

Are Mandatory Auditing Requirements in Small Firms Justified by their Benefits? A Literature Review¹

Irina Alexeyeva, Peter Frii, Ann-Sofie Henrikson, Annina H. Persson, Oscar Stålnacke and Stefan Sundgren

Abstract

The regulation of auditing for privately held firms varies across the world. While countries such as the United States and Canada impose no general audit requirement for private firms, many European Union (EU) Member States mandate audits even for small entities. The EU Accounting Directive (2013/34/EU) sets minimum thresholds for audit exemptions but allows Member States to adopt stricter national rules, creating variation across the EU. This paper reviews theoretical and empirical literature on the regulation of private-firm auditing. It explores justifications for audit mandates for small private firms, including externalities, behavioral considerations related to tax compliance and financial misconduct, and costs and benefits of voluntary auditing. In addition, the study reviews legal frameworks for statutory audits in selected EU countries and highlights how national policies and risk assessments shape audit thresholds and enforcement strategies. The review concludes by identifying gaps in the literature and suggesting areas for future research.

Keywords:

Mandatory audits; audit costs; audit benefits; audit regulation

Irina Alexeyeva is an Associate Professor at Umeå School of Business Economics and Statistics, Umeå University, Sweden.

Peter Frii is an Associate Professor at Umeå School of Business Economics and Statistics, Umeå University, Sweden.

Ann-Sofie Henrikson is an Associate Professor at the Department of Law, Umeå University, Sweden.

Annina H. Persson is a Professor of Private Law at Royal Institute of Technology, Sweden.

Oscar Stålnacke is an Associate Professor at Umeå School of Business Economics and Statistics, Umeå University, Sweden.

Stefan Sundgren is a Professor of Accounting at Hanken School of Economics, Finland, and a Guest Professor at Umeå School of Business Economics and Statistics, Umeå University, Sweden.

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1. Introduction

The regulation of private-firm auditing varies significantly around the world. In the United States and Canada, private firms are not obligated to audit their financial statements, and therefore, only about one-third of all medium to large private firms prepare audited financial statements (Lisowsky & Minnis, 2020). In contrast, the general rule for private companies in EU Member States is that they must audit their financial statements. This requirement can be economically and administratively burdensome for small companies. For this reason, exemptions were introduced for small firms in the Accounting Directive, 2013/34/EU.² However, the Directive serves as a minimum harmonization instrument, which means that it only prescribes mandatory auditing for companies that exceed certain thresholds. Member States are allowed to impose audit requirements on smaller companies whose sizes fall below the thresholds.

Mandatory auditing has been a political issue in some European countries for many years (Accountancy Europe, 2020). In some countries, as for example in Sweden, the absence of mandatory auditing has been linked to increased economic crime, leading to proposals for lowering the thresholds that trigger audit requirements. Historically, however, the rationale for mandatory auditing has rarely been justified in detail in the Swedish legislation. The debate has instead mostly focused on the role of the auditor in the fight against tax fraud and other financial crimes. However, no detailed evaluation of the auditor's role in this regard has taken place. The abolition of mandatory audits in micro firms was primarily justified as a means to reduce costs and ease the administrative burden for small companies.³

The diversity of regulations across countries makes it difficult to evaluate the advantages and disadvantages of auditing. Numerous theoretical and empirical studies have been conducted to shed light on voluntary and mandatory auditing in general. Literature on private-firm auditing has been reviewed previously (Haapamäki, 2018; Vanstraelen & Schelleman, 2017). However, these reviews primarily focus on determinants of voluntary audit choices and on the economic benefits of being audited. The focus of those studies is not on mandatory auditing per se. The reviews by Minnis and Schroff (2017) and Langli and Willekens (2018) do address some of the benefits and costs associated with audit mandates. However, in this article, we aim to provide a more comprehensive and integrated review of both theoretical and empirical research on the topic.

The overall purpose of this study is to present a summary of what can be learned from the literature about the benefits and drawbacks of mandatory auditing for small, privately held firms. More specifically, we aim to gain insight into the factors and circumstances presented in the literature that support auditing, as well as those that challenge the justification for mandatory audits. In addition, we review research on the firm-specific costs and benefits of voluntary audits to assess whether firms have sufficient incentives to opt for audits even in the absence of mandates. Finally, we identify gaps in the existing literature to suggest directions for future research. Specifically, the study addresses the following research questions:

RQ 1: What can be learned from research about factors and circumstances that motivate mandatory audits?

² Art. 36 Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings.

³ SOU 2008:32 s. 71–77.

RQ 2: What can be learned from research on the firm-specific costs and benefits of voluntary audits?

RQ 3: What are the research gaps in the literature on mandatory auditing?

To complement the literature review, we examine the legal framework for mandatory auditing in the European Union and selected Member States to illustrate how audit requirements are applied in practice. While the EU Accounting Directive in many respects merely stipulates minimum requirements, Member States are allowed to impose stricter national rules.⁴ This flexibility has resulted in considerable variation in the thresholds for audit exemptions across the EU. By comparing audit thresholds, national adaptations, and recent legislative trends in five EU countries, Denmark, Finland, Sweden, Germany, and Spain, we aim to illustrate how different national contexts and policy rationales shape the implementation of mandatory audit requirements.

The study begins in chapter two with a presentation of the research method used. Chapter three provides a review of the legal requirements for auditing in some EU member states, including a summary of the threshold applied. We then present insights from the debate on the advantages and disadvantages of mandatory auditing, as well as having stricter auditing requirements for high-risk firms in Denmark. This is followed in chapter four by a review of theoretical studies on the benefits and drawbacks of mandatory auditing. Chapter five presents empirical studies on the effects of mandatory auditing in certain industries and on the market in general. Chapter six concludes the study by summarizing the main findings and offering directions for future research.

2. Research Method

The review is based on an electronic search of library journal databases for both published research and completed working papers available online. Key search terms included “mandatory audits”, “compulsory audits”, “audit requirements”, “audit costs”, “audit benefits”, and related variations. Furthermore, we have conducted a manual search of reference lists in relevant papers to identify additional sources. Identifying relevant disclosure and behavioral research in law and economics is challenging, as it is difficult to define specific search terms that would consistently identify literature relevant to audit mandate motivations. Therefore, that part of the review relies heavily on prior review articles (e.g., Beyer et al., 2010; Jolls et al., 1998) and manual reference tracing. Given the vast scope of research on auditing and regulation, a fully comprehensive review is beyond the scope of this study. Instead, we focus on a subset of literature that offers insights directly applicable to mandatory auditing.

The following inclusion criteria were applied to select relevant studies for this review. Firstly, the studies were included if they provided theoretical or empirical insights into factors that motivate audit mandates, including firm-level considerations and broader regulatory discussions. Secondly, we considered studies that addressed the costs, benefits, or implications of auditing for private companies, with a particular focus on mandatory audit requirements or voluntary audit decisions. Thirdly, disclosure and behavioral research were reviewed, provided they offered insights applicable to the audit mandate context. Fourthly, only studies published in peer-reviewed journals or reputable academic outlets were selected. Fifthly, to ensure a high quality of publication, we rely on the Association of Business Schools (ABS) Academic Jour-

⁴ Of relevance in this article art. 36 Directive 2013/34/EU.

nal Guide 2021, including journals ranked as 4*, 4, 3 and 2, with 4* representing journals of the highest quality. This largely corresponds to the Australian Business Dean Council (ABDC) journal list using the abbreviation as A*, A, B or C, with A* representing journals of the highest quality. In addition, completed working papers published online were included when they provided recent findings or research advancements relevant to our research questions. Including unpublished papers can enhance the comprehensiveness and depth of the literature review. However, it is important to exercise caution when using unpublished papers. Therefore, we critically evaluate the quality, reliability, and relevance of these papers, considering the authors' reputation and the rigor of the research design.

