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Future of Work in the Audit profession

Finland Futures Research Centre

Master's thesis

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This thesis examines how emerging technologies, evolving regulation and broader societal expectations are reshaping the future of work in the external audit profession. The study draws on academic literature together with selected recent professional publications produced by major audit firms, regulators and international oversight bodies. These sources are used to identify the key external forces influencing the development of audit practice and the conditions under which audit work is carried out. A PESTEL-based qualitative content analysis is applied to structure these drivers, and the analysis is subsequently extended through the use of the Gausemeier scenario methodology to develop three exploratory future scenarios for the profession.

The findings suggest that technological transformation, most notably the increasing use of data analytics and artificial intelligence, is fundamentally reshaping audit workflows and expanding the competence requirements placed on auditors. At the same time, regulatory developments are intensifying, and new assurance domains such as sustainability reporting are becoming more prominent. These changes are reinforced by persistent labor-market challenges, which together contribute to increasing complexity in audit work and its organization. Building on these developments, the scenario set illustrates how different combinations of technological, regulatory and workforce-related drivers may shape the profession's future operating environment. Scenario A describes a cohesive, technology-driven transformation in which client readiness and relatively stable regulatory conditions enable coordinated change. Scenario B reflects a more incremental and uneven path, where innovation progresses selectively but is constrained by limitations in resources, capabilities and regulatory complexity. Scenario C portrays a high-pressure future characterized by rising demands, heightened scrutiny and delayed adaptation under increasingly strained conditions.

Overall, the thesis argues that the audit profession's long-term resilience and its ability to sustain professional legitimacy do not depend on technology adoption alone. Instead, they are shaped by the responsible integration of advanced technological tools, the development of interdisciplinary capabilities and the continued importance of communication, ethical competence and professional integrity in audit work. These elements are central to maintaining trust and credibility in an environment where both expectations and accountability pressures are expected to increase.

Key words: external audit, future of work, professional competencies

Pro gradu -tutkielma

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Tässä pro gradu -tutkielmassa tarkastellaan, miten uudet teknologiat, sääntelyn kehittyminen ja yhteiskunnalliset odotukset muokkaavat tilintarkastusammatin tulevaisuutta. Tutkimus yhdistää akateemisen kirjallisuuden sekä valikoidut ajankohtaisjulkaisut muun muassa suurilta tilintarkastusyhteisöiltä, sääntelyviranomaisilta ja kansainvälisiltä valvontaelimiltä. Näiden lähteiden perusteella tunnistetaan keskeiset ulkoiset tekijät, jotka vaikuttavat tilintarkastuksen toimintatapojen kehitykseen ja käytännön tarkastustyön reunaehtoihin. Aineisto analysoidaan laadullisen PESTEL-viitekehyksen avulla, ja Gausemeierin skenaariomenetelmää hyödyntäen analyysiä syvennetään tutkielman tavoitteisiin perustuvien kolmen tulevaisuusskenaarion muodostamiseksi.

Tulokset osoittavat, että teknologinen murros – erityisesti data-analytiikan ja tekoälyn lisääntyvä käyttö – muuttaa tilintarkastuksen toteutustapoja sekä samalla laajentaa alan ammattilaisiin kohdistuvia osaamisvaatimuksia. Samanaikaisesti sääntely-ympäristö kiristyy ja varmennuksen piiriin tulee uusia aihealueita (esimerkiksi kestävyysraportointi), jotka kasvattavat tilintarkastajien roolia. Myös työmarkkinoihin liittyvät haasteet lisäävät työn organisatorista ja ammatillista monimutkaisuutta. Näihin kehityskulkuihin pohjautuva skenaariotyö havainnollistaa, miten eri tekijöiden yhdistelmät voivat muovata alan toimintaympäristöä tulevaisuudessa.

Skenaario A kuvaa koordinoitua, teknologiavetoista muutosta, jossa asiakasorganisaatioiden valmius ja suhteellisen vakaa sääntely-ympäristö mahdollistavat hallitun uudistumisen. Skenaario B edustaa maltillisempaa ja osin epätasaista kehityspolkua, jossa innovaatio etenee valikoivasti resurssi-, osaamis- ja sääntelyrajoitteiden puitteissa. Skenaario C puolestaan kuvaa kuormittunutta tulevaisuuskuvaa, jossa kasvavat vaatimukset, lisääntynyt valvonta ja sopeutumisen viiveet kiristävät alan toimintaedellytyksiä.

Tutkielma osoittaa, että tilintarkastusalan pitkän aikavälin elinvoimaisuus ja ammatillisen legitimiteetin säilyminen eivät perustu yksinomaan teknologian käyttöönottoon. Keskeistä on teknologisten työkalujen vastuullinen hyödyntäminen, monipuolisen osaamisen kehittäminen sekä viestintä- ja vuorovaikutustaitojen, eettisen osaamisen ja ammatillisen integriteetin korostuminen käytännön tilintarkastustyössä. Nämä tekijät ovat ratkaisevia, kun tavoitteena on ylläpitää luottamusta ja uskottavuutta toimintaympäristössä, jossa sekä sidosryhmien odotuksien, että luotettavuuteen kohdistuvien vaatimuksien odotetaan kasvavan.

Avainsanat: tilintarkastus, työn tulevaisuus, ammatilliset kompetenssit

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1.1 Background of the thesis

Audit – and more broadly, assurance services – are often considered knowledge-intensive business services. It means that talent and the currency of talent's knowledge are not only always relevant, but - in fact - also a prerequisite for success. One of the key elements in the profession is the ability to keep up to date with latest technology as well as understand and evaluate current risk environment. It is reasonable to assume that future generations of auditors will face a world where the risk landscape and the nature of risks undergo tremendous changes alongside technological development.

Four companies dominate the global audit market – Deloitte, Ernst & Young (EY), KPMG, and PricewaterhouseCoopers (PwC) - that are called as “Big 4”. International Accounting Bulletin (2021) compiled a study and report regarding the market share of Big 4 companies in 2021. According to the study these four giants are covering nearly ¾ of the overall global revenue, whereas the mid-tier players in the market hold only 25 %. Since the Big 4 audit nearly all major listed companies globally, they significantly shape audit methodologies, technological investments, and professional standards. Their market dominance means industry-wide practices, innovation cycles, and competence expectations often originate within these firms.

From the standpoint of this study, it is relevant to note that de Vries and Speklé (2025) observed that while Big 4 firms report higher perceived audit quality, employees in these firms also show less interest in staying in the profession, which suggests that the demanding work environment may lead to disengagement despite high audit standards.

