from Refinitiv Eikon consist of three pillar scores — environmental, social, and corporate governance— that are normalized into percentages ranging from 0 to 100. These scores assess a company's ESG performance based on publicly available reported data such as corporate websites, annual reports, and ESG reports. The weightings for environmental and social categories may vary across industries, whereas governance weights remain consistent across all industries (REFINITIV, 2021). Scholars, such as Clarkson *et al.* (2008); Laguir *et al.* (2015) and Lanis and Richardson (2012) consider CSR disclosure as a reliable indicator of CSR activity. For instance, Lanis and Richardson (2012) used CSR disclosure items from corporate annual

reports to construct proxy measures for CSR activities. Similarly, we also considered the ESG scores from Refinitiv Eikon as suitable proxies for CSR activities.

Refinitiv Eikon provides ESG scores data for 72 Spanish firms listed on the Spanish stock market over a 17-year period (2002-2018). The selection of this timeframe and the limitation to 72 firms are due to the availability constraint of ESG scores during the data collection period. Consistent with standard practices in accounting research, we excluded eight financial institutions from the analysis due to their unique characteristics (Pucheta-Martínez *et al.*, 2019). To conduct our study, we match the EIKON data with the necessary financial data from SABI (Sistemas de Análisis de Balances Ibéricos) for the same period (2002-2018). SABI is a financial database managed by Bureau Van Dijk that includes financial statements, stock data, and information about the legal structure of companies in Spain and Portugal. We match Refinitiv Eikon's codification symbols with SABI's NIF codes. The resulting sample consisted of 156 firm-year observations from 2008 to 2018. Due to the relatively small sample size, we aggregated the NACE Rev.2 industry sections into four industry groups, as shown in **Table 10**. The majority of the observations in the sample are from the manufacturing sector (Group 1), followed by information and communication (Group 2), wholesale (Group 3), and professional services (Group 4).

Table 10. Number of observations by year and industry groups

												Year	
Industry Groups		*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*Total*
1.	Manufacturing, Electricity, gas, steam and air conditioning supply, Water supply, sewerage, waste management and remediation activities, Construction (C, D, E and F NACE rev.2 industry sections)	2	3	5	6	6	6	8	7	6	7	15	71
2.	Wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, accommodation, and food service activities (G, H and I NACE rev.2 industry sections)	1	1	1	3	2	2	3	3	4	5	4	29
3.	Information and communication (J NACE rev.2 industry sections)	3	3	3	5	4	4	4	3	3	3	3	38
4.	Professional, scientific, and technical activities, Administrative and support service activities (M and N NACE rev.2 industry sections)	0	0	1	3	4	1	1	2	2	2	2	18
Total		6	7	10	17	16	13	16	15	15	17	24	156
Percent.		3.85	4.49	6.41	10.9	10.26	8.33	10.26	9.62	9.62	10.9	15.38	100

3.5. Results

3.5.1. Descriptive statistics and univariate analysis

The presence of outliers can significantly affect the distribution of statistical measures. Therefore, all continuous variables in our analysis were winsorized at the 1st and 99th percentiles. Winsorization allowed us to limit the influence of extreme values in the dataset and mitigate the potential impact of outliers. Winsorized estimators are typically more robust to outliers than estimations using untransformed variables. This approach is commonly employed in accounting and tax avoidance research (e.g., Abdelfattah and Aboud, 2020; Cohen *et al.,* 2008).

Table 11 presents the descriptive statistics of the winsorized continuous variables included in Eq. (3.2), excluding dummy variables for simplicity. We observe that the mean wages per employee (*WAGE_REV*) are 16.77% of revenue per employee, and the *SSCE* is 1.3% [(16,236.670/1,242,897.910) × 100] of revenues and 7.8% (1.3% / 16.77%) of wages. The average revenue growth (*REVGROWTH*) was approximately 2% [(1.02-1) × 100] per year.

Table 12 presents the Pearson correlation and variance inflation factor (VIF) values for the winsorized continuous independent variables in Eq. (3.2). The highest correlation is 0.652 (significant at $p < 0.01$), which is observed between *TAtREV* and *WAGE_REV*. Additionally, a correlation of 0.510 (significant at $p < 0.01$) is observed between ESG and *lnREV*. However, the VIF values indicate that the highest VIF (4.76) is associated with the dummy variable for 2018. This VIF is well below the threshold of 10, indicating the absence of serious collinearity.

Table 11. Descriptive statistics of continuous variables in Eq. (3.2)

Variables	*mean*	*min*	*max*
ABNSSCE	-2,773.364	-91,039.450	243,021.600
SSCE	16,236.670	4,821.847	86,854.730
ESG	57.382	0.500	91.630
SOCP	65.347	0.150	98.540
REVE	1,242,897.910	42,369.220	23,501,684.0
lnREV	20.508	17.153	22.730
ROA	7.421	-14.902	36.266
PPETOTA	9.560	0.076	89.363
INVTOTA	5.470	0.000	30.506
TAtREV	5.190	0.534	100.500
DEBTTA	19.433	0.192	75.734
WAGE_REV	16.765	1.593	130.487
INTFATA	9.372	0.001	62.462
REVGROWTH	1.024	0.624	1.456
N	156		

All continuous variables are winsorized at the 1st and 99th percentiles.

Table 12. Pearson correlation and variance inflation factor (VIF) values of the winsorized continuous independent variables of Eq. (3.2).

	ESG	*SOCP*	*REVE*	*lnREV*	*ROA*	*PPETOTA*	*INVTOTA*	*TAtREV*	*DEBTTA*	*WAGE_REV*	*INTEATA*	*REVGROWTH*	*VIF VALUES*
ESG	1												2.48
SOCP	0.933***	1											1.99
REVE	0.281***	0.239**	1										4.09
lnREV	0.510***	0.439***	0.185*	1									2.95
ROA	-0.013	-0.034	0.227**	0.305***	1								1.70
PPETOTA	-0.252**	-0.220**	-0.116	0.188*	0.043	1							1.39
INVTOTA	-0.096	-0.070	-0.038	0.030	0.227**	-0.090	1						1.24
TAtREV	0.136	0.138	0.026	-0.384***	-0.175*	-0.055	-0.236**	1					2.71
DEBTTA	0.005	0.091	0.106	0.015	-0.286***	0.005	-0.151	0.101	1				1.56
WAGE_REV	-0.021	0.042	-0.290***	-0.401***	-0.254**	-0.126	-0.203*	0.652***	0.307***	1			3.03
INTEATA	-0.331***	-0.271***	-0.093	-0.363***	-0.204*	-0.131	-0.058	-0.102	-0.090	0.065	1		1.45
REVGROWTH	0.015	0.008	0.082	0.106	0.216**	0.089	0.018	0.035	-0.036	-0.066	-0.058	1	1.17

*** , ** and * denote Significances level at 1%, 5% and 10% respectively.

3.5.2. Multivariate results

Previous research on earnings management (Cohen *et al.*, 2008; Jeter and Shivakumar, 1999; Roychowdhury, 2006) and LTAV (Argilés-Bosch *et al.,* 2021; Ravenda *et al.,* 2015) estimated the parameters of Eq. (3.1) cross-sectionally for each industry-year. However, due to the limited number of observations in our sample, cross-sectionally estimating for each industry and year change would result in a lower number of observations (approximately 3.5) compared with the referenced research. Therefore, to estimate the *ABNSSCE*, we performed panel data estimations using Eq. (3.1) with firm fixed effects at the industry level and observations for each year. This approach allows us to obtain the minimum number of observations required to account for industry variations. The estimation of Eq. (3.1) (not displayed for simplicity) has an overall average *R*-squared of 0.265 across industry groups for the 156 firm-year observations.
Given the panel data structure and the results of the Hausman test, we performed firm fixed effects estimations of Eq. (3.2). The Breusch-Pagan test (not displayed for simplicity) revealed the presence of heteroscedasticity in our model for all experimental variables at $p < 0.05$. Therefore, we performed panel data estimations with fixed effects and robust standard errors.

Table 13 presents the main results of Eq. (3.2). All estimations have an *R*-squared overall value ranging from 0.137 to 0.186. The results consistently support H1, showing a positive and significant relationship at $p < 0.1$ between *ESG* and the dependent variables, *ABNSSCE* and *SSCE*. Additionally, there is a positive and significant relationship ($p < 0.05$) between the *SOCP* and both dependent variables. Since SSC falls within the social dimension of CSR, it explains why the results with *SOCP* show higher significance than those with *ESG*.

The results indicate that a 1 percent increase in *ESG* score leads to firms paying an additional amount of €172.883 of SSC per employee, as indicated by firm characteristics in column 1. Similarly, a 1 percent increase in the *ESG* score corresponds to an additional amount of €40.865 for the SSCE in column 3. In columns 2 and 4, a 1 percent increase in the *SOCP* score is associated with corresponding additional amounts of €154.089 and €35.574, respectively.
The *SSCE* depends on the level of wages on which SSC is computed. Therefore, a lower *SSCE* may be primarily attributed to lower wages rather than LTAV. However, in our computation of the *SSCE* in Eq. (3.1), we consider that the

SSCE is related to *WAGE_EM*. Consequently, *ABNSSCE*, which is the residual of Eq. (3.1) also accounts for the possibility that lower wages could result in low SSC. Additionally, the estimation of Eq. (3.2) also includes *REVE* as a control variable, and the correlation coefficient between *REVE* and *WAGE_EM* was very high (0.87). Therefore, the regression estimations in columns 3 and 4 of **Table 13** account for lower wage levels, supporting the negative and significant relationship between CSR and LTAV.

The coefficient of *REVE* is consistently positive and significant at $p < 0.1$ in columns 1 and 2, and at $p < 0.05$, in columns 3 and 4, indicating that an increase in *REVE* should result in an increase in *ABNSSCE* and *SSCE*. The coefficient of *PPETOTA* is negative and significant at $p < 0.1$ in column 4, indicating that capital-intensive firms tend to pay less SSC. Similarly, the coefficient of *INVTOTA* is negative and significant ($p < 0.1$) in columns 3 and 4, indicating that inventory-intensive firms are inclined to pay lower SSC. However, contrary to our expectation, the coefficient of *INTFATA* is positive and significant at $p < 0.1$ in column 4.