The review is based on 64 papers, of which 22 are theoretical (analytical) or empirical studies on voluntary auditing or audit mandates. Most of the remaining 42 papers are theoretical, empirical, or review articles focused on disclosure regulation or behavioural economics. We draw on these papers in our attempt to understand factors that could motivate audit mandates in Section 3. Table 1 summarizes the analytical studies on audit mandates. The 15 articles reviewed in Table 2 focus on firm-specific benefits of auditing. The two papers presented in Table 3 examine firm-specific costs, while the three papers presented in Tables 4 and 5 are empirical studies focusing on the market-wide effects of mandatory auditing. The legal discussion in this article is based on the European legislation and national acts obtained from EUR-Lex and national public databases provided by authorities, and the relevant academic literature. The selection of countries in Section 3 aims to highlight the diversity and in some cases and extremes of national statutory auditor requirements.

Since the analytical literature on audit mandates is scant, and audit mandates essentially is a way to regulate disclosure quality, we utilize disclosure theory to investigate the conditions under which such mandates may be warranted. Our review of the theoretical literature also incorporates insights from behavioral economics literature, which we apply to the context of mandatory auditing. We do this because entrepreneurs running small businesses are generally not experts in accounting or legal issues. Therefore, the assumptions found in behavioral economics literature may better explain their behavior than models based on rational utility maximization.

Analytical literature typically produces hypothetical effects, which are not necessarily empirically tested or supported. To better understand what is known (and what remains unknown) about audit mandates from the empirical literature, we next review studies examining firm-specific benefits, costs and market-wide effects of mandatory auditing. The (scant) literature on market-wide effects is reviewed with a particular focus on the broader consequences of audit mandates. The final aims of the study are to summarize what can be learned about audit mandates from the existing literature and to suggest fruitful areas for future research.

3. Mandatory Auditing in EU Countries

In this section, we present the European Union (EU) mandatory auditing requirements and provide detailed insights into the auditing regulations of several specific EU countries. The harmonization of accounting rules has been an important part of the work to create a common European corporate and capital market (Thorell, 1993). In order to guarantee that accounting information is equivalent in the Member States, Directives 2006/43/EC⁵ and 2013/34/EU contain

⁵ Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts.

provisions to ensure that companies' results and position are reported in a fair manner. A European standardization of companies' financial reporting can be expected to promote equal treatment of owners and stakeholders in different countries. Developments within the EU have thus come to develop towards higher requirements for accounting and auditing and that the review of the accounts must then be carried out by qualified auditors according to high standards. The provisions were designed with large and listed companies as a starting point. At the same time, it was found that the need for protection for shareholders and other actors who come into contact with small companies is often considerably less than in larger operations. In smaller companies with only one or a few owners, who may not infrequently be the same as those who run the business as board members and employees, there is no need for an auditor to provide insight into and control over the company's finances.⁶ Consequently, exemptions for smaller companies were already introduced in the Fourth Company Law Directive.⁷

In the accounting directive 2013/34/EU, the preamble states that a clear objective of the directive is to reduce the administrative burden and improve the business environment for SMEs. Reference is made, among other things, to the Commission's Better Regulation Programme "Smart Regulation in the European Union" and the Commission's Communication "Think Small First: A Small Business Act for Europe".⁸ The aim of the former is to design and introduce legislation of the highest quality, respecting the principles of proportionality and subsidiarity, and to ensure that the administrative burdens are proportionate to their benefits. The Commission's Communication draws attention to the role of SMEs in the growth of the Union economy and the importance of increasing the competitiveness of companies.⁹

Article 36 of the accounting directive provides for the possibility for Member States to make derogations for micro enterprises. A micro-enterprise is defined as an enterprise which, on the balance sheet date, does not exceed the thresholds of more than two of the following three criteria: a) A maximum balance sheet total of EUR 450 000, b) A net turnover not exceeding EUR 900 000, or c) An average number of employees during the financial year not exceeding ten persons.¹⁰ Derogations are also possible for small enterprises. A small enterprise is defined as an enterprise which does not have activities that exceed two of the following three criteria on the balance sheet date: 1. A balance sheet total of EUR 5 000 000, 2. A net turnover of EUR 10 000 000 and 3. The average number of employees during the financial year must not have exceeded 50 persons.¹¹ However, Member States may set higher thresholds for balance sheet total and net turnover as long as they do not exceed EUR 7 500 000 for balance sheet total and EUR 15 000 000 for net turnover, respectively.¹² The monetary size criteria were increased by 25 per cent through the 2023 amendment to the Accounting directive, thereby reducing the number of undertakings subject to mandatory statutory audit.

6 Preamble (43) of Directive 2013/34/EU.

7 Art. 51, 11, 12 and 44 of the Fourth Council Directive 78/660/EEC of 25 July 1978 based on Article 54(3)(g) of the Treaty on the annual accounts of certain types of companies.

8 Preamble (1) Directive 2013/34/EU.

9 https://commission.europa.eu/law/law-making-process_en, 2026-06-15, and European Commission Communication (COM(2008) 394 final) — 'Think small first' — A 'small business act' for Europe, <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=LEGISSUM:et0001>, 2026-06-15.

10 Art. 1 sec. 1 a and b, Commission delegated directive (EU) 2023/2775 of 17 October 2023 amending the accounting directive.

11 Art. 3 sec. 1 (c) Commission delegated directive (EU) 2023/2775 of 17 October 2023 amending the accounting Directive.

12 Art. 3 sec. 2 (a) and (b) Commission delegated directive (EU) 2023/2775 of 17 October 2023 amending the accounting Directive.

However, the exemption from ensuring that the company's accounts are audited is designed in such a way that each Member State may, but does not have to, make an exception to the audit requirement.¹³ The directive states that a national exemption should be designed taking into account the specific conditions and needs of its own markets.¹⁴ This means that the thresholds for when an auditor must be present differ between different Member States. In a longer-term perspective from 2006–2021, however, it can be stated that the thresholds have been increased in most Member States, with the consequence that, over time, a growing number of companies in most Member States have become exempt from statutory audit.

There are large differences between the levels of the Member States' thresholds. It can be noted that three countries, Sweden, Finland and Malta, stand out as the countries with the lowest thresholds and thus require an auditor even for smaller operations. This can be compared with Germany which has made full use of the discretion afforded by EU law by setting their national audit-exemption thresholds at the maximum balance sheet total and net turnover levels permitted under the Accounting Directive.

We proceed with an overview detailing how five different EU countries have implemented the requirements of the EU directive. Additionally, this section provides insights into national differences in legislation on the role of mandatory audits.

Denmark: In Denmark, several relaxations of the audit requirement have been implemented since 2006, when the Danish Parliament introduced a law that small companies were no longer required to have an audit. Since 2006, Denmark has allowed small companies (class B undertakings) to opt out of statutory audit. Subsequent increases in the applicable size thresholds, introduced in several stages, have meant that an increasing number of companies fall within the audit exemption. Companies are now exempt from the audit requirement if two of the following three thresholds are not exceeded for two consecutive years, namely 1) a maximum of 12 employees, 2) DKK 4 million (535 200 €) in balance sheet total and 3) DKK 8 million 41 070 000 €) in net turnover.¹⁵ These thresholds align with the extended thresholds specified in the EU directive.¹⁶

However, Danish legislation has certain limitations on the possibility of opting out of auditing even if the company does not exceed the thresholds. According to these provisions, a company may not opt out of an audit if the company itself, a related company or the person who has a controlling influence over the company, has been fined or convicted of a breach of the anti-money laundering legislation, Companies Act, the Accounting Act or the tax legislation. In such cases, the company may not opt out of audit for the financial year in which the decision becomes final and for the two subsequent financial years. Furthermore, the Danish Business Authority (Erhvervsstyrelsen) is empowered to suspend the audit exemption for an additional period of up to two financial years where significant errors or deficiencies are identified in the undertaking's financial statements or bookkeeping.¹⁷

In 2021, a broad political majority in Denmark agreed to increase efforts against fraud and errors in accounts and tax reports. The agreement led to legislation that came into force on the 1st of July 2022 and applies from the financial year beginning on or after the 1st of January 2023. The changes in the law meant, among other things, that companies with more than 50 million DKK (about 6.5 million €) in total assets should not be able to opt out of audit or ex-

13 Art. 36 Directive 2013/34/EU.

14 Preamble (14) Directive 2013/34/EU.

15 § 22a and 135 (1) årsregnskabsloven (Annual Accounts Act) LBK nr 402 af 26/03/2026.