Audit firms increasingly rely on advanced tools to deliver efficient services and uphold their reputation with stakeholders. The adoption of technology is now essential for assessing the effectiveness and efficiency of auditing tasks. In today's environment, conducting a financial statement audit without modern technological tools such as automated data gathering and different data analytics solutions is impossible. While this may have been a topic of debate in the past, it is now essential to understand why auditors use these tools and how they improve the efficiency and effectiveness of external audits. (Thottoli et al.., 2022, p. 100) Based on literature one of the key drivers for innovation in audit is to reach competitive advantage. Like for example in manufacturing business, also

audit firms in the business are trying to create unique technological models and core competencies to create distinctive position in the market. (Frishammar et al., 2019.)

Audit profession also faces political pressure that shapes the requirements for audit professionals. For example, in the UK there has been initiative to restore trust in audit and corporate governance after a series of large corporate failures. It is obvious that this kind of challenges will lead to updates in regulation and intends to shape new rules for changing circumstances. (Kwarterng, 2021.) Respectively in the US, the Enron scandal led to establishment of a new audit supervision authority called The Public Company Accounting Oversight Board (PCAOB) in 2002 (Ho, 2022). It is fair to assume that similar trends and intentions have and will appear in other countries and continents alongside with these British and American examples.

At the same time, the profession's own working culture reveals internal pressures that influence its future just as much as regulation does. This is one of the key reasons why there has also been a growing demand to enhance the reputation of the audit profession in several countries. In 2025, de Vries and Speklé (2025) published their Netherlands based study that examined how workload during busy season affects audit quality and the attractiveness of the audit profession, emphasizing the moderating role of organizational commitment. They also discussed the traditional culture within the audit profession, highlighting aspects that align with the perception of monotony. Working long hours during busy season seems to be a common and ingrained feature of public accounting, emphasizing that the profession has historically been characterized by demanding workloads and a "workaholic" culture. According to de Vries and Speklé (2025) this culture and reputation burden can make recruitment and retention of new talent more challenging. (de Vries & Speklé, 2025.)

In Finland, attractiveness of the audit profession especially amongst business students has been studied for example in theses of Valtakari (2018) and Lahti (2015). Studies show students view auditing as monotonous due to limited knowledge and heavy workloads. To improve the profession's image, audit firms and universities should collaborate to promote auditing education. Audit firms should also refine their hiring processes and ensure balanced audit teams with both process-oriented and goal-oriented members. (Valtakari, 2018.)

Accountancy Europe (Union of European Accountants) has released a commitment to enhance the attractiveness of the profession. In addition to this, in Norway there have been political scandals impacting both the leadership and audit profession's reputation amongst public audience (Accountancy Europe, 2024). In addition to this, also Accountancy Europe (2024) mentioned in their article that audit job has traditionally been associated with monotony which can cause above mentioned (Valtakari, 2018; Lahti, 2015; de Vries & Speklé, 2025) challenges for recruitment and talent attraction standpoint.

1.2 Auditors' role in public trust and modern work realities

People often see auditing as a regular job that focuses on details and does not consider bigger social issues. This was one of the drivers for Norwegian Institute of Public Accountants (NIPA) to conduct a recent campaign to improve the image of auditors and attract new talent. The spearheads in the campaign were versatility of tasks, importance of the profession and auditors' role as safeguards for trust. (Accountancy Europe, 2024.) Similar campaign was also published in Finland in 2024 by membership organization of auditors "Suomen Tilintarkastajat ry". Like in Norway, also the Finnish campaign relied on real career stories that also promoted importance of emerging technology and versatility of the meaningful tasks. (Suomen Tilintarkastajat ry, 2024.)

Pollack et al. (2018) show that political scandals in Norway during 2010–2016 predominantly involved issues related to economic benefits, administrative shortcomings, and conduct that was widely perceived as morally questionable but remained largely within the boundaries of the law. Media coverage framed these cases less as instances of criminal corruption and more as shortcomings in transparency, accountability, and the responsible use of public resources. Consequently, the scandals drew attention to perceived weaknesses in existing control and oversight mechanisms rather than to deliberate wrongdoing, thereby contributing to a broader public debate on institutional trust.

The moral legitimacy of a career in public accounting is underpinned by society's perception that the auditing profession acts in ways that are beneficial and contribute to the public good (Suchman 1995). Durocher et al. (2016) also mentioned that the audit profession plays a critical role in society by supporting the legitimacy and stability of economic systems. Drawing on legitimacy theory, Durocher et al. (2016) suggested that

auditing contributes to societal trust by ensuring that organizational activities align with accepted norms of transparency, accountability, and propriety. Auditors are therefore evaluated not only on technical competence but also on their contribution to public interest, particularly considering past financial scandals that have highlighted the profession's societal responsibilities. The authors (Durocher et al., 2016) also argued that auditing provides moral legitimacy by enabling informed decision-making and reinforcing confidence in financial reporting and corporate governance. While accounting firms now focus more on commercial and advisory roles, audit work is still portrayed as meaningful and socially significant due to lasting societal expectations. As professional identities shift, auditing continues to maintain public trust and economic legitimacy. (Durocher et al., 2016.)

De Vries and Speklé (2025) highlighted that auditors are expected to operate effectively under intense busy-season workloads, requiring strong stress tolerance, time management, and the ability to maintain focus under pressure. The study emphasized the need for sustained professional skepticism and sound judgment despite time constraints, as excessive workload is widely perceived as a threat to audit quality. Drawing on cue utilization theory, the authors further implied that auditors must be capable of selectively focusing on task-relevant information in complex and demanding contexts. In addition, organizational commitment emerges as a critical personal attribute, as it moderates the negative effects of workload on both perceived audit quality and career attractiveness. (De Vries & Speklé, 2025.)

Based on a systematic literature review, Leocádio et al. (2024) found that modern auditors require not only traditional auditing knowledge but also digital and data-analytic skills to evaluate complex, technology-driven audit evidence effectively. The review highlighted the continued importance of analytical thinking and professional skepticism, particularly in contexts where judgment complements automated tools. Communication and interpersonal skills remain essential for collaborating in multidisciplinary teams and conveying findings to diverse stakeholders, while ethical competence and professional integrity continue to support audit practice. Adaptability and continuous learning were identified as critical for maintaining audit quality in a rapidly evolving professional environment, showing that auditors now stand at a crucial crossroads where the evolution of their skills is closely linked with the technological changes shaping the profession. (Leocádio et al., 2024.)

1.3 Aim of the study

The audit profession is facing growing uncertainty as technological development, regulatory change and broader societal expectations increasingly reshape audit work and professional roles. Rather than assuming a single, linear development path, this study adopts a futures-oriented perspective to explore how these changes may evolve in different ways. Against this background, the aim of the study is to examine possible future scenarios for the audit profession and the key drivers and professional implications associated with these alternative futures.

The objective of this research is to address the primary research question as well as its associated sub-questions:

- What are the possible future scenarios for the audit profession, considering the impact of emerging technologies, related opportunities and concerns, and evolving regulation?