Table 13. Robust fixed effects estimation of Eq. (3.2)

Variables	*(1)* *ABNSSCE*	*(2)* *ABNSSCE*	*(3)* *SSCE*	*(4)* *SSCE*
ESG	172.883*		40.865*	
	(88.952)		(22.853)	
SOCP		154.089**		35.574**
		(68.423)		(16.601)
REVE	0.000*	0.000*	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
*ln*REV	2,366.947	2,648.239	-947.352	-871.347
	(3007.010)	(2914.650)	(900.759)	(874.887)
ROA	150.134	145.484	3.545	2.486
	(169.812)	(167.493)	(38.305)	(39.489)
PPETOTA	-58.024	-107.874	-21.869	-33.647*
	(69.182)	(66.5192)	(18.859)	(17.201)
INVTOTA	-225.310	-228.206	-72.586*	-73.256*
	(190.402)	(176.066)	(40.512)	(37.708)
*TAt*REV	38.478	-67.233	-24.500	-49.131
	(309.685)	(280.250)	(78.833)	(71.244)
DEBTTA	-130.928	-132.771	-17.239	-17.421
	(84.672)	(82.906)	(23.867)	(23.154)

WAGE_REV	-199.856	-104.522	-94.723	-72.505
	(265.644)	(243.797)	(67.771)	(60.252)
INTFATA	173.914	174.828	60.352	60.288*
	(142.724)	(126.290)	(37.549)	(33.757)
REVGROWTH	2,402.307	3,071.189	332.232	492.141
	(6082.583)	(5840.135)	(1569.112)	(1516.678)
LOSPRY	2,291.256	2,091.959	316.609	265.383
	(2250.845)	(2236.256)	(484.324)	(461.295)
Constant	-63,495.562	-69,012.310	34,192.072*	32,736.094*
	(6.00143e+04)	(5.74365e+04)	(1.77208e+04)	(1.70859e+04)
FIRM (dummies)	Yes	Yes	Yes	Yes
YEAR (dummies)	Yes	Yes	Yes	Yes
Observations	156	156	156	156
Number of firms	33	33	33	33
R-squared overall	0.145	0.137	0.186	0.178

Robust standard errors in parentheses
*** , ** and * denote Significances level at 1%, 5% and 10% respectively.

We also conducted robust random effects estimations to account for industry and year effects, which are presented in **Table 14**. All estimations have an *R*-squared overall ranging from 0.295 to 0.441. These results provide additional support for H1, as the coefficients of *ESG* and *SOCP* are consistently positive and significant at $p < 0.05$ in column 1 and at $p < 0.01$ in columns 2–4. The results also indicate that with a 1 percent increase in *ESG* score, firms pay additional amounts of €198.234 (column 1) and €48.089 (column 3) for *ABNSSCE* and *SSCE*, respectively. Similarly, with a 1 percent increase in *SOCP*, the corresponding additional SCC per employee amounts are €173.188 (column 2) and €41.204 (column 4).

Table 14. Robust random effects estimations of Eq. (3.2)

Variables	*(1)* *ABNSSCE*	*(2)* *ABNSSCE*	*(3)* *SSCE*	*(4)* *SSCE*
ESG	198.234**		48.089***	
	(76.972)		(18.188)	
SOCP		173.188***		41.204***
		(60.347)		(13.994)
REVE	0.002***	0.002***	0.001***	0.001***

	(0.000)	(0.000)	(0.000)	(0.000)
lnREV	2,310.643	2,449.202	-1,226.069	-1,192.440
	(3211.763)	(3406.688)	(906.880)	(960.704)
ROA	125.304	115.999	-2.424	-4.782
	(165.302)	(171.024)	(39.802)	(43.961)
PPETOTA	-26.843	-72.855	-5.448	-15.995
	(58.835)	(56.735)	(16.032)	(15.742)
INVTOTA	-471.839*	-489.083*	-151.559**	-157.615**
	(262.603)	(268.198)	(66.436)	(69.154)
TAtREV	498.881	435.594	126.500	115.475
	(382.640)	(377.869)	(111.272)	(110.865)
DEBTTA	-134.709*	-139.895*	-21.045	-22.187
	(81.359)	(79.017)	(22.898)	(22.102)
WAGE_REV	-521.120*	-460.980	-207.260**	-196.142**
	(295.466)	(288.483)	(87.112)	(85.503)
INTFATA	164.949	162.653	57.583*	56.564*
	(120.559)	(105.913)	(33.423)	(31.490)
REVGROWTH	-2,324.902	-1,812.865	-1,181.588	-1,091.163
	(7911.867)	(7821.958)	(2042.190)	(2037.970)
LOSPRY	2,578.747	2,441.715	390.642	353.393
	(2267.050)	(2282.739)	(531.897)	(529.909)
Constant	-57,445.379	-59,106.043	42,979.500**	42,666.904**
	(6.84655e+04)	(7.11964e+04)	(1.89992e+04)	(1.99115e+04)
YEAR (dummies)	Yes	Yes	Yes	Yes
INDG (dummies)	Yes	Yes	Yes	Yes
Observations	156	156	156	156
Number of firms	33	33	33	33
R-squared overall	0.295	0.314	0.415	0.441

Robust standard errors in parentheses

*** , ** and * denote Significances level at 1%, 5% and 10% respectively.

3.5.3. Robustness Analysis

According to Col and Patel (2019), the main challenge in examining the relationship between CSR and tax avoidance is endogeneity caused by omitted variables and simultaneity. Likewise, since important corporate decisions, including those related to CSR and tax avoidance, are made simultaneously, it may be difficult to draw causal interpretations. Undoubtedly, external instruments are preferable alternatives to deal with reverse causality. However, the literature stresses the difficulties in finding appropriate exogenous instruments (Razzaq *et al.*, 2021). Thus, to solve the endogeneity problem, we used one-year and second-year lagged values of *ESG* and *SOCP* as instruments

(Moralles and Moreno, 2020; Wang *et al.*, 2013). According to these authors, the use of lagged values of the explanatory variables provides robust findings, demonstrating that the procedure can treat or at least significantly mitigate the problem of endogeneity. Given the aforementioned framework, to verify the statistical consistency of the results, a fixed effects Limited Information Maximum Likelihood (LIML) instrumental variables model was estimated, as it tends to have better results with small samples and weak instruments (Baum *et al.*, 2003; Schaffer, 2005).

For the *ESG* fixed effects instrumental variables model, the Hansen J statistic indicates potential instrument validity, with a p-value of 0.15. Additionally, the C-statistic (which infers from two Sargan-Hansen statistics) suggests that *ESG* is exogenous, as evidenced by a p-value of 0.164 when the dependent variable is *ABNSSCE*. When *SSCE* is the dependent variable, the Hansen J statistic yields a p-value of 0.0364, while the C-statistic indicates *ESG* exogeneity with a p-value of 0.167.

Regarding the *SOCP* fixed effects instrumental variables model, the Hansen J statistic provides a p-value of 0.45, suggesting potential instrument validity. However, the C-statistic shows a p-value of 0.0802, indicating that the *SOCP* is not exogenous when *ABNSSCE* is the dependent variable. When considering *SSCE* as the dependent variable, the Hansen J statistic's p-value is 0.812, and the C-statistic points to the *SOCP*'s non-exogeneity with a p-value of 0.0936. Therefore, in almost all cases, the instruments tended to be valid. Although the literature recommends testing the validity of instruments using the Hansen J test, it is important to stress that the Hansen J statistic only assesses whether different instruments identify different parameters (Orlic *et al.*, 2018). Consequently, instrument validity is not guaranteed. Overall, *ESG* was found to be exogenous for *SSCE* and *ABNSSCE*, while the C-statistic pointed towards endogeneity for *SOCP* in relation to both dependent variables.

Hence, **Table 15** shows that the coefficients of *ESG* and *SOCP* are positive and significant at $p < 0.01$ for both dependent variables (columns 1-4), implying that even when endogeneity is addressed, signals and statistical significance remain consistent with the results presented in our baseline estimations. **Table 16** presents the fixed effects estimation of Eq. (3.2), with robust standard errors and one-year lagged values of *ESG* and *SOCP* as independent variables. These results further support H1, and our conclusions remain unchanged.

Table 15. Fixed Effects Limited Information Maximum Likelihood (LIML) instrumental variables estimations of Eq. (3.2).

	(1)	(2)	(3)	(4)
Variables	*ABNSSCE*	*ABNSSCE*	*SSCE*	*SSCE*
ESG	615.061***		151.070***	
	(179.698)		(45.280)	
SOCP		428.529***		99.233***
		(88.378)		(21.430)
REVE	-0.000	-0.000	0.000	0.000
	(0.001)	(0.001)	(0.000)	(0.000)
*ln*REV	2,383.524	2,630.421	-1,025.819	-848.928
	(3662.561)	(3085.166)	(905.583)	(749.727)
ROA	245.161	277.173*	29.445	34.819
	(150.299)	(142.708)	(36.649)	(34.705)
PPETOTA	-68.850	-207.751**	-22.261	-57.163**
	(120.964)	(102.763)	(29.650)	(24.995)
INVTOTA	-196.118	-255.825	-58.545	-70.808
	(328.925)	(315.121)	(79.999)	(76.648)
TAtREV	-127.171	-360.584	-69.566	-124.033*
	(306.628)	(296.232)	(74.551)	(72.052)
DEBTTA	-209.748**	-167.112**	-33.829*	-22.732
	(81.651)	(74.789)	(19.923)	(18.191)
WAGE_REV	-36.263	157.827	-50.943	-4.132
	(253.991)	(240.470)	(61.805)	(58.492)
INTFATA	327.445**	257.675**	94.289***	75.012***
	(132.946)	(115.375)	(32.607)	(28.058)
REVGROWTH	8,060.624	8,294.227*	1,553.813	1,590.192
	(5009.331)	(4789.377)	(1218.136)	(1164.964)
LOSPRY	6,742.883***	4,767.486**	1,227.482**	741.758
	(2497.175)	(2321.848)	(608.373)	(564.772)
Observations	134	134	134	134
Number of firms	19	19	19	19
R-squared	0.356	0.410	0.302	0.361

Robust standard errors in parentheses
*** , ** and * denote Significances level at 1%, 5% and 10% respectively

Table 16. Robust Fixed Effects estimation of Eq. (3.2) with one-year lagged variables of ESG and SOCP as independent variables.