16 Art. 3 (2) of Directive 2013/34/EU.

17 See § 135a årsregnskabsloven (Annual Accounts Act).

tended review, regardless of net turnover and number of employees. The changes in the law also entailed stricter requirements to hire an auditor for companies that have a net turnover of over 5 million DKK for two consecutive financial years and that operate within one of eleven specially designated high-risk industries. Depending on how the companies are classified, the auditor must provide different types of review or statements.¹⁸ The high-risk industries do include areas of business activity where many companies make mistakes in the declarations or do not pay VAT or other taxes on time, as cleaning services, transport and haulage services or restaurants and catering.¹⁹

Particularly interesting to note is that in a Danish evaluation (Erhvervsstyrelsen, 2018), it was also found that in companies where there is an intention to commit economic crime, mandatory auditing would probably not lead to better detection of illegal activities because it takes a long time (in some cases up to 23 months) before the annual report is audited. Therefore, individuals with criminal intent have plenty of time to commit crimes before the auditor comes into the picture.

Finland: In Finland, which has the most extensive requirements for mandatory auditing, auditing becomes mandatory already if more than one of the following criteria is met: (a) net turnover is greater than EUR 0.2 million, (b) total assets are over EUR 0.1 million, or (c) an average number of employees during the financial year exceeds 3 people.²⁰ Consequently, Finland has together with Sweden, Malta, and Cyprus the lowest thresholds for auditing in the EU. In 2018, it was proposed that the threshold should be raised to 10 employees, EUR 0.35 million in assets, and EUR 0.7 million in net turnover. However, this proposal did not lead to legislative change, partly due to concerns about its potential impact on the “gray economy”. In 2020 a working group proposed mandatory reviews instead of full audits of micro-companies. Currently, this has not resulted in a change of the regulation.²¹

Sweden: In Sweden, only smaller businesses are exempt from the statutory audit requirement, and until 2010, auditing was mandatory for all companies in Sweden, regardless of size. However, starting from 2011, the criteria changed: auditing is now required if a company exceeds more than one of the following thresholds: a) the average number of employees in the company has been more than 3 in each of the last two financial years, b) the company's reported balance sheet total has been more than SEK 1.5 million (approximately 0,13 million Euro) in each of the last two financial years, c) the company's reported net turnover has been more than SEK 3 million (approximately 0,27 million Euro) in each of the last two financial years.²² Consequently, compared to other EU countries, Sweden has low thresholds for mandatory auditing. A significant aspect of Swedish legislation is the duty imposed on auditors regarding suspicions of criminal activities by company executives. If an auditor suspects that a board member or the managing director is involved in crimes, such as fraud or money laundering, the auditor should inform the board of directors. If the board does not take appropriate actions (for example because the board is involved in the crime), the auditor is then obliged to inform a prosecutor about the suspects.²³

18 See § 135 sec. 1-8 årsregnskabsloven (Annual Accounts Act).

19 See Bekendtgørelse om fastsættelse af klassificerede risikobrancher efter årsregnskabsloven BEK nr. 1488 af 27. november 2025, <https://www.retsinformation.dk/eli/lt/a/2025/1488>, 2026-03-31.

20 2 § Revisionslag (Auditing act) 1141/2015, reviderad 31/12 2023 genom 1250/2023.

21 Ministry of Employment and the Economy publications 2020:38.

22 Ch. 9 art. 1 aktiebolagslagen (Swedish Companies Act) (2005:551).

23 These rules are in Ch. 9, art. 42-44 aktiebolagslagen (Swedish Companies Act), (2005:551).

Germany: The general rule for companies in Germany is the requirement to undergo an audit. However, exceptions are made for micro companies, which are defined by not exceeding two of the following thresholds: (a) total assets not exceeding 450,000 EUR; (b) 9,000,000 EUR in sales revenue in the twelve months preceding the balance date sheet; or (c) an annual average number of employees not exceeding 10.²⁴ The exceptions for small companies, which are defined by not exceeding two of the following thresholds: (a) total assets not exceeding EUR 7,500,000 EUR; (b) 15,000,000 EUR in sales revenue in the twelve months preceding the balance date sheet; or (c) an annual average number of employees not exceeding 50.²⁵

To summarize, micro or small companies usually never have to undergo audits. However, it is a common practice for such companies to use a tax advisor (Steuerberater), who is responsible for preparing tax declarations, annual reports, and managing salary and fee reports.²⁶ In Germany, there is a strong connection between accounting and taxation, and thereby, the tax advisor has an important role in accounting. The professional role of the tax advisor is regulated, and a special degree is required.²⁷ The tax advisor assures the tax authority that no violations of the tax legislation, or other financial crime have been discovered.

Spain: In 1951, Spain introduced a new limited liability company law which, for the first time, included provisions for auditing in its legal framework. However, these initial regulations stipulated an audit only if it was demanded by a specified percentage of the shareholders. Apart from some minor changes, the issue of mandatory audits in Spain did not gain serious attention until the late 1980s when Spain became a member of EU. The current regulation in Spain mandates auditing unless, at the end of the financial year, a company meets at least two of the following criteria: (a) a net turnover of no more than EUR 5.7 million; (b) a total balance sheet value not exceeding EUR 2.85 million; or (c) more than 50 employees.²⁸ In essence, Spain has set its mandatory auditing requirements at approximately half of the EU's thresholds for net turnover and total assets.

A notable feature of Spanish legislation is the stipulation that the duration of the initial contract with an auditor must be between three and nine years. After this period, the contract may be renewed annually.²⁹ Obviously, the purpose of this rule is to reduce the risk of "audit opinion shopping" (Ruiz-Barbadillo et al., 2006). In contrast to Denmark and Sweden, there is – as we know - no public debate about the role of auditing in deterring financial crimes in Spain.

The pros and cons of low threshold mandatory auditing are currently a subject of debate in Sweden, as of the time of writing this study. Following the abolition of mandatory auditing for all companies in 2010, an evaluation conducted by the National Audit Office (2017) concluded that the disadvantages outweigh the advantages.³⁰ Among other things, the authority finds that the cost savings for companies not using auditors are minimal and that financial reports

24 § 267 Handelsgesetzbuch (HGB). "Aktiengesellschaft" which do not exceed the thresholds are considered small, have an audit obligation according to § 316 (1) HGB and for GmbH § 264a HGB.

25 § 267a and § 267 Handelsgesetzbuch (HGB). "Aktiengesellschaft" and GMBH (Gesellschaft mit beschränkter Haftung) which exceed the thresholds have an audit obligation according to § 316 (1) HGB and § 264 and § 264 a HGB.

26 See § 5 abs. 1 Einkommensteuergesetz (EStG).

27 See § 35 Steuerberatungsgesetz (StBerG) where it is pointed out that an exam is required and that the exam is organized by a committee supervised by the taxation authorities.

28 Art. 263 La ley de Sociedades de Capital (Capital Companies Law), 3rd of July 2010 nr 161. Real Decreto Legislativo 1/2010, de 2 de julio, por el que se aprueba el texto refundido de la Ley de Sociedades de Capital.

29 264 La ley de Sociedades de Capital (the Companies Act) 3rd of July 2010 nr 161. and art. 22 of the Accounting Act (Ley de Auditoria de Cuentas), 20th of July 2015, nr 22/2015.

30 RIR 2017:35.

without audits tend to contain more errors. Additionally, the National Audit Office observed that companies opting out of auditing are often involved in cash-intensive businesses, leading to the conclusion that the fight against financial crime has become more challenging as a result of these legislative changes.