Sub-questions:

a. What key external drivers and development trajectories are shaping the future of work in the audit profession?

b. What capabilities and competence requirements are likely to become more important for audit professionals and audit firms under these alternative future developments?

The main question relates to understanding the technological transformation and evolving regulation will challenge the audit profession and what are its key implications such as emerging risks, expected economic realities and competence needs. To better understand the change, sub-questions are used to perceive different angles and perspectives to the topic. To be able to respond to main question, it is necessary to understand important trends. This will help to understand new risks and how they challenge this risk-based and risk-driven profession in the future.

Modern technologies typically require new knowledge and competencies. The future of work can also be viewed, in part, as the future of required skills, making professional adaptation an important dimension to explore as the technological and risk landscape evolves. Finally, since the audit industry is dominated by four major firms (thereinafter

"the Big 4" or "the Big 4 firms") that lead in thought leadership, it is crucial to understand their perspectives and explicitly stated ambitions on these topics.

While the audit profession is inherently global in nature and no strict geographical limitation is applied in this study, the analysed regulatory developments and professional publications primarily reflect European and US contexts. This emphasis follows from the composition of the research material and the prominent role these regions play in contemporary audit regulation and supervision, particularly within large international audit firms. These regions frequently function as global reference points for regulatory, supervisory, and methodological developments in external auditing (see e.g. Eierle et al., 2022).

The timeframe of this thesis extends to the mid-2030s, reflecting a horizon in which technological transformation, regulatory developments, and talent dynamics are expected to generate observable structural changes within the audit profession. This timeframe is consistent with current projections for technological, regulatory, and labour-market developments shaping the audit profession (such as Cedefop, 2025).

1.4 Research approach

This study combines academic literature and professional publications to build a comprehensive understanding of the external forces shaping the future of the audit profession. The theoretical background (Chapter 2) introduces key academic perspectives on external auditing, the evolution of audit practice, emerging technologies, and the competence requirements linked to technological change. Chapter 3 summarizes research materials and methods that are used in this thesis.

Following this, Chapter 4 examines recent professional publications and official releases from major audit firms, regulators, and international professional bodies. The purpose of this review is to complement academic insights with practitioner-oriented viewpoints. These documents provide current, market-driven perspectives on trends, challenges, and strategic priorities in the profession.

The PESTEL analysis uses this combined body of material to identify and structure the political, economic, social, technological, environmental, and legal factors influencing how audit work is changing. Most professional publications included are from the past few years, reflecting the rapid development of technology and the fast-changing

regulatory environment. This approach allows the thesis to integrate conceptual academic insights with the practical foresight expressed in industry publications, offering a more holistic view of the audit profession's future.

The PESTEL analysis is conducted to summarize and better understand the elements driving the change in audit profession to the anticipated direction it currently is going in the future. Chapter 5 contains future scenarios for audit profession. Scenarios have been developed based on results in the previous chapters. They are discussed in the chapter 6 which also contains conclusions from the performed analyses and scenario work.

This scenario work aims to follow so called *"Gausemeier-Approach"* which divides scenario work into five steps. In the first step, project is described and both timespan as well as anticipated scope are defined. In the second phase of the work, influence areas, influencing factors and key factors are identified. Third step relates to scenario-projection where key factors are prepared, and future projections are identified. Fourth step is the scenario-building that consists of projection bundles, possible pre-scenarios, future mapping, and description of scenarios. Last step is called scenario-transfer which covers consequences, opportunities and threats, strengths, and weaknesses as well as strategies. This way the study follows the original Gausemeier et al. (1998) scenario methodology, complemented by the structured presentation used in Sardesai et al. (2021).

2 Theoretical background

2.1 External audit process

The accounting and audit profession has a long history and legacy. It has been said that assurance was provided already during Sumerian era, by "counting things" and quantities of grain and livestock were recorded in clay tablets. Later the profession has gone through several development phases and modern way of doing audit has its roots in 19th century. Auditors have their own associations and organisations in all continents, and these bodies are playing leading role in developing the way audits shall be conducted. (Peterson, 2022, p. 14.)

For clarification, in this thesis word "audit" stands for external financial statement audit that focuses on fulfilling statutory audit requirements. Other audit types, such as internal audit or ISO audits are not in scope in this study. However, there are some relevant regulatory extensions to conventional financial statement audits that are touched upon in this thesis because of their obvious nature in the evolvement of audit profession and its future. One example of such extension is Corporate Sustainability Reporting Directive (CSRD) that came into effect in January 2023 and was set by European Union. This has been considered as a remarkable addition to auditors' business and operating environment. (PwC, 2023; CEAOB, 2024.)

A financial statement audit comprises distinct phases: planning and preparation, execution, and reporting. Sometimes an initiation of follow-up audit is also needed, but not always. (Gu et al., 2024, p. 3.)

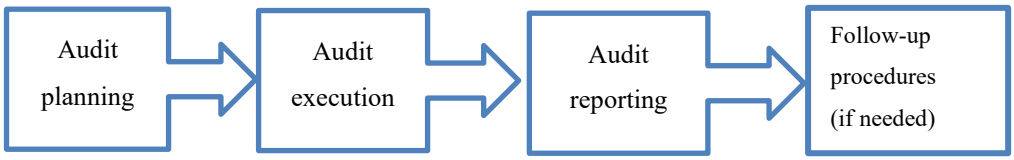

Figure 1: Audit phases (adopted from Gu et al., 2024, p. 3)

Audit planning establishes the audit foundation by analysing the entity, its environment, internal controls, and conducting risk assessments to identify potential misstatements. The auditor then sets audit strategy and materiality and develops a plan for the audit. (Gu et al., 2024, p. 3.)

The audit execution phase aims to collect sufficient evidence using audit procedures. It involves testing controls and performing substantive tests to identify material misstatements. Findings are reviewed, and the audit plan is updated and revised, as necessary. All conducted work needs to be documented. (Gu et al., 2024, p. 3.)

Audit reports are used to communicate an auditor's findings and opinions to stakeholders. These reports evaluate whether financial statements comply with the appropriate reporting standards and confirm that no significant errors or misstatements are present. (Gu et al., 2024, p. 4-6.) International Standards on Auditing (ISA) is a framework of standards that are globally recognized by professional auditors. ISA 315 (revised in 2019) outlines the auditor's duty to identify and assess material misstatement risks in financial statements. In addition to this, ISA 200 requires the auditor to exercise professional judgment in planning and performing an audit, and to plan and perform an audit with professional scepticism. (IAASB, 2019, p. 6.)

One of the main risks in audit relates to fraud. Fraud risk has long been a key focus in audits and academic literature. Addressing fraud risks in appropriate manner is crucial for the audit quality; if auditor is not doing enough work and fails to detect fraud, the consequences are serious. On the other hand, auditing must follow business rationale and hence doing too much work when fraud is not presence is not adding economic value. In practice this means that the auditor needs to understand the risk environment and client's business to ensure that audit work addresses the most important risks in efficient manner. (Nieschwietz et al., 2020.)