Variables	(1) *ABNSSCE*	(2) *ABNSSCE*	(3) *SSCE*	(4) *SSCE*
L.ESG	134.774**		35.338**	
	(62.008)		(16.348)	
L.SOCP		125.422**		30.042**
		(48.392)		(11.794)
REVE	0.000	0.000	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
lnREV	2,914.505	3,583.260	-804.470	-603.513
	(2638.787)	(2914.003)	(788.117)	(857.584)
ROA	224.470	187.673	18.336	9.100
	(176.896)	(171.700)	(38.898)	(39.144)
PPETOTA	-106.330	-137.266*	-31.941*	-39.779**
	(64.343)	(71.864)	(16.496)	(18.040)
INVTOTA	-240.653	-279.215	-69.987*	-79.394*
	(184.326)	(198.341)	(37.910)	(42.119)
TAtREV	-29.232	-119.602	-44.898	-66.099
	(318.740)	(316.167)	(79.373)	(80.462)
DEBTTA	-105.881	-116.800	-12.296	-14.270
	(84.090)	(84.830)	(23.004)	(22.842)
WAGE_REV	-143.806	-66.164	-76.536	-58.335
	(279.619)	(276.585)	(68.191)	(67.654)
INTFATA	170.942	160.002	59.659*	56.206*
	(137.375)	(124.201)	(33.967)	(31.171)
REVGROWTH	5,407.168	5,814.966	936.791	1,014.166
	(5586.009)	(5794.914)	(1495.214)	(1517.088)
LOSPRY	2,832.823	2,605.526	368.776	303.140
	(2323.915)	(2379.428)	(472.018)	(495.836)
Constant	-74,355.677	-87,621.891	31,175.316*	27,340.478
	(5.32481e+04)	(5.81407e+04)	(1.56867e+04)	(1.69451e+04)
FIRM (dummies)	Yes	Yes	Yes	Yes
YEAR (dummies)	Yes	Yes	Yes	Yes
Observations	141	141	141	141
Number of firms	22	22	22	22
R-squared overall	0.087***	0.075***	0.139***	0.127***

Robust standard errors in parentheses
*** , ** and * denote Significances level at 1%, 5% and 10% respectively

3.6. Discussion and conclusions

This study investigates the relationship between CSR and LTAV using a sample of Spanish firms. We measured CSR using *ESG* and *SCOP* scores obtained from Refinitiv Eikon. We also built a proxy for LTAV based on the SSC reported in the income statements obtained from SABI. The results indicate that CSR has a positive and significant relationship with SSC, thereby, a negative relationship with LTAV. This negative relationship between CSR and LTAV remains robust across different measures of CSR and LTAV as well as different estimation methods while controlling for industry effects. Furthermore, the estimations addressing endogeneity are consistent with our baseline results, indicating that CSR has a negative and significant relationship with LTAV. From the analysis, we may conclude that ESG scores are associated with CSR and good citizenship tax-paying behavior. Although the CSR-LTAV relationship may depend on factors not included in our model, our results suggest that the model adequately explains this relationship.

This analysis provides a unique perspective on the relationship between CSR and LTAV, an area that has received limited attention despite being considered a social responsibility issue. Building on the existing literature on tax avoidance to include labor tax avoidance, this study provides valuable insights and holds practical and managerial implications for business research. Given that taxes are related to reporting decisions (e.g., Hanlon and Heitzman, 2010), we can argue that debates on labor tax policies can affect corporate decisions concerning types of employment contracts and reporting practices, especially since SSC is reported in Spain's income statement. As tax avoidance and CSR involve the legality and ethicality of business practices, this study may encourage managerial actions that come at a minimal cost to society (Bird and Davis-Nozemack, 2018; Ginesti *et al.*, 2020). This study examines the social implications of LTAV, addressing its impact on both employees and the government's ability to provide public goods. Paying one's fair share of SSC is not just a legal and ethical responsibility, but also an economic and philanthropic responsibility. The research also highlights concerns regarding companies exploiting legal loopholes to violate their social contracts with society and manipulate social rents through LTAV in this globalized market economy. Firms cannot simply exploit these loopholes to reduce labor taxes, treating them as avoidable costs without considering the impact on their corporate legitimacy and CSR policies,

because the field of accounting also holds ethical relevance (e.g., Ginesti et al., 2020; Sikka and Willmott, 2010).

Our results should be used cautiously, with a full understanding of their limitations. Considering the sample size, the generalizability of the results is limited. However, the results increase confidence in the validity of the negative relationship found in contexts with legal and social characteristics similar to those in Spain. In fact, our results shed light on civil-law countries, where social responsibility behaviors are usually driven by laws and regulations, which differ from common-law countries, where such behaviors are entrusted to companies' discretion. Some studies report that civil-law countries perform better in the ESG domain (Castillo-Merino and Rodriguez-Perez, 2021) and that common-law countries are less likely to engage in CSR practices than civil-law countries (Demirbag *et al.*, 2017). Similarly, Becchetti *et al.* (2020) found that the French legal tradition of civil law scores higher on human resource policies than in common-law countries. Thus, our findings may be explained in terms of what is expected in the civil law tradition, while a positive relationship (i.e., window dressing) or no relationship may be related to the common law tradition. Consequently, the negative relationship between CSR and LTAV may be attributed to civil law tradition, in which firms are legally compelled to pay SSC and be socially responsible.

Moreover, our measure of LTAV using *ABNSSCE* and *SSCE* depends on the reliability of the reported number of employees. It has been previously demonstrated that firms can exploit NSE to manipulate employee counts, thereby reducing the amount of SSC owed to the government (Argilés-Bosch *et al.,* 2021; International Labour Organisation, 2016). Hence, while our estimations are accurate, it is important to acknowledge that firms manipulating these figures can introduce endogeneity issues, potentially affecting the proper interpretation of our measures (Ravenda *et al.,* 2015).

A future research agenda could conduct a comparative study on the relationship between CSR and LTAV by enlarging the sample size and including data from countries that share similar legal and social characteristics. This approach will enhance the generalizability of the findings. A qualitative assessment to address CSR concerns, which are not easily captured in archival ESG data, could help address the underlying reasons for LTAV. Additionally, alternative proxies for LTAV could be explored to improve the predictive power of normal and

abnormal SSC estimations and enhance the reliability of the estimations. Furthermore, considering the types of employment contracts within a sample can provide valuable insights. Finally, a comprehensive empirical analysis could also study whether LTAV and ITAV are substitutes or complements and examine their relationship with CSR.

CHAPTER 4 . THE INFLUENCE OF CORPORATE SOCIAL RESPONSIBILITY ON LABOR COST BEHAVIOR.

Abstract

Purpose – This study is a cross-country examination of the effects of corporate social responsibility (CSR) on labor cost (LC) behavior.
Design/methodology/approach – The paper is an empirical work using a sample of 4,170 firm-year observations from France, Germany, Italy, and Spain between 2007 and 2020. It uses ESG data collected from Refinitiv Eikon, and accounting data collected from Refinitiv Worldscope Database.
Findings – Employing two CSR proxies, namely, the overall Environmental, Social, and Governance (ESG) score and the Social Pillar score, the findings indicate a significant relationship between CSR and asymmetric LC behavior. The results indicate that socially concerned firms exhibit greater LC stickiness. Additionally, socially concerned firms experience a more pronounced increase in LC during the expansion phase of their activities than non-socially concerned firms. The results remained unchanged and robust across the different estimation methods and model specifications.
Social implications – This study holds potential interest for both firms and academic researchers, as our findings suggest that socially concerned firms have the potential to make CSR decisions that benefit employees.
Originality/value – This study contributes to the research on CSR and asymmetric labor cost behavior.

Keywords Corporate Social Responsibility, Socially concerned firms, Cost stickiness, Labor Cost Stickiness.

4.1. Introduction

The concept of asymmetric cost behavior in accounting, first introduced by Anderson *et al.* (2003), stipulates that the relationship between cost and activity level depends on the direction of activity changes. This concept is also referred to as 'cost stickiness, implying that costs decrease less when sales decrease than when they increase by an equivalent amount (Anderson *et al.*, 2003; Banker and Byzalov, 2014). In other words, costs with an asymmetric behavior are labeled 'sticky' when "the magnitude of the increase in costs associated with an increase in volume is greater than the magnitude of the decrease in costs associated with an equivalent decrease in volume" (Anderson *et al.,* 2003, p. 48). This study aims to analyze the influence of social and ethical considerations on resource allocation to labor in socially concerned firms, particularly their asymmetric response to decreases in activity.

Considering the significance of optimal resource management for firms, Golden et al. (2020) argue that firms' discretion in adjusting current and future resources also affects cost stickiness and corporate social responsibility (CSR) activities. CSR activities that contribute to employees' well-being encompass a wide range of initiatives, including welfare and safety measures, educational benefits, health support, workplace safety, and stress management (Alferaih, 2020). Consequently, when aiming to maintain strong employee relations, firms may adopt a no-layoff policy, refraining from workforce adjustments in cases of declining activity. Instead, they leverage slack resources to retain their workforce, resulting in sticky cost behavior for the labor pool as it does not decrease with revenue. However, labor cost (LC), which includes salaries and benefits (e.g., employee CSR initiatives), constitutes a significant portion of firms' total costs. Data from Autor et al. (2020) indicate that LC accounted for 60% to 70% of the value added in key OECD countries in 2010, including the USA, Germany, France, Italy, Japan, and the UK. In the context of US banks, LC constituted a significant portion of total non-interest expenses (52%) and total expenses (30%) (Hall, 2016). For Spanish firms, LC had a mean of 22.1% and a median of 15.6% of firms' revenue (Argilés-Bosch *et al.*, 2023).