4. A Review of Theoretical Studies on Auditing

This section addresses RQ1 by reviewing theoretical justifications for and against mandatory auditing. Generally, proponents of mandatory audits (and mandatory disclosure in general) claim that information about a firm's financial conditions will be underreported without regulation. They also assert that firms will suppress information if it is unfavorable for them to disclose. Opponents, on the other hand, claim that firms have incentives to voluntarily disclose information in order to differentiate themselves from high-risk and/or low-value firms (e.g., Dye, 1990; Lennox & Pittman, 2011). Consistent with the view that audit mandates are unnecessary, Watts and Zimmerman (1983) find in their analysis of the historical development of auditing that it arose voluntarily as a demand-driven service rather than as a result of regulation.

This section explains the underpinning of these opposing views. In addition to theories directly related to mandatory auditing, we also base our analyses on theories of mandatory disclosure. The rationale for including this literature is that an audit mandate does not necessarily increase the amount of information disclosed by firms but requires that the financial statements they disclose meet a minimum level of credibility and verification. In this sense, auditing can be viewed as a complement to disclosure regulation because it enhances the reliability of financial information available to external stakeholders (see Beyer et al., 2010). This connection is particularly relevant when considering voluntary audit choices, since firms may use audited financial statements to signal the credibility of their financial information to lenders and other external stakeholders.

Our review begins with a discussion of research examining the effects of mandatory auditing on production costs, audit fees and audit quality in settings where there are no externalities. We then turn to theories on disclosure costs (including externalities) and discuss how such costs may influence auditing choices in an unregulated market. Finally, we present some insights from the behavior economics literature and discuss their potential implications for audit mandates.

4.1. Impact of Mandatory Audits on Audit Quality, Audit Costs and Audit Fees

One might assume that audit mandates increase the quality of audits and audit fees, but some analytical studies suggest this is only half the truth. Ronnen (1996) analyzes how mandatory auditing influences the overall quality of audits and audit fees. He examines a setting where the demand side consists of several client firms, and the supply side includes two audit firms competing on quality and price. The study assumes that audit firms aiming to provide high-quality services make a fixed-cost investment to attain quality, and that each audit firm offers the same quality level to all its clients. In this framework, audit quality becomes differentiated if one of the two audit firms makes the fixed-cost investment to offer higher quality audits. A key finding in the study is that mandatory auditing will make the low-quality auditor less aggressive in its pricing behavior, that is, charging lower fees. Furthermore, compared to an unregulated market, auditing mandates widen the disparity in quality levels offered by audit firms. In es-

sence, mandatory auditing creates the demand for low-quality and low-cost auditing services. The increased disparity in quality will also result in a switch of some clients from lower-quality to higher-quality audit firms.

Breuer et al. (2023) analyze how auditing mandates impact audit fees and the job market for auditors. They present a model where the demand for voluntary audits depends on client firm size. Audit firms can grow by attracting new employees, who will enter the profession if their wage exceeds their outside-option wage. Greater demand for auditors increases wages and, in turn, the marginal cost of auditing. The main predictions of their model are that mandatory audits lead to an increase in the number of auditors and their wages, while decreasing the average size of audit clients. As a consequence of higher wages and audit fees, some voluntary audit demand is crowded out (i.e., clients that would have the incentive to hire an audit in an unregulated market may find the costs too high in a regulated one).

These models suggest that audit mandates may lead to unintended market distortions, such as increased demand for lower-quality audits and reduced incentives for voluntary auditing. Although mandates may expand the audit market, they do not necessarily result in uniform improvements in audit quality. These theoretical insights also inform RQ₁ by highlighting that the motivation for mandatory auditing may depend on how mandates influence audit market structure and incentives. Further empirical research could shed more light on these effects.

4.2. Auditing at an Unregulated Market Without Externalities and Other Market Imperfections

The observation that no audit mandates are required in markets without externalities or other imperfections can be understood by applying the unraveling result at the auditing setting. Research related to the “unraveling result” identifies conditions under which firms voluntarily disclose all their private information (Beyer et al., 2010). The underlying assumption is that a firm knows its own type, but this type is unknown to external parties.

As discussed in Section 5.1, auditing improves earnings quality and reduces the cost of debt capital. To illustrate the intuition behind the unraveling argument in a voluntary auditing setting, assume that credit risk varies across firms, the firms know their own risk, and that creditors are unable to distinguish between high-risk and low-risk firms when firms are unaudited. If auditing improves earnings quality to the extent making it possible for creditors to differentiate between firms, then all unaudited firms will, in this setting, receive credit on similar terms. To get credit on more favorable terms, firms with below-average credit risk will have an incentive to signal their type by voluntarily hiring an auditor. As a result, the average credit risk of the remaining pool with unaudited firms will be higher than when all firms were unaudited. This will prompt the unaudited firms with the highest quality to audit as well. This will lead to a spiral in which firms choose to be voluntarily audited to separate themselves from lower-quality peers. Eventually, this should result in a market where all but the worst firms choose to be voluntarily audited.

This argument, however, assumes that disclosure is costless (Beyer et al., 2010). As discussed in Section 5.2, audit fees can be significant, especially for small firms. In a market where auditing is costly, firms will only hire an auditor if the benefits of signaling quality exceed the costs. This results in a market equilibrium where only a portion of firms will choose to undergo

auditing.³¹ The analysis of audit mandates from the perspective of signaling theory suggests no inherent need for mandatory auditing, since firms can credibly signal their quality through voluntary audit choices. Moreover, mandatory auditing may even be counterproductive by removing the signaling value of audit choice, thereby suppressing valuable information about the types of firms that would have chosen to be audited (Lennox & Pittman, 2011).

However, the unraveling result rests on several assumptions (see Beyer et al., 2010 pp. 301-305). For example, unraveling will not occur if firms with very good as well as very bad news choose to withhold information (Clinch & Verrecchia, 1997; Fisher & Verrecchia, 2004). In the auditing setting, this situation might occur if poorly performing firms opt out of auditing because they do not want to reveal their financial weaknesses to lenders, while high-performing firms opt out to avoid disclosing sensitive performance information to competitors.

Beyer et al. (2010) identify four main rationales for financial disclosure regulation in the literature: financial externalities, real externalities, agency costs and economies of scale. Of these, the literature addressing real externalities is particularly relevant for the voluntary auditing setting. Real externalities arise when a firm's disclosure affects other firms' decisions and cash flows (Beyer et al., 2010; Dye, 1990). An example of a real externality, that has received considerable attention in analytical and empirical research, is that a firm's disclosure of proprietary information influences a competitor's decision to enter or exit a market (e.g., Cho et al., 2020; Darrough & Stoughton 1990; Ellis et al. 2012; Li et al., 2018, Wagenhofer, 1990). In an auditing setting, this literature raises the question of whether the threat of increased competition deters firms from publishing audited financial statements. Section 5.3 discusses the scant empirical evidence that is available on this topic.

Real externalities also occur when external parties bear the costs of a firm's decision, while the firm exclusively reaps the benefits. For example, opting out of auditing has been associated with higher rates of tax evasion and engagement in illicit activities (Accountancy Europe, 2020). Since society bears the cost of reduced tax income and criminality, such externalities may provide justification for regulation. However, a critical issue is whether the auditor is the party that mitigates these problems most cost-efficiently. An obvious alternative is the imposition of stricter penalties for tax evasion and corporate misconduct. The relative efficacy of auditing and penalties may, in turn, depend on how rational entrepreneurs are in evaluating future legal risks. From the perspective of RQ1, these theoretical insights suggest that mandatory auditing may be justified primarily in settings where externalities or other market imperfections weaken firms' incentives to voluntarily disclose credible financial statements. This point will be explored further in the following section through insights from behavioral economics literature.