Having outlined the foundations of external auditing, the following section examines how academic literature anticipates these foundations to evolve in the coming years.

2.2 Academic assessments regarding the future of audit

While the foundational structure of external auditing remains well defined, recent scholarly work offers important perspectives on how the profession may develop in response to emerging pressures and trends. The following section synthesises these academic assessments, providing an overview of the principal themes that shape current research on the future of audit.

In the academic literature, there is an ongoing discussion of the future of audit. For example, Peterson (2022) discusses in his article some mid-term changes that profession is expected to face. One of these changes relates to ESG matters (environment, sustainability, and governance) that auditors will be providing assurance on going forward. However, Peterson did not really touch for example technological issues or challenges that auditors will face in the future. Thottoli et al., (2022, p. 111) suggested that advancements in technology are rendering traditional auditing techniques obsolete.

Auditing has traditionally functioned as a means for governments to demonstrate legitimacy and accountability to parliaments and citizens, reflecting broader political expectations concerning the appropriate stewardship of public resources. As noted by Mattei et al. (2021), significant shifts in public sector auditing have largely stemmed from politically driven administrative reforms. The transition from traditional public administration to New Public Management (NPM)—particularly influential in countries such as the United Kingdom, Australia, New Zealand, and the United States—reoriented auditing from a narrow emphasis on legal compliance toward efficiency, performance, and results. Subsequent developments associated with New Public Governance (NPG), especially within European welfare states and Nordic jurisdictions, further broadened audit objectives to encompass public value, societal outcomes, and accountability to a wider set of stakeholders. These evolutions indicate that the scope and priorities of public sector auditing are shaped less by technical or professional logics and more by prevailing political ideologies and reform agendas. (Mattei et al., 2021.)

Mattei et al. (2021) also emphasize enduring tensions between audit independence and political influence. Supreme audit institutions and public auditors operate in environments where mandates, oversight structures, and reform trajectories are subject to governmental and legislative interests. Consequently, political pressures may constrain audit autonomy, particularly as auditing becomes increasingly intertwined with policy evaluation and reform processes. In this context, auditors must navigate complex, multi-actor governance arrangements and heightened political scrutiny. This underscores the continued centrality of political dynamics in shaping the expected role, authority, and credibility of the audit function moving forward. (Mattei et al., 2021.)

Existing research indicates that auditors routinely incorporate political stability and risk at both national and regional levels into their risk assessments. In environments marked by political instability, auditors tend to perceive a greater degree of client business risk, which often manifests in increased audit effort and, accordingly, higher audit fees. Political intervention plays a significant role in this context, as responses to financial crises, corporate scandals, or systemic risks commonly lead to the introduction of new regulations and reforms. These changes typically expand the scope of audits and impose additional oversight requirements, thereby increasing complexity, compliance obligations, and associated costs. As a result, the audit profession is becoming increasingly influenced by shifting political priorities, rather than operating solely within traditional market-driven frameworks. (Eierle et al., 2022.)

Furthermore, the expanding authority of politically mandated audit oversight bodies signals a broader trend towards greater governmental involvement in the audit sector. Enhanced regimes for inspection and enforcement are prompting auditors to adopt more conservative approaches and heightened professional scepticism. While these developments may help to bolster public confidence in audit processes, they also risk steering the profession in a more compliance-focused direction, potentially limiting the exercise of professional judgement. (Eierle et al., 2022.)

Eierle et al. (2022) also investigated the principal economic drivers impacting audit fee structures. Their analysis considers critical macroeconomic indicators, including GDP per capita, levels of purchasing power, inflation rates, the degree of economic stability, as well as prevailing interest and exchange rates. According to their findings, these variables exert considerable influence on audit pricing, with fees tending to be higher in areas characterised by greater purchasing power. The literature also documents a marked increase in audit fees during times of financial crisis, a pattern noted across multiple jurisdictions and attributed primarily to heightened business risk. However, the review acknowledges cases where companies managed to negotiate reduced fees during such periods, illustrating the effect of fee pressure. Additionally, Eierle et al. (2022) examined market competition as an economic factor shaping audit fees. While initial research produced varied outcomes, more recent studies suggest that greater concentration within the audit market correlates with increased fees. Still, the evidence regarding product

market competition amongst audit clients remains mixed and appears highly context-dependent across different countries. (Eierle et al., 2022)

Social expectations surrounding accountability, transparency, and public trust increasingly shape the development of the audit profession. Ferry and Radcliffe (2022) emphasize that auditing is not merely a technical exercise but a cornerstone of societal governance, supporting confidence in both democratic institutions and market systems. As societies face recurring crises—such as public health emergencies, social justice movements, and climate-related challenges—the demand for credible oversight intensifies. These societal pressures are reshaping stakeholders' expectations of auditors, broadening the purpose of audit work to include reinforcing institutional legitimacy and mitigating growing scepticism toward authority and organizational integrity. (Ferry & Radcliffe, 2022.)

At the same time, the norms and attitudes influencing the profession are evolving in response to shifting societal values. Johri and Singh (2024) show that contemporary audit research increasingly centres on themes such as legitimacy, professional scepticism, and sustainability assurance—topics driven largely by rising expectations of corporate and public accountability. As society places greater emphasis on ethical conduct, environmental responsibility, and non-financial reporting, auditors are required to adapt accordingly. This shift signals that the profession is no longer evaluated solely on technical precision but also on its responsiveness to broader societal concerns, including responsible organizational behaviour and transparent governance. (Johri & Singh, 2024.)

Furthermore, these social developments are reshaping auditors' competencies, roles, and professional identity. Increasing societal demand for transparency and ethical behaviour elevates the auditor's position as an independent guardian of the public interest, requiring strong professional scepticism, effective communication skills, and heightened sensitivity to societal risks. Both articles suggest that audit practices must now consider the broader social implications of organizational decisions—particularly in areas such as sustainability reporting, crisis management, and stakeholder engagement. As Johri and Singh (2024) note, trending research areas such as sustainability assurance and fraud detection reflect the wider societal call for auditors to address emerging risks with significant social consequences. Similarly, Ferry and Radcliffe (2022) highlight growing

public expectations for audit institutions to function as stabilizing forces during periods of societal uncertainty. Together, these insights illustrate how social forces are pushing the audit profession toward a more expansive and socially embedded role—one that extends beyond traditional compliance and contributes actively to societal trust, resilience, and institutional credibility. (Ferry & Radcliffe, 2022; Johri & Singh, 2024.)