Given that empirical studies on asymmetric cost behavior (e.g., Ballas *et al.,* 2022; Dalla Via and Perego, 2014; Golden *et al.,* 2020; Habib and Costa, 2021) often focus on Selling, General, and Administrative (SG&A) expenses and operating costs, we directly focus on analyzing LC, which exhibit specific and different

behaviors and consequences in relation to firms' activities. Thus, we posit that a firm's level of CSR engagement could influence its resource allocation toward LC during changes in activities.

Few studies have analyzed the relationship between CSR or Environmental, Social and Governance (ESG) factors and LC stickiness. Most of these studies use non-European firms and analyze the relationship between CSR and cost stickiness using the Morgan Stanley Capital International (MSCI) database, formerly KLD (Golden *et al.,* 2020; Habib and Hasan, 2019), and the Taiwan Economic Journal (TEJ) database (Chen and Wang, 2023). However, our analysis presents empirical evidence on the impact of CSR on LC behavior using cross-country European data from Refinitiv Eikon. Our analysis considered the overall ESG score, with a specific emphasis on individual social pillar scores. We specifically analyze whether firms expressing social responsibility through their social pillar scores exhibit asymmetric LC behavior when their operational activities change. The emphasis on the social pillar stems from the absence of prior studies that explicitly analyze the effects of social concerns on LC behavior.

Using a sample of firms in France, Germany, Italy, and Spain, we find evidence of LC stickiness. Socially concerned firms show a more substantial increase in LC when sales increase, and they apply lower cuts to LC compared to non-socially concerned firms when sales decrease. Our results are robust to different model specifications and CSR measures.

This study contributes not only to the limited research on LC behavior (Argilés-Bosch *et al.*, 2023; Hall, 2016) but also to research on CSR and asymmetric LC behavior. Some scholars argue that socially concerned firms should consider the interests of multiple stakeholders in their decision-making processes, avoiding the dominance of any single stakeholder (e.g., shareholders) over others (Clarkson, 1995; McGuire *et al.*, 2003). This perspective aligns with the fundamental principle of CSR, which advocates that firms should be accountable to both shareholders and stakeholders (e.g., employees, customers) (Chen and Wang, 2023). Such an argument may diverge from the conventional economic principle of firms aiming to generate profit, cut costs, and increase shareholders wealth, emphasizing the significance of this research.

The remainder of this paper is organized as follows. Section 2 reviews the literature and develops the hypotheses. Section 3 outlines the research design of this study. Section 4 presents the results. The discussion and conclusions are presented in Section 5.

4.2. Literature review and hypotheses development

The traditional cost model assumes a symmetric increase (decrease) in costs corresponding to changes in the activity level (Banker and Byzalov, 2014; Noreen, 1991) but overlooks managerial intervention in resource adjustment processes (Anderson *et al.*, 2003). However, academic research reveals an asymmetrical relationship between cost behavior and firm activity levels. This asymmetry is influenced by deliberate managerial decisions, managers' overconfidence, empire-building incentives (Anderson *et al.*, 2003; Banker and Byzalov, 2014; Chen *et al.*, 2012, 2013), and the economic theory of optimal resource commitment (Banker *et al.*, 2013).

Managerial discretion plays a significant role in resource adjustment decisions, which include either upward or downward adjustments of costs in response to changes in activity (Banker *et al.*, 2013; Banker and Chen, 2006). Golden *et al.* (2020) argue that asymmetric cost behavior in response to activity changes also influences resource adjustment and ESG expenditures. Adjustment costs, such as severance payments, recruitment and training costs for new hires, loss of morale among remaining employees, and erosion of human capital due to the disruption of work teams, fall under CSR and labor-related costs (Anderson *et al.*, 2003; Banker *et al.*, 2016). However, when resource adjustment decisions are driven by managers' personal interests, they can lead to agency problems (Chen *et al.*, 2012).

CSR decisions and LC, like most cost decisions, are subject to managerial discretion (Davis, 1960; Guthrie and Durand, 2008; Hall, 2016). When firms focus their CSR on employees (internal CSR), such as creating favorable working conditions and adopting employee-friendly practices, they increase their value and retain skilled personnel for innovation (Bauman and Skitka, 2012; Chang and Jo, 2019; Edmans, 2011). However, managers holding discretion over LC face the challenge of balancing scarce resources between shareholders and other stakeholders. While it is financially risky not to reduce LC when activities decline (Makni Fourati *et al.*, 2020), such an approach can

lead to more employee-friendly practices, potentially resulting in greater LC stickiness during periods of low activity (Chang *et al.*, 2022).

Empirical research on the relationship between CSR or ESG factors and asymmetric cost behavior is limited, particularly regarding the impact of social concerns on asymmetric LC behavior. Studies on LC behavior have analyzed the impact of managerial incentives to meet or beat the zero earnings benchmark on LC behavior in private Belgian firms (Dierynck *et al.*, 2012), the influence of ownership structure on LC decisions in US banks (Hall, 2016), LC stickiness in medium and small size Italian firms (Dalla Via and Perego, 2014) and in state-owned enterprises (Prabowo *et al.*, 2018). Country-level determinants such as collective bargaining, unemployment insurance benefits, the stringency of employment protection legislation (Banker and Chen, 2006; Prabowo *et al.*, 2018), and labor unions (Chang *et al.*, 2022) have been identified as drivers of LC stickiness. Argilés-Bosch *et al.* (2023) noted that the abatement of labor protection laws, which lead managers to cut labor resources, also results in less LC stickiness compared to periods with stringent laws.

Concerning the relationship between CSR and cost stickiness, Chen and Wang (2023) find that firms with high cost stickiness have higher ESG performance. Habib and Hasan (2019) and Golden *et al.* (2020) observed a positive relationship between CSR and cost stickiness, while Paek *et al.* (2016) reported lower cost stickiness in CSR-oriented firms. Golden *et al.* (2020) suggested that these divergent results between Habib and Hasan (2019) and Paek *et al.* (2016) could stem from considering total ESG scores rather than specific ESG scores that exhibit greater stickiness. Consequently, we consider both the impact of overall ESG and social pillar scores on LC behavior during varying sales periods. The economic and social aspects of CSR enable firms to meet both personal and professional employee needs (Calvo and Calvo, 2018), such as career opportunities, training, health and safety measures, work–life balance, and adherence to human rights and equal opportunity principles (Brammer *et al.*, 2007; Golob and Podnar, 2021; Hameed *et al.*, 2016; Near *et al.*, 1980; De Roeck *et al.*, 2014). Firms that prioritize employee satisfaction and welfare are likely to offer higher wages (Cao and Rees, 2020; Ghaly *et al.*, 2015), potentially leading to greater asymmetric LC behavior due to increased employee-related costs (Golden *et al.*, 2020). Therefore, effective cost management becomes crucial for overall profitability, particularly when LC constitutes a significant expense category (Hall, 2016). Assessing the long-term cost-benefit of employee-focused

CSR investments is essential, as inefficient labor investments, whether over-investment or under-investment, can lead to substantial costs (Cao and Rees, 2020).

Therefore, McWilliams and Siegel (2001) propose that CSR decisions should be approached as any other form of investment, necessitating a thorough cost–benefit analysis to determine optimal resource allocation. Accordingly, Habib and Hasan (2019) argued that resource adjustment decisions should be based on a long-term comprehensive cost–benefit analysis of resource reduction. Echoing Anderson *et al.* (2003) and Banker and Byzalov (2014), Habib and Hasan (2019) emphasized the importance of considering the nature of CSR-related investments when dealing with adjustment costs, especially when the investment is susceptible to cost stickiness.

Analyzing CSR-related cost stickiness reflects "good" cost stickiness, indicating efficient resource planning aligned with the company's long-term managerial focus on economic performance and increased firm value (Banker *et al.,* 2018; Banker and Byzalov, 2014; Golden *et al.,* 2020; Habib and Hasan, 2019). This challenges the agency conflict argument, which posits that managers might overinvest in CSR (e.g., employees) to enhance their reputation as socially responsible managers at the expense of shareholders (e.g., Barnea and Rubin, 2010; Friedman, 2007; Jensen and Meckling, 1976; Watts and Zimmerman, 1990). Cao and Rees (2020) also challenge the agency cost argument, stating that employee-friendly practices positively influence labor investment efficiency, due to the negative association with abnormal net hiring. Thus, socially concerned firms are likely to be less prone to cutting labor resources during activity downturns, thus preserving their long-term profitability.

Socially responsible firms, despite incurring higher costs per employee, often experience more productive and innovative performance from their employees (Miles and Angelis, 2022; Sun and Yu, 2015). These firms achieve enhanced financial performance and positive correlations with firm value (Chang and Jo, 2019; Edmans, 2011; Flammer and Luo, 2017; Orlitzky *et al.*, 2003; Waddock and Graves, 1997). Therefore, when management views employee-related CSR as pivotal for their relationship with stakeholders who wield influence over their license to operate, the business case for CSR becomes salient. For socially concerned firms, CSR is seen not just as a cost but also as an investment to enhance reputation, legitimacy, brand value, and risk mitigation (European

Commission, 2001). Consequently, we posit that socially concerned firms are likely to avoid employee dismissals, aligning with a long-term investment strategy. Building on the arguments of Habib and Hasan (2019) and McWilliams and Siegel (2001), we propose the following hypotheses:

H1. Socially concerned firms exhibit less LC decrease during the decreasing phase of their activities.
H2. Socially concerned firms exhibit higher LC increase during the increasing phase of their activities.

4.3. Research design
4.3.1. Sample and data

Refinitiv Eikon is the data source for our variables of interest, the ESG scores, which were collected from 2005 to 2020. ESG scores from Refinitiv Eikon consist of three pillar scores — environmental, social, and corporate governance— that are normalized into percentages ranging from 0 to 100. These scores reflect the multi-dimensionality of companies' ESG performance based on publicly available reported data, such as corporate websites, annual reports, and ESG reports. The weightings for the environmental and social categories may vary across industries, whereas governance weights remain consistent across all industries (REFINITIV, 2021). Accounting information for the same period was collected from the Refinitiv Worldscope Database. The data available in the public domain are also collected from various sources, including annual reports, official fillings, and data feeds. The primary objective of the Refinitiv Worldscope Database is to enhance the comparability of the financial data across companies from different countries, industries, and across periods (Thomson Reuters, 2013).