4.3. Relaxing the Rationality Assumption

A stream of behavioral economics research in law and economics analyzes how factors such as bounded rationality, bounded willpower, bounded self-interest, over-optimism, and moral

³¹ The signaling literature builds on the assumption that signaling costs vary between firms (see Connelly et al., 2011 for a review of signaling literature). For example, assuming that the benefits of auditing are lower for firms owned by entrepreneurs who are likely to take actions harmful to creditors than for honest entrepreneurs, and that the audit cost is the same for all firms, there may be a signaling equilibrium in which firms owned by honest entrepreneurs choose to be audited, while firms owned by less honest entrepreneurs opt out of auditing. If a separating equilibrium emerges, creditors (and other users of financial statements) can learn about entrepreneurs' traits by observing their auditing choices.

costs influence actors in legal systems (e.g., Garoupa, 2003; Jolls et al., 1998; Sunstein, 1999). Bounded rationality refers to the fact that humans' cognitive abilities are not infinite. To deal with these limitations, people frequently rely on rules of thumb or heuristics. While the rules of thumb are generally useful, they can lead to systematic errors in specific situations (Jolls et al., 1998).

Bounded willpower refers to the tendency of individuals to take actions that they know are in conflict with their long-term welfare. For example, an entrepreneur may recognize that complying with laws and regulations is beneficial in the long run. However, doing so may require short-term sacrifices, such as time or financial resources. When faced with such decisions, entrepreneurs choose the immediate, smaller benefit over the delayed uncertain potentially larger award.³² This preference is explained in the literature on bounded willpower (and lack of self-control) by the concept of present bias, which suggests that individuals disproportionately value immediate outcomes over future ones. In other words, the implied discount rates vary with the time horizon, leading to a strong preference for near-term rewards and an aversion to near-term penalties.³³

We continue with applying the concepts of bounded rationality and bounded willpower to the issue of tax evasion. Tax evasion remains a significant problem in many countries. In the US, for example, Hurst et al. (2014) find that self-employed individuals underreport approximately 25% of their income on average. Using a model based on rationality, firms would trade-off the benefits of tax evasion against its costs (i.e., the risk of being caught and punished) when they decide how much income to report (Allingham & Sandmo, 1972).³⁴ Taxation authorities are responsible for ensuring compliance, and if entrepreneurs running unaudited businesses are, for some reason, more prone to tax evasion than those with audited accounts, taxation authorities can respond by adopting a risk-based strategy and investigate unaudited firms more frequently than audited firms.³⁵ Rational individuals are expected to make at least rough cost-benefit calculations before making their decisions. If the perceived risk of getting caught is sufficiently high, it should deter rational entrepreneurs from engaging in tax evasion. Hence, under the assumption of rationality, the reduced risk of tax evasion alone is arguably not a sufficient rationale for mandatory audits.³⁶

However, the importance of mandatory audits might increase if entrepreneurs behave in boundedly rational ways. Bounded rationality implies that entrepreneurs systematically fail

32 For a comprehensive presentation of the concepts, see for example Jolls et al., (1998), Garoupa (2003), Bukspan (2021) or Dold (2023).

33 This pattern is referred to as "hyperbolic discounting" (e.g., Laibson, 1997).

34 Research concludes that also the tax-morale impacts how much tax that is paid, and that the tax morale varies between individuals and countries (Luttmer & Singhal, 2014).

35 Research suggests that a higher book-tax conformity results in more income decreasing earnings management (Watrin et al., 2014). Therefore, the association between auditing and tax evasion might be stronger in countries with a high book-tax conformity.

36 Similar arguments can be made for other types of crimes related to auditors' responsibilities. The Swedish Economic Crime Authority (2020) finds that criminal activity is more prevalent among firms that choose not to be audited.

to assess costs and benefits accurately. Jolls et al. (1998) suggest that increasing the visibility of law enforcement means the future consequences of illegal actions more cognitively accessible, and lead to more accurate assessments of the likelihood and severity of punishment. They conclude that enhancing the visibility of enforcement is desirable from a prescriptive standpoint. Auditors have regular and frequent contacts with their client-firm and have therefore good opportunities to make the consequences of tax evasion apparent for the firm. Following the reasoning above, improved visibility of enforcement through regular auditor contact could help entrepreneurs more accurately evaluate the risks of non-compliance, thereby reducing the incidence of tax evasion even in the absence of rational behavior.³⁷

Furthermore, mandatory auditing may play a more significant role in reducing tax evasion and corporate criminality if entrepreneurs exhibit risk preferences consistent with bounded willpower. As discussed above, the literature on bounded willpower suggests that individuals display present bias, that is, a strong preference for near-in-time rewards and aversion to near-in-time punishments but that each of these diminish over time. This simplifies that a small penalty near in the future may have a much stronger deterring effect than a large penalty far in the future. As Jolls et al. (1998) point out, potential offenders care much more about the difference between not getting caught and being imprisoned for one year than by the difference between being imprisoned for ten years versus eleven years.

Tax evasion tends to be associated with a relatively low probability of detection and relatively high penalties. One way to increase the likelihood of detection is to require auditors to report such irregularities to tax authorities or other governmental bodies. For example, as mentioned above, in Sweden auditors are required to include an explanatory paragraph in the audit report if a firm has failed to pay taxes, or if it in other ways has violated tax laws.³⁸ In such cases, the auditor must also send the audit report to the tax authorities. Furthermore, Swedish laws oblige auditors to inform the board of directors and the public prosecution service if there are suspicions of criminal activity. Auditors are likely to have a higher probability of detecting such irregularities than tax authorities, and while the consequences of auditors' detection and reporting may be less severe than those imposed by law enforcement, they are more immediate. As such, they may be more effective at deterring entrepreneurs whose time preferences align with bounded willpower. In this way, auditor involvement could serve as a more effective and timely means of deterrence than relying solely on formal legal penalties. Obviously, a policy requiring the auditor to report irregularities works efficiently only if auditing is mandatory.

³⁷ This conclusion parallels the observation by Jolls et al. (1998: 1538) that making parking ticket enforcement more visible by using large visible tickets is more efficient than using small hardly visible tickets because it brings the consequences of a parking offense into mind for those that pass the car with the ticket. Furthermore, Jolls et al. point out that another example of how visibility can impact criminality is that visible police patrols (for example, police that walk in the streets rather than drive patrol cars) can increase the deterrence of potential criminals without altering the actual probability of apprehension. In a similar vein, the visibility about the consequences of tax evasion and crimes brought to entrepreneurs by auditors may deter entrepreneurs from engaging in illegal activities.

³⁸ The Swedish Companies Act (2005:551) (CA) include the following main regulations related to the auditor's responsibilities to report tax evasion and other crimes: Ch. 9 art. 33 CA requires that the audit report should be qualified if board members or the managing director have undertaken actions that may make them liable to pay damages. Ch. 9 art. 34 and art. 37 CA requires that the auditor should include an explanatory paragraph in the audit report if the firms has violated tax laws. The auditor should in that case inform taxation authorities by sending them the audit report. Ch. 9 art. 42-44 CA requires that the auditor should immediately inform the board of directors and the public prosecution service if he or she suspects that some criminal actions have taken place in the company.

Overall, the theoretical literature reviewed in this section suggests that the case for mandatory auditing depends critically on the presence of externalities, market imperfections, or behavioral biases that limit the effectiveness of voluntary auditing mechanisms.

5. A Review of Empirical Literature

In this section, we review empirical studies that explore the economic effects of auditing, structured around two levels of impact: firm-specific and market-wide. This review primarily addresses RQ₂ by identifying the costs and benefits associated with voluntary audits. It also contributes to RQ₁ by examining how mandatory audits affect firms and audit markets. The studies are summarized in Tables 1–4 and discussed in the text to highlight the progress in the area.