Data analytics has been identified to be essential element in the future of audit, but this influence has not yet been widely examined in academic research. However, it is expected that things such as data analytics have enormous potential to improve the audit quality and enhance the obtained confidence. It can also be used in risk identification and evaluation phase. Based on this, from methodological point of view, it looks like data analytics is likely to be one of the key drivers of digital transformation in audit profession. (Hezam et al., 2023.)

Also, Odeyemi et al. (2024, p. 360-361) examined the implications of AI for the audit profession from several perspectives. First, they assumed that AI would serve as a catalyst for transformative change, particularly in automating the routine tasks inherent to audit work Many of these tasks are currently time-consuming and labour-intensive. A key goal in this regard is to free up more time for strategic and analytical activities. This would represent a transformative leap in the auditing process, given the demanding nature of regulatory documentation requirements and supports Eulerich et al.'s (2022) above mentioned findings regarding the TBATs limited role in judgement-intensive reporting activities. Odeyemi et al. (2024, p. 361) concurred with Hamdan and Al Habashneh (2024) that such changes would redefine the auditor's role, significantly enhancing overall quality, improving processes, and ensuring the timely delivery of audits.

A comprehensive literature review of prior research on auditing and taxation in the context of emerging technologies was conducted by Atayah and Alshater (2021) who analysed how technological developments had influenced audit practice over time. Their review identified big data analytics, artificial intelligence, and blockchain as the most frequently examined technologies in audit literature. According to the authors, these technologies were associated with improvements in audit efficiency, primarily through the automation of routine audit procedures and the ability to analyse large volumes of transactional data, thereby reducing the time required for audit planning and fieldwork.

The reviewed studies also indicated that emerging technologies contributed to audit reliability by enhancing auditors' capacity to identify anomalies, patterns, and potential irregularities in client data. Data analytics and artificial intelligence were described as supporting auditors' decision-making by providing more comprehensive and timely information, which improved risk identification and the evaluation of audit evidence. In addition, the literature highlighted that technology facilitated evidence gathering by enabling continuous access to client data and more extensive testing compared to traditional sampling-based approaches. (Atayah & Alshater, 2021.)

Odeyemi et al. (2024) highlighted in their paper another crucial point for audit process and it regards risk assessment, a critical component of every audit. They argue that AI can enhance the risk assessment and evaluation process by conducting scenario modelling and employing advanced anomaly detection algorithms to help auditors identify potential fraud risks. AI can analyse market trends such as volatility, economic indicators (e.g., risks of economic downturn), and geopolitical factors to assess risks in the external environment. This integration of AI can propel human-AI strategic collaboration into a rapidly evolving phase. One of the potential challenges auditors may encounter when embedding AI into the audit process relates to legacy systems. Many of the widely used systems are not sufficiently advanced to integrate seamlessly with AI technology, necessitating significant investments in system upgrades and integration efforts. (Odeyemi et al., 2024, p. 364.)

In examining the future of audit, ethical considerations surrounding AI adoption form a central theme in current literature. Odeyemi et al. (2024) highlighted several ethical challenges that accompany the growing reliance on AI enabled audit processes. These include the risk of inaccurate or biased outputs when AI systems are trained on incomplete, flawed, or historically biased data, as well as limited transparency arising from "black box" algorithmic decision making. The authors also emphasize heightened privacy concerns due to the extensive processing of sensitive financial and operational data, making robust safeguards essential. Furthermore, they stress that AI may transform auditors' competence requirements: auditors must be able to interpret, validate, and critically assess AI generated insights to maintain audit quality and integrity. (Odeyemi

et al., 2024.) This concern partially also relates to emerging risk of data poisoning that is being discussed later in Chapter 2.3.

Atayah and Alshater (2021) indicated that the effective use of emerging technologies in auditing required access to advanced technical expertise and appropriate analytical tools. The reviewed literature emphasised that auditors need the ability to work with both structured and unstructured data, apply data analytics techniques, and communicate audit findings through suitable data visualisation methods. At the same time, Atayah and Alshater (2021) pointed out that these technological requirements often extend beyond traditional auditing competencies, highlighting the importance of interdisciplinary collaboration and the involvement of specialists with technological expertise. Rather than viewing technology adoption solely as a matter of individual auditor training, the literature pointed to the need for organisational capabilities that enable auditors to work alongside technology experts in order to effectively integrate emerging technologies into audit practice (Atayah & Alshater, 2021). It is good to remember that the same applies to professional auditing bodies that must develop and maintain ethical guidelines and protocols for use of AI in audits that can ensure the alignment with ethical standards (Odeyemi et al., 2024.)

While big part of academic research of emerging trends in audit relate to AI and data analytics, it is important to have a look at wider studies concerning future of work. Due to auditing's nature as white-collar work, the most interesting studies relate to similar professions such as consulting, accounting, administration, and finance because it is fair to assume that people on these professions will face similar challenges and tensions with auditors. By reviewing academic articles on these matters, the aim is to understand the bigger picture of the change in white-collar work and whether there are other highlights worth taking into consideration when addressing the questions regarding the future of audit work.

Kumar & Gupta (2023, p. 1) outlined that emerging technologies have the potential to lead to significant productivity gains and efficiency improvements in white-collar professions. Common narrative regarding this development relates to possibilities to focus on strategic, creativity demanding roles whereas simple decision-making can be automated in time-consuming routine tasks. From individual professional's perspective it

can be seen as risk and opportunity; job losses are possible, but on the other hand, modern technology usually provides new opportunities in the future. For professionals and leaders in all professions it is essential to understand these trends during our century and plan how to address the challenges and how to take advantage of the upcoming opportunities. (Kumar & Gupta, 2023, p. 1)

Another profession close to audit is accounting and accountant profession. Taib et al. (2022, p. 348) mentioned that accounting work is going through a notable change when manual accounting systems are being replaced by automated solutions. As a result, the scope of accountants' work is expanding, and consumer expectations are evolving due to technology and innovation enabled changes. As digitalization progresses, the accounting industry will undergo similar changes. To stay relevant, finance and accounting professionals must embrace this digital shift. Future accountants will need to be equipped with the best available technology and related expertise to thrive in their careers. (Taib et al., 2022, p. 348) The same finding was noted in Atayah and Alshater's study (2021, p. 121). Both articles discuss how emerging technologies are expected to influence the profession and note that higher education institutions may play a significant role in preparing students with the necessary skills for these changes.

Environmental factors increasingly affect external auditing through environmental regulation and compliance risk. Li et al. (2025) examined whether auditors consider clients' compliance with environmental regulations when planning audits and setting audit fees. Although auditing standards give auditors only limited responsibility for detecting environmental law violations, such noncompliance can increase audit risk and the complexity of audit work. (Li et al., 2025.)