The study sample was obtained from four countries: France, Germany, Italy, and Spain. They are the most important economies in continental Europe according to their gross domestic product. These countries share similarities in terms of employment protection and labor relations. Moreover, their legal system operates under a civil law framework, which is distinct from the common law system found in Anglo-Saxon countries.

The retrieved data contain 20,234 firm-year observations. As customary in studies focusing on cost stickiness (Banker *et al.*, 2013; Prabowo *et al.*, 2018), we

exclude observations with missing, zero, or negative sales values. Additionally, we discard observations in which sales increase or decrease by more than 50% (Argilés-Bosch *et al.*, 2023; Hartlieb *et al.*, 2020) because these drastic changes could reflect mergers and divestitures (Banker *et al.*, 2013). Considering the necessary lags and available information for the variables used in this study, the final sample includes data spanning from 2007 to 2020. The sample contains 4,172 firm-year observations from 503 firms presented in **Panel A** of **Table 17**. The reduction in sample size was mainly attributed to missing data in the ESG and Social pillar scores. **Panel B** presents the number of observations per year. The decrease in data for 2020 is a result of the data being downloaded in July 2021, when data for the previous year were not yet fully available. **Panel C** presents the number of observations by country. Italy and France had the highest number of observations, with 1,500 and 1,260 observations, respectively. Germany had the smallest sample size, consisting of 629 firms, despite being the most significant economy in continental Europe. From the raw data, Germany had the smallest sample of 2,034 (10.05%), compared to France, which had 9,721 (48.04%). Moreover, although most German firms disclosed their ESG scores, they also had missing data on net sales and employees, which contributed to the decrease in the final sample.

Table 17. Sample details

	503 observations
Panel A: Sample construction	
Total firm-year observations in Refinitiv Eikon and Worldscope from 2005 to 2020	20,234
Less negative data in total revenues	13
Less revenue increases above 50% and revenue decreases or below 50% or missing data	2,028
Difference	18,193
Less missing data and lags in the required variables	14,021
Final sample (firm-year observations)	4,172
Number of firms	503
Panel B: Sample composition by year	**firm-year observations**
2007	265
2008	283
2009	290
2010	293
2011	301
2012	291
2013	253
2014	247
2015	260
2016	282
2017	315
2018	434
2019	440
2020	218
Total	4,172
Panel C: Sample composition by country	**Firm-year observations**
France	1,260
Germany	629
Italy	1,500
Spain	783
Total	4,172

4.3.2. Models and variables

Following Anderson *et al.* (2003), we start with the following model that allows us to identify the overall existence of LC stickiness:

$$\Delta ln\mathrm{LC}_{i,t} = \beta_0 + \beta_1 \cdot \Delta ln\mathrm{REV}_{i,t} + \beta_2 \cdot D \cdot \Delta ln\mathrm{REV} + \varepsilon_{i,t} \quad (4.1)$$

where Δ*ln*LC denotes the log-change in LC for firm i in year t. Δ*ln*REV is the log-change in sales revenue representing a firm's activity level. The use of the ratio form and log specification of the variable reduces heteroscedasticity and accommodates the economic interpretation of the estimated coefficients (Anderson *et al.*, 2003). D is a dummy variable equal to 1 when sales revenues in year *t* are less than those in year *t* – 1 and 0 otherwise. β are the coefficients to be estimated and *ε* is the error term.

To observe the impact of CSR on LC behavior in the decreasing and increasing phases of a firm's activity, we included CSR dummies (*CSRD*) and interacted them with $D \cdot \Delta ln REV$ and $\Delta ln REV$. Other factors (*CONTROLS)* influence cost stickiness. Thus, Prabowo *et al.* (2018) and Habib and Hasan (2019) include only the interaction of $D \cdot \Delta ln REV$ with *CONTROLS*, excluding the interaction of $\Delta ln REV$ with *CONTROLS*. In contrast, researchers, such as Calleja *et al.* (2006), Golden *et al.* (2020) and Hartlieb *et al.* (2020) built a complex model that includes the interactions of *CONTROLS* with both $D \cdot \Delta ln REV$ and $\Delta ln REV$. Liu *et al.* (2019) built a comprehensive model including standalone *CONTROLS* variables in addition to both types of interactions, as presented below:

$$\Delta ln\mathrm{LC}_{i,t} = \beta_0 + \beta_1 \cdot \Delta ln\mathrm{REV}_{i,t} + \beta_2 \cdot D_{i,t} \cdot \Delta ln\mathrm{REV}_{i,t} + \beta_3 \cdot D_{i,t} \cdot \Delta ln\mathrm{REV}_{i,t} \cdot CSRD_{i,t} + \beta_4 \cdot \Delta ln\mathrm{REV}_{i,t} \cdot CSRD_{i,t} + \sum_{k=1}^{N} \gamma_k \cdot D_{i,t} \cdot \Delta ln\mathrm{REV}_{i,t} \cdot CONTROLS_{i,t} + \sum_{k=1}^{N} \lambda_k \cdot \Delta ln\mathrm{REV}_{i,t} \cdot CONTROLS_{i,t} + \sum_{k=1}^{N} \delta_k \cdot CONTROLS_{i,t} + \varepsilon_{i,t} \quad (4.2)$$

where β, γ, λ, and δ are the coefficients to be estimated.

The interaction of $D \cdot \Delta ln REV$ with *CSRD* (β_3) tests H1, whereas the interaction of $\Delta ln REV$ with *CSRD* (β_4) tests H2, allowing us to control for

the influence of CSR in the decreasing and increasing phases of sales, respectively.
We assess firms' social responsibility using CSR dummies (*CSRD*), taking a value of 1 if the corresponding score is above the sample's CSR median and zero otherwise. We use *CSRD* rather than a continuous variable to measure CSR because we expect a markedly different behavior between socially concerned firms and non-socially concerned firms. This distinction helps clearly interpret the results (Belsley *et al.*, 2004; Cohen *et al.*, 2003). We employ two measures of *CSRD*: the social pillar score dummy (*SOCPD*), which represents the ESG component most related to social and labor concerns, and the overall ESG score dummy (*ESGD*). CSRD is a generic variable, and results are presented for only *SOCPD* and *ESGD*.

The included control variables (*CONTROLS)* are employee intensity (*EMPINT*), asset intensity (*ASSINT*), successive revenue decreases (*SUC_DEC*), gross domestic product growth (*GDPGR),* and country dummies for France, Germany, Italy (*FR, GER, IT,* respectively)*,* with Spain as the default country. The definitions of all variables are provided in the appendix.

Previous studies have found that companies requiring high *ASSINT* and *EMPINT* to sustain their activities tend to have greater adjustment costs, resulting in stickier costs (Anderson *et al.*, 2003; Golden *et al.*, 2020). Therefore, we expect positive and significant coefficients for the interactions corresponding to $D \cdot \Delta ln REV$ with *ASSINT* and *EMPINT* (Ballas *et al.*, 2022; Chen *et al.*, 2012; Dierynck *et al.*, 2012; Habib and Hasan, 2019; Liu *et al.*, 2019). Since we also expect that firms experiencing two consecutive years of successive sales decreases (*SUC_DEC*) will exhibit a low degree of LC asymmetry, we expect a significantly positive coefficient corresponding to the interaction of $D \cdot \Delta ln REV$ with *SUC_DEC* (Anderson *et al.*, 2013; Chen *et al.*, 2012; Dierynck *et al.*, 2012). The *GDPGR* takes into consideration the yearly effect and the specificity of each country (*FR, GER, IT*). Additionally, *GDPGR* also measures managers' optimism or pessimism regarding future sales (Anderson *et al.*, 2003). As commonly done in previous research, we mean-centered all continuous independent variables to mitigate multicollinearity and to facilitate the interpretability of the main effect (Chen *et al.*, 2012; Cohen *et al.*, 2003). Additionally, we winsorized all continuous variables at 1% in each tail to avoid biased results caused by extreme values. Winsorized estimators are usually more

robust to outliers than untransformed estimators (Bailey, 2019; Dimitropoulos, 2022).

4.4. Testing results
4.4.1. Univariate statistics

Table 18 presents the descriptive statistics of the winsorized variables used in the empirical analysis. To provide a meaningful comparison of descriptive statistics, we present non-mean-centered values, while the remainder of the study is conducted with mean-centered variables. On average, LC increases by 4.3%, and revenues increase by 3.1%. It is worth mentioning that 34.9% of firm-year observations experience a decrease in revenue, and 14.6% of firms experience two or more consecutive years of sales decrease.

Table 18. Descriptive statistics

Variables	*Obs*	*Mean*	*Std. Dev.*	*P25*	*P50*	*P75*
ΔlnLC	4172	.043	.178	-.0222	.0414	.117
ΔlnREV	4172	.031	.190	-.048	.041	.134
SOCPD	4172	.5	.5	-	-	-
ESGD	4172	.5	.5	-	-	-
D.	4172	.349	.477	0	0	1
EMPLINT	4172	4.176	5.277	2.094	4.00	6.682
ASSINT	4172	5.441	11.490	.952	1.491	3.267
SUC_DEC	4172	.146	.354	0	0	0
GDPGR	4172	.014	.031	0135	022	.0311

All continuous variables are winsorized at the 1st and 99th percentiles.

For simplicity, **Table 19** presents the Pearson correlation coefficients of the standalone variables. The highest correlation coefficient, 0.725 (significant at $p < 0.01$), is observed between *SOCPD* and *ESGD*. However, these variables are alternative CSR measures that are not simultaneously included in the regression model. All coefficients between the standalone variables are low, with the highest absolute value being -0.326 (significant at $p < 0.01$) between *Δ*ln*REV* and *SUC_DEC*.