5.1. Firm-Specific Benefits

In this subsection, we discuss empirical studies that identify possible benefits of auditing. We focus on studies related to audit exemptions when firms of a certain type (i.e., private firms in the US) or below a given size threshold are allowed to choose to be audited. A firm-level line of reasoning suggests that the credibility of financial information is essential for users, such as creditors and other third-party investors, in making their resource allocation decisions. External auditors provide independent verification that financial information is presented without significant distortion, thereby increasing its reliability (Hope et al., 2011). Audits will thus reduce information risks when capital providers make financial decisions (Hope et al., 2009). Two studies (Dedman & Kausar, 2012; Lennox & Pittman, 2011) examine the impact of audit exemptions on the credibility of financial information measured by firms' credit ratings. Lennox and Pittman (2011) find that when auditing becomes voluntary, the firms that remain audited receive higher credit ratings, while unaudited firms receive lower ratings. They conclude that the rating upgrade is due to the positive impression that the decision to be audited voluntarily conveys to third parties such as credit-rating agencies. Similarly, Dedman and Kausar (2012) find that firms which retained an audit received significantly higher credit scores compared to audit opt-out firms. Both findings suggest that credit rating agencies perceive audited financial statements to be of greater credibility compared to unaudited financial statements. Based on these findings, Peel (2021) examines the conjecture that companies which disclose that their annual accounts are prepared by reporting accountants are rewarded with higher credit scores. He uses a sample of unaudited micro companies from the UK but fails to find any support for his hypothesis.

Furthermore, Dedman and Kausar (2012) and Clatworthy and Peel (2013) investigate the impact of audit exemptions on the quality of financial statements. Dedman and Kausar (2012) find that firms that no longer are audited become less conservative and report more aggressively while Clatworthy and Peel (2013) find that audited accounts are approximately half as likely as unaudited accounts to contain errors. Downing and Langli (2019) examine how audit exemptions affect firms' compliance with relevant accounting and tax regulation. They measure firms' compliance by the "compliance quality score" (CQS), which is constructed using the results of the inspections conducted by the Norwegian Directorate of Taxes. The results show that firms that chose not to be audited had a significantly lower CQS also during the period when they had an auditor. They attribute this result to the difficulty to ensure uniform compli-

ance quality in a mandatory audit regime. Further, they find that the CQS of those firms that chose not to be audited declined after these firms opt out of being audited. These findings suggest that audit exemptions can reduce the quality of financial statements as well as the quality of firms' compliance with accounting and tax regulation for those firms that opt out of audit. Ojala et al. (2020) also explore the conjecture about the credibility of audited financial statements from the tax authority's perspective. They develop a theoretical model and empirically examine whether voluntary audit influences the tax authority's response in terms of tax adjustments, using a large dataset of Finnish small private companies. The result shows the probability of tax adjustments made by the tax authority is lower in companies that choose to voluntary audit and receive an unqualified audit report.

The above evidence indicates greater credibility and quality of audited financial statements. This provides compelling reasons why audited financial information can be important for external capital providers. A significant body of literature investigates this issue focusing on various aspects. Blackwell et al. (1998) use a sample of 212 of U.S. private or closely held firms of which 37% are voluntary audited and find that the choice to be audited leads to significantly lower interest rates. However, they do not find any significant effects of other alternatives to audit, such as review and compilation, on interest rates. Minnis (2011) uses a larger sample with U.S. firms and provide similar evidence on the debt pricing for voluntary audited private firms. He further finds that the cost of debt is more strongly associated with financial statement variables for firms with audited financial statements compared to firms with unaudited financial statements. He concludes that lenders use financial statements to a greater extent in their pricing decisions if they are audited. Kim et al. (2011) also examines how the voluntary choice of audit influences the price of debt using a large sample of Korean private firms. Their finding confirms the results of Blackwell et al. (1998) and Minnis (2011). Allee and Yohn (2009) also consider different types of financial-statement attestations and show that only audited financial statements benefit the firms through greater access to credit. Indeed, some of these studies are based on relatively small samples that reduce the power of the statistical tests. For example, Blackwell et al. (1998) use a sample with 212 firms of which 78 were audited, 34 reviewed and 52 compiled by auditors. Furthermore, various forms of attestations have been aggregated in the analyses. Therefore, we think there is a demand for more research examining how various types of attestations correlate with the availability and cost of debt.

Kausar et al. (2016) further explores the benefits of audit by examining whether the decision to obtain an audit contains information that is independent of the information produced from the audit. Using a natural experiment setting provided by audit regime shift in the U.K., they find that firms that voluntary obtain audit significantly increase their debt, investment, and operating income. They also find that the cost of debt has been reduced for those firms. Kausar et al. (2016) concludes that audits not only enhance financial statement reliability, lowering capital costs, but also offer creditors additional insights, easing financial frictions. Further, they conclude that such information would be hidden by the audit mandate.

The role of credible financial information for external capital providers can depend on country-specific institutional factors. Hope et al. (2011) use survey data from 68 private firms around the world and find that firms whose financial statements were reviewed by an external auditor experience considerably lower external financing constraints. Moreover, they find that this relationship increases in the presence of controlling owners, especially in countries with weaker investor creditor rights. Using survey data, Briozzo and Albanese (2020) study the effects of voluntary audits on firms' investment and financing decisions in countries that are

characterized by a weaker institutional setting (i.e., Argentina, Brazil, Colombia, and Mexico). Their results show that the choice to obtain an audit is positively associated with firms' access to financing and the probability of investing in fixed assets. Their results are consistent with previous findings showing that audited financial statements provide greater financial and investments opportunities, indicating that the audit choice also is important for firms in emerging economies.

In general, the above studies suggest that auditing enhances the quality and credibility of financial information, and access to finance. These findings are directly relevant to RQ2, as they indicate that voluntary audits can generate important firm-level economic benefits.

5.2. Firm-Specific Costs

In this subsection, we seek to add to the literature by outlining potential costs related to auditing by reviewing the relatively sparse empirical literature in the area. The cost of audit includes direct audit fees, and the indirect cost of management time and effort related to the preparation and supervision of the audit process (Bernard et al., 2018; Kausar et al., 2016). Data on audit fees is unavailable in many European countries. Nonetheless, a few studies have estimated average audit fees for private firms. Kausar et al. (2016) report that an average private firm in the U.K. pays audit fees about £6,000, which represents approximately 6% of the firm's earnings. The average audit fees in Spain are approximately €7,000 (Gandía & Huguet, 2018). The indirect cost of management time/effort is difficult to observe. However, Kausar et al. (2016) suggest that these costs are non-trivial.

Further, Kausar et al. (2016) suggest that since audit costs are substantial for small firms, firms near the size thresholds can try to obtain an exemption from the audit requirement by manipulating their size downwards. They examine the frequency distributions of firms along the continuum of size (sales and assets) near the pre-2004 regulatory threshold for audit exemptions in the U.K. and find support for their hypothesis. They attribute the result to the fact that audit represents a considerable cost for small firms.

Bernard et al. (2018) further explore the idea of size management and estimate the costs of disclosure avoidance. Using data on private firms from 12 European countries, they find that approximately 8% of the firms manage their assets to obtain an exemption from the audit requirement. They further report that the estimated direct cost of managing size for firms near the threshold is approximately 7%–9% of the firm's median income. Bernard et al. (2018) conclude that audit represents a substantial cost for small firms despite the potential offsetting benefits. They further discuss that the size threshold creates incentives for firms to be below it.

The above studies suggest that despite potential benefits, audit costs can be substantial, especially for small firms, and may influence firms' incentives to comply with mandates. These findings complement the benefits discussed in Section 5.1 and contribute to RQ2 by highlighting the firm-specific costs associated with auditing.

5.3. Market-Wide Effects of Mandatory Auditing

In this subsection we discuss empirical studies on potential market-wide effects of auditing mandates. Theoretical studies (see the review in Section 4) suggest that firm disclosures also affect other firms and result in information spillovers and externalities. There is a growing stream of recent research that addresses this issue.

Breuer (2021) explores the effects of mandatory reporting and auditing on industry-wide resource allocation using data from 26 European countries. The result in his study suggests that audit mandates make entry for small firms more difficult and that it increases the minimum level of productivity required for firms to operate in an industry. Breuer concludes that auditing mandates do not lead to improvements beyond firms' voluntary audit choices and that they impose a fixed cost on firms.