Using a sample of U.S. listed firms, Li et al. (2025) found that auditors charge higher audit fees to clients with greater environmental compliance risk. Firms subject to environmental regulations or enforcement actions seemed to pay higher audit fees, indicating that auditors take environmental compliance risk into account when assessing audit effort. The study also showed that the complexity of environmental regulations is more strongly related to audit fees than the size of individual environmental liabilities. Firms facing multiple environmental regulations incur higher audit fees, while the monetary value of potential fines or cleanup obligations does not consistently affect audit

pricing. This suggests that auditors respond mainly to regulatory complexity rather than to the financial size of environmental exposure. (Li et al., 2025.)

While these findings demonstrate that environmental regulation influences external audit practice, the overall audit literature on environmental factors remains rather limited. Eierle et al. (2022) noted that environmental factors are among the least studied components of the PESTEL framework in audit fee research. Although climate change and environmental risks have become more important in corporate and regulatory discussions, existing studies focus mainly on narrow risk measures, such as drought exposure, with broader climate-related risks receiving less attention. Eierle et al. (2022) also highlighted international efforts to develop global sustainability reporting frameworks and discussions about mandatory external assurance. However, there is still little empirical evidence on how environmental regulation and sustainability-related reporting requirements affect audit markets and audit fees. (Eierle et al., 2022.)

The legal context represents one of the most influential external forces shaping both current and future audit practices. Systematic review evidence shows that legal elements—such as changes in auditing standards, financial reporting requirements, corporate governance rules, disclosure obligations, partner-identification requirements, and fee-transparency regulations—consistently affect audit effort, pricing, and auditor liability. In general, regulatory tightening expands audit scope and intensifies compliance requirements, leading to higher audit fees, while regulatory relaxations tend to reduce them. These findings highlight that ongoing regulatory evolution is a central mechanism through which the audit profession's responsibilities, expectations, and economic dynamics continue to be reshaped. (Eierle et al., 2022.)

Recent cross-country research further clarifies how various components of the legal environment influence audit outcomes. Amoruso et al. (2025) distinguish between private litigation frameworks—such as mandated disclosure rules—and public enforcement frameworks, including regulatory powers and sanctions. Their evidence indicates that more extensive disclosure regulations are associated with higher audit fees, increased values on selected audit-quality indicators, and a greater likelihood of choosing a reputable auditor. This suggests that demanding disclosure regimes broaden audit scope and elevate assurance expectations. By contrast, stronger public enforcement mechanisms

are linked to lower audit fees, reduced engagement of high-reputation auditors, and lower values on several audit-quality proxies. In these cases, active regulatory enforcement appears to substitute for portions of the monitoring traditionally performed by auditors, thereby altering perceived litigation exposure and overall audit demand. (Amoruso et al., 2025).

Litigation dynamics add yet another critical dimension to the legal landscape affecting the audit profession. Insights from interviews with prominent audit litigation attorneys show that claims against auditors are usually triggered by events such as bankruptcy, financial restatements, or government investigations that increase the visibility of potential audit deficiencies. Decisions to pursue claims depend on the merits of the case, the magnitude of economic damage, the auditor's capacity to pay, and the expected litigation costs. Most disputes are settled before trial due to the uncertainty of jury outcomes, reputational considerations, and the financial risks associated with litigation. Larger firms typically resist early settlement and adopt more prolonged defense strategies, reducing the expected value of claims and discouraging plaintiffs. Smaller firms, with lower reserves and greater sensitivity to reputational harm, tend to settle earlier. These dynamics shape audit documentation practices and risk-management behaviors, ultimately influencing industry norms and expectations. (De Meyst et al., 2021.)

These findings demonstrate that legal forces operate across multiple intersecting dimensions. First, standard-setting and governance reforms continue to expand audit scope and influence both audit effort and pricing. Second, the design and strength of public enforcement regimes determine the balance between regulatory oversight and auditor-provided assurance. Third, litigation norms and settlement patterns shape how audit firms manage risk, document their work, and position themselves in the market. Finally, the frequency, intensity, and complexity of regulatory changes emerge as influential factors in their own right, suggesting that regulatory volatility—not only regulatory content—has a substantial impact on how audit processes evolve. (Eierle et al., 2022; Amoruso et al., 2025; De Meyst et al., 2021.)

Against this broader academic discussion on the future of the audit profession, the following section examines emerging technologies more closely by focusing on both the opportunities they create for audit work and the concerns they raise for auditors.

2.3 Emerging technology related opportunities and concerns for auditors

While emerging technologies offer substantial potential to enhance audit effectiveness and efficiency, prior research also highlights a range of technological, organisational, and ethical challenges that auditors must address.

A hot topic currently is artificial intelligence (AI) which dominates evolving technology related discussion. The concept of AI co-piloted auditing has also been a research topic over the last few years. For example, Gu et al., (2024) conducted a study that focused on the collaborative potential of auditors and foundation-models (i.e. large, general-purpose AI models) in the auditing domain. According to their study there would be possibilities for enhancing auditors' capabilities through AI in several parts of the audit.

In the study by Gu et al. (2024), human auditors were positioned in a collaborative partnership with a co-pilot, referring to a model in which auditors worked alongside a foundation-model AI system, referring to large, general-purpose AI models that support auditors by analysing non-client-specific information and assisting with task decomposition. In this arrangement, the auditor provided professional judgement and interpreted client-specific endogenous data, while the AI supported the process by analysing exogenous information and assisting with task decomposition. From a future-of-work perspective, this form of collaboration introduced new competence requirements for audit teams. In particular, Gu et al. (2024) highlighted the growing importance of prompting as a practical skill in co-piloted auditing; auditors had to be able to design and apply structured prompt protocols—such as Chain-of-Thought prompting—to guide the model through multi-step audit tasks and to critically evaluate the outputs it generated (Gu et al., 2024).

Eulerich et al. (2022) examined how the use of technology-based audit techniques (TBATs) affects audit task outcomes, focusing on audit effectiveness, audit efficiency, and audit costs. TBATs were defined as automated audit tools, such as data analytics and computer-assisted audit techniques, that support audit planning, risk assessment procedures, and the performance of audit procedures across different stages of the audit. The study therefore conceptualised audit technology not as a general innovation, but as the application of specific techniques within the audit process.

The findings of Eulerich et al. (2022) showed that increased use of TBATs is associated with higher audit effectiveness. Audit teams that apply TBATs more extensively identify a greater number of significant risk factors and provide more audit recommendations. This indicates that TBATs enhance auditors' ability to obtain and evaluate audit evidence and to identify risks of material misstatement during the audit. At the audit function level, higher TBAT usage is also associated with the completion of a larger number of audit engagements, suggesting broader audit coverage. (Eulerich et al., 2022.)