Table 19. Pearson Correlation

Variables	*Δln*REV	*SOCPD*	*ESGD*	*EMPLINT*	*ASSINT*	*SUC_DEC*	*GDPGR*
*Δln*REV	1						
SOCPD	-0.084***	1					
ESGD	-0.085***	0.725***	1				
EMPLINT	-0.086***	-0.004	-0.072***	1			
ASSINT	-0.029***	-0.061***	-0.017	0.035***	1		
SUC_DEC	-0.326***	0.043***	0.035**	0.035***	0.011	1	
GDPGR	0.141***	-0.059***	-0.063***	0.000	-0.023***	-0.078***	1

*** , ** and * denote Significances level at 1%, 5% and 10% respectively.

To address potential multicollinearity, we estimated the variance inflation factor (VIF). When we consider the variables in Equation (4.1), the unreported result of the VIF indicates the highest VIF to be 2.20, corresponding to both Δ*ln*REV and $D \cdot \Delta lnREV$. Importantly, this value falls below the threshold of 10, which is typically indicative of significant collinearity. However, when examining the full model in Equation (4.2), which includes all the standalone variables and interaction terms, we observe high VIF values for some of the interaction terms. Disatnik and Sivan (2016) and McClelland *et al.* (2017) argued that concerns about multicollinearity mainly arise from the high correlation between standalone independent variables. High correlations and VIFs between independent variables and their interaction terms are merely fictitious collinearity, as this multicollinearity is simply a matter of interval scaling and does not create a multicollinearity problem.

4.4.2. Multivariate results

Considering the panel data structure and the results of the Hausman test, we perform firm fixed effects estimations. Additionally, the Breusch-Pagan test (not displayed for simplicity) revealed the presence of heteroscedasticity in our model. Consequently, we perform firm fixed effects estimations with robust standard errors.

Table 20 displays the main results of Equations (4.1) and (4.2). All estimations present a significant goodness-of-fit, with an R-square overall ranging from 0.262 to 0.295. Column (1) presents the fixed effects estimations of Equation (4.1). A pattern of LC stickiness was observed, with a significantly positive coefficient for β_1 (0.417, $p < 0.01$) and a significantly negative coefficient for β_2 (-0.132, $p < 0.05$). These results indicate that, on average, there is a 0.417% increase in LC for every 1% increase in sales revenue. Conversely, a 1% decrease in net sales results in a decrease of 0.285% ($\beta_1 + \beta_2 = 0.417 - 0.132$) in LC. In columns (2) and (3), we present the fixed effects estimations of the full model, Equation (4.2), which includes the two variables of interest (*SOCPD* and *ESGD*) as well as all interaction variables. These interaction variables explain the effects of the control variables during the decreasing and increasing phases of a firm's activities. Column (2) shows that β_3 (-0.236, $p < 0.1$) is negative and significant, and β_4 (0.270, $p < 0.05$) is positive and significant. These figures display a pattern of LC stickiness, indicating that *SOCPD* influences LC stickiness. Thus, for a 1

% decrease in sales revenue, socially concerned firms decrease their LC by 0.533% ($\beta_1 + \beta_3 + \beta_4 = 0.499 - 0.236 + 0.270$), which is a 0.236% less than non-socially concerned firms. These results support H1. Conversely, for a 1% increase in sales revenue, socially concerned firms increase their LC by 0.769% ($\beta_1 + \beta_4 = 0.499 + 0.270$), which is 0.270% more than that of non-socially concerned firms. These results support H2.

Concerning the control variables related to asymmetric LC behavior, we observed that the interaction $D \cdot \Delta ln\text{REV} \cdot GDPGR$, representing the country-level factor, exhibits a negative and significant coefficient in column (2). This indicates that, with higher *GDPGR,* firms apply higher LC increases when activity increases and lower LC cuts when activity decreases, and vice versa. These results suggest that economic factors such as *GDPGR* can influence asymmetric LC behavior (e.g., Banker and Chen, 2006).

In column (3), we observe that β_3 is negative but statistically non-significant, suggesting that *ESGD* does not significantly influence LC stickiness. However, the significantly positive coefficient for β_4 indicates a different pattern in LC behavior for socially concerned firms compared to non-socially concerned firms. Thus, we observe that for a 1% increase in sales revenue, socially concerned firms increase their LC by 0.752% ($\beta_1 + \beta_4 = 0.511 + 0.241$), which is 0.241% more than non-socially concerned firms, while non-socially concerned firms increase their LC by 0.511% per 1% increase in sales revenue. These results support H2 and indicate that socially concerned firms substantially increase their LC in the increasing phase of their activities compared with non-socially concerned firms. Since LC falls within the social dimension of CSR, this explains why the results with *SOCPD* show higher significance than those with *ESGD*. The control variable *GDPGR* behaves similarly to column (2).

In columns (4) and (5), we present the random effects estimations of Equation (4.2), which include standalone country dummies that were excluded from the fixed effects estimations due to collinearity. The results in both columns of the coefficients of interest, β_3 and β_4, provide reinforced support for H1 and H2. Moreover, unlike column (3), β_3 is negative and significant in column (5) when we add standalone country dummies to the estimation. The control variable *GDPGR* behaves similarly to that in the previous columns.

Table 20. Relationship between firm's social concerns and labor costs ($\Delta \ln LC$). Equations (4.1) and (4.2) fixed effects and random effects estimations with robust standard errors.

	(1)	(2)	(3)	(4)	(5)
	Fixed effects			Random effects	
Variables	*Equation (4.1)*	*Equation (4.2)*	*Equation (4.2)*	*Equation (4.2)*	*Equation (4.2)*
$\Delta lnREV$	0.417***	0.499***	0.511***	0.345***	0.355***
	(0.044)	(0.114)	(0.110)	(0.101)	(0.098)
$D \cdot \Delta lnREV$	-0.132**	-0.026	-0.064	0.162	0.127
	(0.058)	(0.176)	(0.162)	(0.144)	(0.134)
$D \cdot \Delta lnREV \cdot SOCPD$		-0.236*		-0.327***	
		(0.137)		(0.127)	
$\Delta lnREV \cdot SOCPD$		0.270**		0.339***	
		(0.106)		(0.101)	
$D \cdot \Delta lnREV \cdot ESGD$			-0.118		-0.229*
			(0.131)		(0.125)
$\Delta lnREV \cdot ESGD$			0.241**		0.320***
			(0.107)		(0.103)
$D \cdot \Delta lnREV \cdot EMPLINT$		0.004	0.002	0.006	0.004
		(0.007)	(0.007)	(0.010)	(0.011)
$D \cdot \Delta lnREV \cdot ASSINT$		0.002	0.002	0.001	0.001
		(0.004)	(0.003)	(0.004)	(0.004)
$D \cdot \Delta lnREV \cdot SUC\_DEC$		0.047	0.060	0.023	0.033
		(0.093)	(0.086)	(0.088)	(0.082)
$D \cdot \Delta lnREV \cdot GDPGR$		-3.054*	-2.946*	-2.944*	-2.907*

	(1.596)	(1.590)	(1.673)	(1.66)
$D \cdot \Delta lnREV \cdot FR$	-0.088	-0.081	-0.170	-0.159
	(0.190)	(0.188)	(0.183)	(0.181)
$D \cdot \Delta lnREV \cdot GER$	0.035	0.001	-0.239	-0.260
	(0.228)	(0.221)	(0.199)	(0.198)
$D \cdot \Delta lnREV \cdot IT$	0.074	0.073	-0.116	-0.110
	(0.202)	(0.199)	(0.171)	(0.169)
$\Delta lnREV \cdot EMPLINT$	0.004	0.005	0.000	0.001
	(0.006)	(0.005)	(0.009)	(0.009)
$\Delta lnREV \cdot ASSINT$	-0.005*	-0.006*	-0.004	-0.005
	(0.003)	(0.003)	(0.004)	(0.004)
$\Delta lnREV \cdot GDPGR$	3.349**	3.531**	3.361**	3.554**
	(1.601)	(1.55)	(1.53)	(1.479)
$\Delta lnREV \cdot FR$	0.030	0.016	0.093	0.079
	(0.130)	(0.128)	(0.136)	(0.135)
$\Delta lnREV \cdot GER$	0.052	0.049	0.282**	0.274**
	(0.150)	(0.148)	(0.133)	(0.133)
$\Delta lnREV \cdot IT$	-0.122	-0.129	0.036	0.025
	(0.158)	(0.157)	(0.137)	(0.136)
SOCPD	-0.004		-0.015***	
	(0.008)		(0.006)	
ESGD		0.004		-0.010
		(0.009)		(0.006)
EMPLINT	0.006	0.006	0.000	-0.000
	(0.005)	(0.005)	(0.001)	(0.001)
ASSINT	0.000	0.000	0.000	0.000
	(0.001)	(0.001)	(0.000)	(0.000)
SUC_DEC	0.006	0.008	-0.006	-0.004

		(0.013)	(0.013)	(0.013)	(0.012)
GDPGR		0.103	0.119	0.075	0.084
		(0.097)	(0.098)	(0.096)	(0.098)
Firm fixed effects	Yes	Yes	Yes		
Country dummies				Yes	Yes
Constant	0.046***	0.057***	0.053***	0.060***	0.057***
	(0.0051934)	(0.010)	(0.010)	(0.008)	(0.008)
Observations	16,112	4,172	4,172	4,172	4,172
Number of firms	1,497	503	503	503	503
R-squared overall	0.280 ***	0.262***	0.265***	0.294***	0.295***

Robust standard errors in parentheses
*** , ** and * denote Significances level at 1%, 5% and 10% respectively

4.4.3. Additional analysis

To enhance the robustness of the results presented in **Table 20**, we consider some circumstances that may have contributed to the biases in our results. Thus, the financial crisis triggered an exceptional economic downturn that may have influenced financial reporting quality and led to atypical firm behaviors, such as pessimistic forecasts and suboptimal disclosures (Saha, 2022; Singh and Peters, 2013). Given the high mean value of the decrease dummy *D* (34.9%), we mitigated potential biases stemming from the financial crisis in our analysis. This was achieved by excluding observations from 2007 to 2009 – the period of the financial crisis according to the European Central Bank (European Central Bank, 2010).