In a recent study, Breuer et al. (2023) develop a theoretical model (described in Section 4.1) and empirically examine whether mandatory auditing influences the audit market using data on European firms. In their empirical analyses, they find that audit mandates considerably increase audit demand, while simultaneously decreasing the average size of audit firms' clients. Small firms mandated to buy an audit tend to buy a cheaper audit in a differentiated audit market to keep their costs down. As a result, this mainly increases the demand for lower-quality audits. Further, they report that an audit mandate is associated with a significantly lower average auditor wage, which is explained by younger unexperienced auditors entering the market. At the same time, they observe that audit mandates displace the rate of voluntary audits among other firms. The explanation they provide is that audit mandates increase audit cost (due to limited audit resources) and thereby impose economic externalities on other firms. Breuer et al. therefore question the effectiveness of audit mandates due to the emergence of low-quality audits.

These findings suggest that mandatory auditing may have broader market-wide consequences that extend beyond individual firms. From the perspective of RQ1, this highlights how audit mandates can influence audit market structure, entry conditions, and firms' incentives to obtain voluntary audits.

5.4. Other Studies on Effects of Audit Mandates

In a recent study, Dong et al. (2023) uses Swedish data and explore the prediction that the shift to a voluntary audit regime will induce greater levels of tax avoidance for firms that voluntarily choose to retain audit compared to firms that are under an audit mandate. The results support this prediction, and they find that firms with voluntary audits significantly decrease their tax burden relative to firms with mandatory audits. This change in tax burden is equivalent to about 1,500 EUR or 19% lower tax payment for each firm with a voluntary audit. Their results also suggest that the voluntarily audited firms report higher levels of tax avoidance if their auditor's client portfolio size is composed by more than 50% of firms that voluntarily choose to be audited. They conclude that a voluntary audit regime weakens auditor independence which results in higher levels of tax avoidance.

These findings suggest that the effects of audit mandates may depend on how regulatory regimes influence auditor incentives and independence. From the perspective of RQ1, this highlights the importance of institutional design when evaluating the potential benefits of mandatory auditing. Overall, the empirical literature reviewed in this section suggests that auditing can generate important firm-level benefits, such as improved financial statement credibility and lower financing costs, while also imposing non-trivial costs, particularly for smaller firms. These findings provide insights into RQ2 by highlighting the trade-offs firms face when deciding whether to obtain an audit voluntarily. At the same time, the evidence on market-wide effects contributes to RQ1 by illustrating how audit mandates can influence audit markets and the behavior of other firms.

6. Conclusions and Suggestions for Future Research

Audit mandates of privately held firms vary significantly across the world. At the one extreme, Nordic countries exempt only micro firms from audit requirements, while at the other extreme, countries like the US and Canada exempt most privately held companies from statutory audits. Under the current EU Accounting Directive, mandatory auditing is only required for companies that exceed certain thresholds. However, Member States are allowed to impose audit requirements on smaller companies whose sizes fall below the thresholds. However, individual EU countries have the discretion to apply stricter national rules and set lower thresholds, thereby extending audit requirements to smaller entities. This paper presents a synthesis of theoretical arguments and empirical evidence on the justification and effects of mandatory auditing for small, privately held firms. In doing so, the review addresses three research questions concerning the motivations for mandatory auditing (RQ 1), the firm-level costs and benefits of voluntary audits (RQ 2), and the research gaps in the literature on mandatory auditing (RQ 3).

This review has examined the literature on both the firm-level costs and benefits of auditing and the broader theoretical arguments for audit mandates. Many empirical studies support the view that auditing enhances the credibility of financial reporting. While findings are somewhat mixed, most studies indicate that audited financial statements are associated with higher credit ratings, lower borrowing costs, fewer accounting errors, improved access to external financing, and better compliance with accounting and tax regulations. However, these benefits alone do not provide sufficient justification for making audits mandatory. In the absence of externalities (i.e., situations where the costs or benefits of auditing extend beyond the individual firm), firms already have incentives to voluntarily obtain an audit when the expected benefits outweigh the costs.

With respect to RQ 1, the theoretical literature suggests that externalities may, in certain cases, justify audit mandates. For example, disclosure literature identifies the effects on competition as an externality that influences firms' willingness to disclose financial information. Hypothetically, the higher-quality financial reports of audited firms could provide competitors with better insights into the profitability in the industry and thereby influence competition. The threat of competition might deter some firms from voluntarily disclosing such information. This could result in fewer audits being undertaken than what would be socially optimal. There is, therefore, a need for further empirical research on how such disclosure externalities impact firms' audit choices.

With respect to RQ 2, our review indicates that voluntary auditing often provides substantial private benefits. With respect to RQ 3, our review also highlights several important gaps in the existing literature. One area deserving particular attention is the potential role of auditing in reducing tax evasion and financial misconduct. Our review of mandatory auditing requirements in selected EU countries indicates that policymakers in, for example, Denmark and Sweden, view auditing as a tool to mitigate these problems. In Denmark, small firms that have violated accounting or tax laws may be required to undergo a mandatory audit for a period of three years. In Sweden, auditors are obligated to report suspected tax violations to the relevant authorities. These rules reflect the perception of the auditor as a compliance mechanism that increases regulatory visibility. Since the costs of tax evasion and financial crime are borne by society at large, such violations represent externalities that may motivate regulatory intervention. However, a key question is whether auditors are the most cost-effective mechanism to address these issues. An alternative could be stronger enforcement through severe penalties for non-compliance.

Virtually all of the extant mandatory auditing literature assumes that entrepreneurs are fully rational. However, the insights from behavioral economics challenge this assumption. Entrepreneurs running small businesses may exhibit bounded rationality or bounded will-power, underestimating future compliance risks or overvaluing short-term costs and benefits. We suggest that auditing might play a greater role in reducing tax evasion and criminality if one acknowledges that small business entrepreneurs do not always act in a fully rational manner. Therefore, we encourage more research on the relationship between audit mandates, entrepreneurial behavior, tax evasion, and corporate misconduct.

As noted, some EU countries have implemented unique approaches to reduce tax evasion and criminality. However, the effectiveness of these policies remains largely untested. For example, does the Danish rule to impose mandatory auditing for firms that have violated tax or accounting laws reduce tax evasion or financial misconduct? Does the Swedish requirement that auditors report legal violations to the authorities improve compliance? Or does the German practice of using a tax advisor (*Steuerberater*) (who is responsible for preparing tax declarations and annual reports) result in lower tax evasion and higher reporting quality? We encourage future empirical research to examine the effects of such idiosyncrasies in the legislation. That research could be done as cross-country studies or as longitudinal studies that assess the impact of regulatory changes within a country over time.

In conclusion, the literature reviewed in this paper suggests that the justification for mandatory auditing (RQ 1) depends on the presence of externalities or enforcement concerns, while the evidence on firm-level costs and benefits (RQ 2) indicates that voluntary auditing often provides substantial private benefits. However, we identify no empirical or analytical studies that justify a general policy of mandatory auditing for all small private firms. Therefore, based on the current body of literature, we conclude that the arguments in favor of audit mandates remain weak. However, the presence of underexplored externalities, the limitations of rational behavior assumptions, and the diversity of regulatory practices all point to the need for more focused empirical research. Future studies could explore how audit mandates perform in different institutional environments, evaluate the effectiveness of alternative policy tools aimed at improving compliance and financial reporting quality, and assess their behavioral impacts in the private sector.