With respect to audit efficiency, Eulerich et al. (2022) also found that greater TBAT usage was associated with fewer audit days, particularly during audit planning and fieldwork. No comparable reduction was observed in the reporting phase, indicating that TBATs mainly affect data-intensive procedures, such as evidence gathering and analysis, rather than judgement-intensive reporting activities. This suggests that audit technology changes the allocation of audit effort across audit stages rather than just reducing total audit work.

The same study also highlighted important cost implications of TBAT adoption. Higher levels of TBAT usage were associated with larger audit function size and higher audit budgets, reflecting investments in technology, training, and specialised expertise. Interview evidence further indicated that auditors experience difficulties in quantifying the benefits of TBATs and in performing formal cost–benefit analyses, as benefits may be indirect, delayed, or not immediately observable at the engagement level. (Eulerich et al., 2022.)

In addition, Eulerich et al. (2022) demonstrated that audit technology, when understood as the use of TBATs within risk assessment procedures and substantive audit work, can enhance audit effectiveness and efficiency, while simultaneously increasing audit costs. These findings suggest that the future impact of audit technology depends on how effectively TBATs are integrated into audit processes and managed within the audit function, rather than on technology adoption alone.

Digital transformation clearly involves a variety of potential risks and challenges. Identifying these risks and challenges requires a comprehensive impact analysis that assesses different perspectives, including the impact on personnel, operations, system,

and data security, as well as client experiences. This analysis enables organizations to mitigate risks and minimize potential negative consequences associated with the transformation. A key risk in this context is related to internal communication within the firm adopting the modern technology. Without a solid communication plan and proper focus, employee engagement may decline, potentially jeopardizing the entire transformation process. (Kumar & Gupta, 2023, p. 1) In addition to this several studies (see Thottoli et al. 2022, p. 103) have mentioned that costs of the audit software are something that all audit firms must consider. In addition to this, availability of skilled staff is needed to get the benefits from the software and training can also demand investments.

Taib et al. (2022, p. 355) reported a relationship between technology readiness and the digitalization of the accounting profession for future accountants. However, this shift toward digitalization also introduces risks. As the accounting profession moves toward a new era of digitalization, traditional accounting practices will be transformed. This implies that while well-prepared accountants are better equipped to adapt to technological advancements, those who lack sufficient technological readiness may struggle to keep pace with industry changes, potentially widening the gap between those who succeed and those who fall behind. (Taib et al. 2022, p. 355.) This might be another perspective that change management has to cover and take care of.

Atayah & Alshater (2021, p. 121) noted that the application of big data, AI, and blockchain in auditing should adhere to ethical considerations, including data privacy, protection, and technology governance. AI will bring a demand for wider understanding of algorithms and machine learning from people utilizing it in audit engagements. Otherwise, concerns regarding the fairness of AI-driven analyses may increase. In addition, the risk of using inappropriate or biased data in audit analyses becomes more evident (Odeyemi et al.., 2024, p. 364). Internet hackers are also a risk factor because they might be trying to steal data or disrupt business operations which can impact the audit work for example by manipulating financial statement closing data (Thottoli et al., 2022). One possible AI related risk in the future is data poisoning. Data poisoning is the intentional insertion of manipulated samples into an AI system's training data to corrupt its behaviour or outputs. Based on current literature, this is not yet widely discussed in audit related studies, but it has been investigated in other sectors, and it can be considered

as a weak signal. For example, Abtahi et al. (2026) noted in their research that even small amounts of poisoned data — sometimes only 100–500 samples — can significantly compromise model performance, with attack success rates of 60% or more (such manipulation can, for example, lead to incorrect diagnoses) (Abtahi et al. 2026).

Fotoh and Lorentzon (2023) investigated how digitalization affects the audit expectation gap, defined as the difference between public expectations and auditors' actual responsibilities, especially regarding fraud prevention and internal control. They suggest that adopting digital tools can narrow this gap by enabling auditors to perform their duties more effectively and transparently. Technologies such as data analytics and automation improve internal controls and fraud detection, leading to better perceptions among users and reducing misunderstandings about auditors' roles.

Traditionally, the profession has relied on educating users to narrow the expectation gap, but Fotoh and Lorentzon (2023) argue for a more constructive transformation driven by digital innovation. This shift represents not only the adoption of new tools but a fundamental reorientation in how audits are conceived, executed, and evaluated. It moves the profession from retrospective, sample-based verification toward a more proactive, data-rich, and technology-enabled audit environment. Through digital platforms, advanced analytics, and automated procedures, auditors can strengthen internal controls, broaden the scope of testing, and reduce dependence on limited sampling. This allows for near real-time monitoring, continuous assurance, and the analysis of entire datasets rather than subsets, ultimately improving audit quality while lowering operational costs. However, as Fotoh and Lorentzon (2023) emphasize, this shift also introduces new vulnerabilities, including heightened cybersecurity risks, data privacy challenges, and substantial demands for technological investment and upskilling. While these developments may create new expectation gaps, the authors maintain that the overall benefits position digitalization as a promising and necessary direction for addressing emerging threats and meeting future expectations in the auditing profession. (Fotoh & Lorentzon, 2023.)

The academic literature suggests that while several external forces shape the expected evolution of audit practice, technological transformation emerges as a central theme, creating the need to analyse its implications for auditors in greater depth.

3 Research materials and methods

This chapter outlines the methodological choices guiding this study, including the research design, the selection and collection of research material, the analytical procedures used in the PESTEL-based content analysis, and the application of the Gausemeier scenario methodology.

3.1 Scenario planning

To address the uncertainties highlighted in the previous sections, this chapter proposes scenario planning as a structured means of analysing alternative directions of potential future developments in the audit profession. While the theoretical background introduces scenario planning as a method within futures studies, the focus of this section is on how the scenario construction process was applied in this study in practice.

Scenario planning is a strategic tool used to navigate uncertainty by exploring multiple possible future developments rather than relying on a single prediction of the most probable outcome. It helps organizations and public authorities prepare for diverse outcomes, make informed decisions, and remain adaptable to rapid changes. The methodology can be used for example in learning purposes and to create strategies to address potential future developments and risks. (Sardesai et al., 2021.)

Scenario planning is widely regarded as a valuable methodology for examining complex futures that involve significant uncertainty. It offers an overview of potential conditions by mapping causal links between projected developments, helping organizations anticipate change, make decisions, and improve strategic planning. Overall, the approach supports innovation, flexibility, and preparedness for different possibilities. (Amer et al. 2013; Sardesai et al., 2020.)

Scenario planning has a long history since it has been used since 1950’s in public policy decisions. In this context, it has roots in war game analysis. Unlike many other, traditional methods that rely on expert knowledge, scenario processes can help to highlight different types of knowledge and the uncertainties that come with them. This approach is especially valuable when dealing with challenges that are too unpredictable to be addressed by conventional methods. (Wilkinson and Eidinow, 2008.)