Moreover, the low number of observations in 2020 may have also affected the robustness of our results. This raises concerns about the characteristics of these firms, which might include audits or legal complications, lower levels of social responsibility, or engagement in dubious or controversial activities, sometimes necessitating the restatement of their financial and non-financial information. Additionally, the unprecedented conditions of the COVID-19 pandemic likely led to extraordinary corporate behavior during this timeframe. To mitigate these concerns and ensure the robustness of our analysis, we re-estimated Equation (4.2), this time, excluding data from both 2020 and the financial crisis period. This decision was not arbitrary but rather a test of robustness to account for the extraordinary nature of these years. The results in **Table 21** show that the fixed effects estimations remain consistent and support our hypotheses in columns 1-3. Results in column 4 are similar to those in column 3 in **Table 20**. The results of the random effects estimations, which are not presented for simplicity, are all statistically significant and support the hypotheses.

Table 21. Relationship between firm's social concerns and labor costs ($\Delta \ln LC$). Fixed effects estimations of Equation (4.2) with robust standard errors, excluding observations from 2007, 2008, 2009 and 2020.

	Years 2007, 2008, 2009 excluded		Years 2007, 2008, 2009 & 2020 excluded	
Variables	(1)	(2)	(3)	(4)
$\Delta lnREV$	0.462***	0.467***	0.453***	0.451***
	(0.131)	(0.131)	(0.130)	(0.128)
$D \cdot \Delta lnREV$	-0.066	-0.129	-0.033	-0.102
	(0.183)	(0.166)	(0.184)	(0.159)
$D \cdot \Delta lnREV \cdot SOCPD$	-0.496***		-0.500***	
	(0.161)		(0.174)	
$\Delta lnREV \cdot SOCPD$	0.490***		0.491***	
	(0.126)		(0.129)	
$D \cdot \Delta lnREV \cdot ESGD$		-0.308**		-0.239
		(0.156)		(0.167)
$\Delta lnREV \cdot ESGD$		0.447***		0.449***
		(0.127)		(0.128)
$D \cdot \Delta lnREV \cdot EMPLINT$	0.004	0.002	0.004	0.001
	(0.006)	(0.006)	(0.007)	(0.007)
$D \cdot \Delta lnREV \cdot ASSINT$	-0.002	-0.001	-0.002	-0.000
	(0.004)	(0.004)	(0.005)	(0.005)
$D \cdot \Delta lnREV \cdot SUC\_DEC$	0.156	0.178*	0.138	0.176*
	(0.108)	(0.098)	(0.115)	(0.102)
$D \cdot \Delta lnREV \cdot GDPGR$	-0.264	-0.459	-2.494	-4.002
	(2.694)	(2.746)	(4.153)	(4.237)
$D \cdot \Delta lnREV \cdot FR$	-0.014	-0.018	-0.034	-0.056
	(0.218)	(0.224)	(0.246)	(0.262)
$D \cdot \Delta lnREV \cdot GER$	0.495*	0.431	0.584**	0.490*
	(0.269)	(0.266)	(0.295)	(0.295)
$D \cdot \Delta lnREV \cdot IT$	0.202	0.181	0.188	0.117
	(0.205)	(0.203)	(0.210)	(0.207)
$\Delta lnREV \cdot EMPLINT$	0.004	0.005	0.005	0.006
	(0.005)	(0.005)	(0.006)	(0.005)
$\Delta lnREV \cdot ASSINT$	-0.003	-0.003	-0.004	-0.004
	(0.004)	(0.004)	(0.004)	(0.004)
$\Delta lnREV \cdot GDPGR$	-0.723	-0.202	1.092	2.539
	(2.336)	(2.351)	(4.121)	(4.060)
$\Delta lnREV \cdot FR$	-0.052	-0.058	-0.070	-0.082
	(0.148)	(0.147)	(0.153)	(0.154)
$\Delta lnREV \cdot GER$	-0.273	-0.253	-0.340	-0.331
	(0.203)	(0.199)	(0.223)	(0.223)
$\Delta lnREV \cdot IT$	-0.238	-0.239	-0.239	-0.235
	(0.162)	(0.161)	(0.161)	(0.158)
SOCPD	-0.010		-0.012	
	(0.010)		(0.011)	
ESGD		-0.000		0.002
		(0.011)		(0.011)

EMPLINT	0.005	0.005	0.004	0.003
	(0.006)	(0.006)	(0.006)	(0.006)
ASSINT	-0.001	-0.000	-0.001	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)
SUC_DEC	0.022	0.025*	0.025*	0.030**
	(0.014)	(0.013)	(0.015)	(0.014)
GDPGR	0.390***	0.401***	0.063	0.012
	(0.126)	(0.133)	(0.191)	(0.188)
Firm fixed effects	Yes	Yes	Yes	Yes
Constant	0.050***	0.045***	0.051***	0.044***
	(0.011)	(0.011)	(0.011)	(0.011)
Observations	3,334	3,334	3,116	3,116
Number of firms	498	498	496	496
R-squared overall	0.227***	0.234***	0.212***	0.222***

Robust standard errors in parentheses
*** , ** and * denote Significances level at 1%, 5% and 10% respectively.

4.5. Conclusions

This study examines the impact of CSR on LC behavior, focusing on a sample of firms from France, Germany, Italy, and Spain. We used ESG scores from Refinitiv Eikon and accounting data from Refinitiv Worldscope Database. To distinguish between socially concerned and non-socially concerned firms, we divided the sample into high and low ESG scores. Our findings reveal that socially concerned firms have a higher increase in LC than non-socially concerned firms when their activities increase. These firms exhibit a higher LC stickiness than non-socially concerned firms. However, this evidence is not significant for *ESGD* in fixed effects estimations (**Table 20**) and in the subsample which excludes observations from 2007-2009 and 2020 (**Table 21**). The significant increase in LC during periods of growth can be attributed to the fact that socially concerned firms tend to expand their operations or invest more in their employees, resulting in greater LC increments compared with non-socially concerned firms. Our results are robust to different estimation methods, model specifications, and CSR specifications.

Socially concerned firms in our sample may be inclined to prioritize satisfying employees' security and safety needs, rather than engaging in opportunistic practices. However, achieving this goal without compromising profitability can be difficult (Bauman and Skitka, 2012). Some scholars argue that, from a financial perspective, the choice to avoid reducing unutilized resources (e.g.,

labor) when activities decrease is risky (Makni Fourati *et al.*, 2020). However, Bauman and Skitka (2012) argue that if CSR initiatives can attract high-quality employees, increase their commitment, reduce employee turnover, and positively influence employees' morality by satisfying their need for security, self-esteem, belongingness, and a sense of purpose, then companies embracing CSR should outperform those that do not.

Our study has significant managerial implications because our findings indicate that socially concerned firms have the potential to make CSR decisions that benefit their employees, particularly during phases of increased activity. This alignment stems from the understanding that firms' social responsibility is not only to their shareholders but also to their employees (Miethlich *et al.*, 2023; Newman *et al.*, 2020).

Nevertheless, this study has some limitations. The use of the dummy variable approach restricts the generalizability of our results to the firms included in our study (Cohen *et al.*, 2003). Considering the significance of LC for academics, professionals, and labor policymakers, and the current interest in CSR and ESG sustainability factors, future studies could further investigate the topic and explore other factors that may influence asymmetric LC behavior. Furthermore, given that some firms have adopted alternative strategies to avoid layoffs during the COVID-19 pandemic, it would be insightful to specifically examine the data from 2020. By conducting a natural experiment, future research could analyze how these firms managed their LC in response to the COVID-19 pandemic.

CHAPTER 5 . CONCLUSIONS

5.1. Summary

In my thesis, I aimed to explore the social and ethical implications of accounting concerning LTAV and asymmetric LC behavior. The bibliometric analysis in Chapter 2 revealed that the majority of articles were written in collaboration, but the frequency of international co-authorship was relatively low. This implies that co-authorship mainly happened among scholars who were based in the same country. The preference for non-accounting theoretical frameworks indicates that authors aim to emphasize the importance of stakeholders beyond shareholders. This choice is particularly notable since accounting studies frequently adopt agency theory, which prioritizes the interests of shareholders over other stakeholders. By incorporating non-accounting theoretical frameworks in accounting studies, it not only underscores a firm's social and ethical obligations to stakeholders beyond shareholders but also promotes the notion that tax avoidance contradicts the rhetorical commitment of firms that position themselves as socially responsible entities.

Chapter 2 also revealed a scarcity of research on the topic of LTAV avoidance, particularly in relation to CSR. Therefore, a quantitative analysis was conducted in Chapter 3 to investigate the relationship between CSR and LTAV, using Spanish firms. CSR was measured using *ESG* and *SCOP* scores from Refinitiv Eikon, while LTAV was proxied by Social Security Contributions (SSC) reported in the income statements obtained from SABI (Sistemas de Análisis de Balances Ibéricos). The results of the panel data estimations show a negative and significant relationship between CSR and LTAV, which is consistent across different measures and estimation methods, even after controlling for industry effects and addressing endogeneity concerns. The analysis suggests that higher CSR, as indicated by *ESG* and *SCOP* scores, is associated with better citizenship tax-paying behavior. Given the legal and social context, we maintain that the findings support the validity of the negative relationship found in situations that share similar legal and social characteristics to those in Spain. In fact, our results shed light on civil-law countries, where social responsibility behaviors are typically driven by laws and regulations, which differ from common-law countries, where such behaviors are left to companies' discretion.

Furthermore, we conducted an analysis to examine the impact of CSR on labor cost behavior in Chapter 4 using data from France, Germany, Italy, and Spain. We utilized ESG scores from Refinitiv Eikon and accounting data from

Refinitiv Worldscope Database. The ESG scores were transformed into dummy variables (*SOCPD* and *ESGD*) to assess firms' social responsibility. The results of our panel data estimations suggest that, when using *SOCPD* as a CSR measure, socially concerned firms experience a higher increase in labor costs than non-socially concerned firms during periods of activity growth, indicating greater labor cost stickiness. However, when using *ESGD* as a CSR measure, this effect is not significant in fixed effects estimations and in the subsamples excluding observations from 2007 to 2009 and 2020. The study suggests that the growth-period rise in LC can largely be ascribed to socially concerned companies' tendency to extend their operations or invest more in their workforce, leading to greater LC increments than non-socially responsible firms. Our findings are robust to different estimation methods, model specifications, and CSR specifications.