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Table 1. Analytical studies of issues directly or indirectly related to audit mandates

AUTHOR (YEAR)	RESEARCH QUESTION	FINDINGS
Breuer <i>et al.</i> (2023)	How audit mandates shape audit markets (theoretically and empirically)	Audit mandates do not ensure regulatory compliance and may result in low-quality audits.
Ronnen (1996)	Effects of mandatory and voluntary audits on audit quality	Auditing mandates widen the disparity in quality between audit firms

Table 2. Studies on the association between mandatory auditing and firm-specific benefits

AUTHOR (YEAR)	RESEARCH QUESTION	SAMPLE	FINDINGS
Blackwell <i>et al.</i> (1998)	The paper examines the relationship between services provided by independent auditors and firms' interest rates	USA: 212 private or closely held firms from the year 1988 (37% -voluntary audit, 16% -review, 24% -compilation, and 23% -no auditor association)	Companies that undergo audits enjoy significantly reduced interest rates compared to companies that don't undergo audits, and this advantage diminishes in a non-linear manner as the size of the company grows. Other types of assurance services are not significantly related to interest rates
Chung and Narasimhan (2001)	Following the elimination of the statutory audit of small private companies in the UK in 1994, this research assesses the perceived value of audits for small firms in Hong Kong where no-audit options are not available for private firms	Hong Kong: 44 small private firms (mandatory audited) and 41 small audit firms	Both groups of respondents do not support the idea of eliminating the compulsory annual audit for small private firms in Hong Kong. Despite the expenses involved, both groups believe that the benefits derived from audits outweigh the costs
Allee and Yohn (2009)	Among other things, this study explores whether firms with financial statements, firms with audited financial statements, and firms with accrual-based financial statements experience advantages such as increased access to credit or reduced borrowing costs	USA: 4,004 firms for 2003 and 2004, of which 790 produced financial statements. Of the 790 firms with financial statements, 496 firms have received any form of audit assurance (43% -voluntary audit, 33% - review, 24% -compilation)	Firms with audited financial statements have a greater access to credit and firms with accrual-based financial statements pay significantly lower interest rates
Hope <i>et al.</i> (2011)	The paper examines the association between the firms' choice to have an external auditor and their perceived external financing constraints (i.e., access to financing and cost of financing)	International: 68 countries: 30,871 observations (29,829 unique firms) between 2002-2005	The result demonstrates that audited firms face lower perceived constraints when it comes to obtaining financing. The result is particularly prominent in firms that have a controlling shareholder and operate in countries with weaker institutions.
Kim <i>et al.</i> (2011)	The paper investigates the association between voluntary audited private firms and debt pricing	Korea: firm-year 72,577 observations from 1987 to 2002, of which 4% have voluntary audits	Private firms with voluntary audits pay significantly lower interest rates on their debt than unaudited firms
Lennox and Pittman (2011)	Examines whether voluntary choice of audit conveys valuable information about the company type	USA: 5,139 private firms are analyzed during the mandatory (2003) and voluntary (2004) audit regimes. Of those firms 33% choose to become unaudited year 2004	The companies that remain audited receive credit rating upgrades because they send a positive signal to lenders and investors
Minnis (2011)	Investigates the association between verification of financial statements and debt pricing	USA: 25,784 firm-year observations from 2001 to 2007 (23% -voluntary audit, 45% -review, 32% -compilation)	Companies with audited financial statements experience a notable reduction in their cost of debt and the information derived from audited financial statements is more strongly correlated with interest rates

Dedman and Kausar (2012)	This study investigates how credit scores, and financial reporting quality of private firms are associated with the voluntary choice of audit	UK: 4,873 firms for 2003 and 2004, of which 72% retain voluntary audit 2004 (the first year in which they were exempt)	Firms retaining a voluntary audit are associated with more conservative financial reporting and receive higher average credit scores despite their lower average profits
Carey <i>et al.</i> , (2013)	The study outlines the federal laws requiring the auditing of for-profit private and not-for profit companies in Australia and discuss the firm-level costs and benefits associated with mandatory auditing	Australia: 21,711 companies (whole population)	The costs are estimated to be substantial. The potential benefits include the credibility of information, positive influence on the culture, governance, and quality of firm management
Clatworthy and Peel (2013)	This study examines the effects of voluntary audit on the probability of errors occurring in published financial statements	UK: 1,067,577 small firms (one year's data for each firm) of which 1.3% are voluntary audited	Firms that opt out an audit are approximately twice as likely to submit defective annual accounts compared to the firms that choose to be audited
Kausar <i>et al.</i> (2016)	This study examines whether the decision to obtain an audit reduces financial constraints for firms and contributes to more efficient investments and improved firm performance	UK: 24,156 firm-year observations from 2001 to 2006 (include treatment and control samples of different sizes)	Firms with voluntary audits experience significant increase in their levels of debt, investments, and operating income. In addition, they pay lower interest on debt
Downing and Langli (2019)	The study examines the effect of mandatory auditing on firms' compliance with accounting and tax regulation	Norway: 6,686 firm-year observations from 2009 to 2012	Audited firms have significantly higher "compliance quality score" (CQS) compared to opt-out firms. Also, among opt-out firms: 1) CQS declines considerably after these firms opt out of auditing; 2) the decline of CQS is primarily observed in firms that in addition to opting out, also decided to discontinue using an external consultant for the preparation of their annual financial statements
Briozzo and Albanese (2020)	The paper examines how voluntary audits influence the probability of debt financing from financial institutions, trade credit from their suppliers and the amount of investments in fixed assets	International: 148 countries: 1,803 firms for 2010	Voluntary auditing has significantly positive effect on the probability of bank financing, fixed assets investment, and the percentage of working capital financed with suppliers
Ojala <i>et al.</i> (2020)	This research investigates how tax aggressiveness (tax return) and the voluntary audit of financial statements influence the probability of tax adjustments in small private companies	Finland: 19,527 firms for 2010	A voluntary audit, coupled with an unqualified audit opinion moderates the relationship between tax aggressiveness and the likelihood of tax adjustments
Peel (2021)	This paper examines the effects of filing micro accounts and the appointment of a reporting accountant on credit scores	UK: 13,102 firms, various years up until 2015	Filing of micro-entity abbreviated accounts results in lower credit scores. The hiring of a reporting accountant has no effect on credit scores

Table 2. Studies on the association between mandatory auditing and firm-specific costs

REFERENCES	RESEARCH QUESTION	SAMPLE	FINDINGS
Kausar <i>et al.</i> (2016)	Has been described above		The finding indicates that companies strategically adjust their size to meet the requirements for audit exemption
Bernard <i>et al.</i> (2018)	The study investigates whether private firms manage their size to avoid additional public disclosure or mandatory auditing	International: 12 European countries: 503,666 observations from 2003 to 2011	Firms intentionally reduce their size when approaching specific bright-line size thresholds that mandate increased disclosure as well as external audit requirements

Table 3. Studies on market-wide effects of mandatory auditing

REFERENCES	RESEARCH QUESTION	SAMPLE	FINDINGS
Breuer (2021).	Examines the effects of reporting and auditing mandates on the concentration of ownership, the concentration of market share, and business dynamism (entry and exit rates)	International: 26 European countries: 223,924 observations from 2000 to 2014	Reporting mandates promote the dispersion of ownership in capital markets and encourage competition in product markets. Auditing mandates are associated with decreased entry rates and increased minimum required level of productivity to operate
Breuer <i>et al.</i> (2023)	This study examines the impact of audit mandates on the main players of the audit market: firms purchasing audits, audit firms and auditors	International: 24 European countries: 100 largest audit firms from each country from 2003 to 2019	Audit mandates lead to an increased demand for audits and larger audit firms, while simultaneously reducing the average size of clients served by audit firms. Additionally, audit mandates result in an increase in the number of auditors in the market, but a decrease in their average wages

Table 4. Studies on other effects of audit mandates

REFERENCES	RESEARCH QUESTION	SAMPLE	FINDINGS
Dong <i>et al.</i> (2023)	This study investigates the potential correlation between audit status (voluntary or mandatory) and the tax avoidance practices of private firms	Sweden: 43,326 firm-year observations (matched sample of 50% voluntary and 50% mandatory audits) from 2006 to 2014	Firms demonstrate increased levels of corporate tax avoidance when operating under a voluntary audit regime. This effect is partially attributed to a decrease in auditor independence