5.2. Research implications

This thesis underscores significant implications for companies, stakeholders, and particularly, employees. It highlights that employees need to recognize that companies with limited social concerns, as indicated by low ESG and social pillar scores, do not fully fulfill their obligations regarding social security contributions. Such companies may not hold the security and wellbeing of their employees as a managerial priority. Consequently, these companies may fail to provide adequate funding for healthcare and pension benefits for their employees. This situation negatively impacts the attractiveness of such companies for skilled and productive workers. Furthermore, investors who prioritize social responsibility will be less likely to invest in these companies (Faleye and Trahan, 2011).

Companies that engage in socially irresponsible practices may be perceived as self-serving and undesirable by stakeholders, particularly highly skilled and productive employees. Likewise, society may perceive them as irresponsible, unsupportive, and self-centered organizations. Conversely, companies that demonstrate social responsibility are more likely to attract top talent, which can enhance productivity and ultimately contribute to improved financial performance.

The thesis also posits paradoxical practical and managerial implications. Although CSR possesses the potential to diminish risks, cultivate competitive

advantages, and enhance firms' reputation and legitimacy (Carroll and Shabana, 2010; Suchman, 1995), the primary objective of firm management is to generate revenue, oversee, and reduce firms' expenses. However, taking into account ethical considerations pertaining to human dignity, the thesis also evaluates the social ramifications of LTAV, emphasizing its impact on both employees and the government's capacity to deliver public goods, as well as firms' ability to increase labor costs when business activity increases, with the intention of bolstering employees' sense of security and safety.

Thus, the paradoxical relationship between a company's economic objectives and its social and ethical aspirations becomes apparent during periods of economic downturn and limited resources. The paradoxical approach to CSR acknowledges the intrinsic value of social concerns and embraces the existence of tensions that arise from accommodating concurrent yet interconnected economic and social considerations (Hahn *et al.*, 2014, 2018). Given that such contradictions will perpetually exist in the business environment, paradox theory posits that while problems are *solved* in the business environment, paradoxes must be effectively *managed* by companies. Consequently, firms must now learn to adopt and manage varying degrees of social, ethical, environmental, and economic challenges.

5.3. Limitations and Future Research

Despite controversies and critiques surrounding the use of ESG scores, our analysis has adhered to the fundamental principles of reliability (results of the study are repeatable), replication (data are available for research replicability), and validity (validity of measurement), as espoused by Bryman (2012) in the evaluation of social science research methodologies. By doing so, I believe that the research findings are robust. However, our study has some limitations that could be addressed in future research.

In Chapter 3, for instance, the small sample size could be expanded in future research to enhance the generalizability of the findings. Additionally, alternative proxies for LTAV could be explored, along with the impact of different types of employment contracts on LTAV. Furthermore, since our research suggests that the legal context plays an important role in LTAV, future studies could include a comparative assessment with countries that share similar legal and social characteristics. In Chapter 4, the use of dummy variables could be

replaced with continuous variables to enhance the generalizability of the findings. Moreover, a qualitative assessment, such as surveys of employees and managers, could be conducted to investigate issues of salary sacrifices in LTAV, and alternative LC management during economic downturns.

Furthermore, given the increasing interest in social accounting practices that encourage businesses to prioritize social, ethical, and environmental concerns, as well as sustainable business practices, the current social context presents a favorable environment for accounting academics to merge competing social, ethical and environmental issues with economic considerations.

Research outputs:

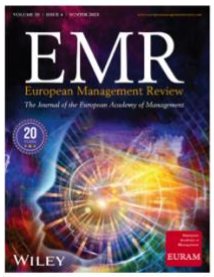
At the time of its deposit, this thesis has already led to the following outputs in relation to presentation at conferences, workshops, seminars and academic publications and activities.

Chapter 2 Tax Avoidance, Labor Tax Avoidance and Corporate Social Responsibility: A Bibliometric Analysis was submitted for publication at **Serials Review** and is with Journal Administrator (Journal citation report- Social Sciences Citation Index 2022, impact factor 0.9, Q4 in Information Science & Library Science; Scimago Journal & Country Rank 2022 impact factor 0.3, Q2 in Library and Information Sciences).

Chapter 3 Corporate Social Responsibility and Labor Tax Avoidance: Evidence from Spain was presented at the following workshops and conferences:

- XIII Reunión de Investigación en Contabilidad Social y Medioambiental – 13th CSEAR Spain Universidad de Burgos, 8th – 10th September 2021
- I Congreso Internacional de Investigación en Contabilidad
- Barcelona (España), 9-10 de diciembre del 2021.
- II PRICIT Doctoral Workshop 31 March – 1 April 2022
- PhD in Business workshop May 11th, 2022

Moreover, Chapter 3 has been published (http://doi.org/10.1111/emre.12646) in the **European Management Review** (Journal citation report- Social Sciences Citation Index 2021, impact factor 3.7, Q3 in Management; Scimago Journal & Country Rank 2022 impact factor 1.1, Q1 in Business and International Management).



European Management Review

Corporate Social Responsibility and Labor Tax Avoidance: Evidence from Spain

DOI: 10.1111/emre.12646

Status: In Production

Chapter 4 The Influence of Corporate Social Responsibility on Labor Cost Behavior has been presented at a research seminar at LaSalle University in Barcelona on January 31st, 2024. At the time of writing these lines, this article has been reviewed and received the reviewers' reports in the first round, and is awaiting the editor's decision in the **Social Responsibility Journal** (Journal citation report- Emerging Sources Citation Index 2022, impact factor 3.2, citation indicator is Q2 in Management; Scimago Journal & Country Rank 2022 impact factor 0.82, Q1 in Business, Management, and Accounting).

Table 22 shows the detailed contributions derived from this thesis as of the date.

Table 22. Research outputs in academic journals.

Thesis Chapters	Authors	Title	Type	Status	Impact factor	Publication details
Chapter 2	Tabitha Aude Sidyida Ilboudo & Josep-Maria Argilés-Bosch	Tax Avoidance, Labor Tax Avoidance and Corporate Social Responsibility: A Bibliometric Analysis	Bibliometric Analysis	Under review	JCR 2022: SSCI IF 0.9 (Q4) SJR 2022: IF 0.3 (Q2)	Serials Review
Chapter 3	Tabitha Aude Sidyida Ilboudo, Josep-Maria Argilés-Bosch & Josepa Alemany Costa	Corporate Social Responsibility and Labor Tax Avoidance: Evidence from Spain	Research article	Published: http://doi.org/10.1111/emre.12646	JCR 2021: SSCI IF 3.7 (Q3) SJR 2022: IF 1.1 (Q1)	European Management review
Chapter 4	Tabitha Aude Sidyida Ilboudo & Josep-Maria Argilés-Bosch	The Influence of Corporate Social Responsibility on Labor Cost Behavior	Research article	Reviewed and awaiting editor's decision.	JCR 2022: ESCI IF 3.2, citation indicator (Q2) SJR 2022: IF 0.82 (Q1)	Social Responsibility Journal

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APPENDICES

Appendix 1 Variable definition and abbreviations

Variables	Expected signs for Eq. (3.2)	Name and definition of variables
LTAV		Labor tax avoidance: measure with *SSCE* and *ABNSSCE*.
ABNSSCE		Abnormal social security to number of employee (residual of Eq. 3.1).
SSCE		Social security contribution in euros divided by number of employee.
ESG	+	Overall environmental, social and governance performance score in percentage.
SOCP	+	Social dimension of ESG score in percentage: includes workforce, human rights, community and product responsibility.
WAGE_EM		Wages in euros divided by number employee (Eq. 3.1)
TA		Total assets of previous year (Eq. 3.1)
*ln*REV	?	Natural logarithm of net revenue. Measures size.
REV_TA		Revenue divided by total asset of previous year (Eq. 3.1)
INCREV_TA		Increase in revenue. Measured as revenue of current year less revenue of previous year divided by total assets of previous year (Eq. 3.1).
REVE	+	Revenue in euros divided by number of employee.
ROA	?	Return on assets. Measured as a percentage of pre-tax income divided by total assets of previous year.
PPETOTA	?	Percentage of property plant and equipment to total assets.
INVTOTA	-	Percentage of inventories to total assets.
TAtREV	-	Total assets divided by revenue.

DEBTTA	-	Indebtedness. Percentage of sum of long-term and short-term debts divided by total assets.
WAGE_REV	-	Percentage of wages divided by revenue.
INTFATA	-	Percentage of net intangible fixed assets to total assets.
REVGROWTH	-	Revenue growth. Revenue of current year divided by revenue of previous year.
LOSPRY	-	Loss in previous year: indicator variable equaling 1 for firms with loss in prior year, and 0 otherwise.
YEAR		Set of dummy variables indicating with the value of 1 that a firm belongs to a given year, and 0 otherwise. The first year (2008) is the default variable.
INDG		Set of dummy variables indicating with the value of 1 that firm belong to a specific industry and 0 otherwise. They are four industries and INDG 1 is the default industry.
FIRM		FIRM fixed effects

Appendix 2 Definition of Variables

Variables	Definition
Dependent variable	
ΔlnLC	Log-change in labor costs: natural logarithm of total salaries and benefit expenses in current year divided by total salaries and benefit expenses in previous year.
Independent variables	
ΔlnREV	Log-change in revenues: natural logarithm of sales revenues in current year divided by revenues in previous year.
D	Indicator variable equaling 1 if sales revenues in current year are less than revenues in previous year, and 0 otherwise.
CSRD	Corporate Social Responsibility dummy: a generic variable including ESGD and SOCPD.
ESGD	ESGD is a CSR proxy: dummy equaling 1 for firms with ESG score above median sample and 0 otherwise.
SOCPD	SOCPD is a CSR proxy: dummy equaling 1 for firms with Social pillar score above median sample and 0 otherwise.
Controls	
EMPLINT	Employee intensity: total number of employees divided by revenues.
ASSINT	Asset intensity: total assets divided by revenues.
SUC_DEC	Indicator variable equaling 1 for observations with two consecutive years with revenue decreases, and 0 otherwise.
GDPGR	Gross domestic product growth
Country dummies	
FR	France
GER	Germany
IT	Italy
SP	Spain