Börjeson et al. (2006) present a scenario typology commonly cited in futures studies. Their framework distinguishes between three main categories of scenarios: predictive scenarios, which address the question "what will happen;" explorative scenarios, which examine "what can happen;" and normative scenarios, which focus on desirable futures and whether specific goals can be achieved (Börjeson et al., 2006; Amer et al., 2012). This classification also underpins later methodological work by Sardesai et al. (2021), who apply and extend the typology when discussing structured scenario processes. While several alternative scenario typologies and ways of structuring scenarios exist, this study focuses on explorative scenarios, as the aim is to understand 'what can happen' in the future audit profession. For this purpose, the scenario planning process in this thesis follows the Gausemeier-Approach (Gausemeier et al., 1998), which offers a systematic method for developing and analysing such exploratory futures.

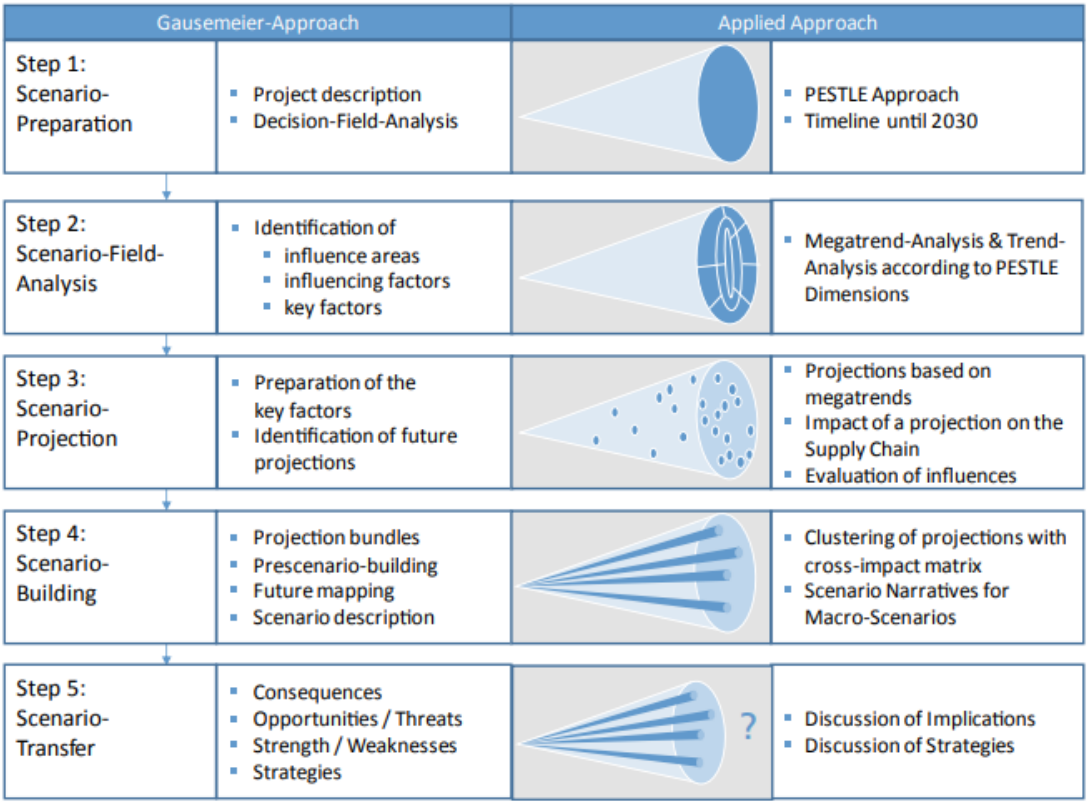

Figure 2: Application of the Gausemeier approach in this thesis (adopted from Sardesai et al., 2021.)

In Gausemeier approach, there are five steps. The first step is the scenario preparation that contains project description and decision-field-analysis. For example, PESTEL can be utilized in this context. Second step is the identification of influence areas, influencing factors and possible key factors. In practice, PESTEL dimension-based trend analyses are one option to complete this step. (Gausemeier et al., 1998.)

Third step is scenario-projection that aims to prepare the key factors and identify future projections. This can include another view on megatrends from projections' perspective and for example evaluation of supply chains when such approach is relevant. In the fourth step scenarios are being built by bundling projections and performing future mapping. At this stage, the scenarios shall also be described, and narratives get written. Fifth, last step is scenario-transfer that analyses and discussed consequences, opportunities, threats, strengths, weaknesses, and strategies regarding the created scenarios. (Sardesai et al., 2021.)

Together, these scenario-planning concepts establish a coherent framework for analysing the uncertainties surrounding the future of the audit profession. The subsequent chapter elaborates on the research methodology used to implement this framework, including the procedures for data selection, analysis, and interpretation.

This thesis employs a qualitative, exploratory futures research design. The aim is to understand how emerging technologies, regulatory developments and broader societal trends may shape the future of work in the audit profession. The study uses futures-oriented analytical methods to map uncertainties, identify key driving forces and explore multiple plausible development paths.

A two-stage methodological structure is used:

1. PESTEL-based qualitative content analysis, which synthesizes signals, drivers and trends affecting the audit profession.
2. Scenario planning using the Gausemeier approach, in which these drivers are transformed into future projections and combined into three exploratory scenarios.

This combined approach is considered to be well suited in future studies literature for a domain where:

- empirical foresight data is limited,
- technological change is rapid,
- regulatory evolution is uncertain,
- and the profession is influenced by political, social, and economic dynamics.

The choice of methodology aligns with the objectives of futures studies, which emphasize structured exploration of uncertainty and systematic integration of heterogeneous knowledge sources. Academic literature was reviewed primarily to build the theoretical background and to identify relevant concepts and broad drivers related to the future of the audit profession. Professional and practitioner-oriented publications constitute the main empirical material analysed in the PESTEL-based results chapter. These two strands are subsequently integrated in the scenario-building phase, where insights from both academic research and professional sources inform the construction and interpretation of future scenarios.

3.2 Research material and data collection

The material used in this study consists of two categories. Together, these sources provide a combination of conceptual insight and real-world signals about anticipated changes:

1. 1. Academic research literature, including peer-reviewed articles on the future of audit, emerging technologies, regulatory developments and changing competence requirements.
2. Professional and regulatory publications, including reports, white papers, speeches, audit quality reviews, and guidance documents from Big 4 audit firms, international oversight bodies, industry associations, and regulatory authorities.

The selection of research material emphasises recency and relevance. As the technological and regulatory environment in auditing is rapidly evolving, the review focuses primarily on materials published within the last five years. This time frame ensures that the analysis reflects current debates, ongoing regulatory reforms, and contemporary perspectives on technological transformation. Older sources are included only when they offer essential historical context or serve as foundational references. In addition, Big 4 publications are intentionally highlighted due to their status as global thought leaders and their influence on the direction of audit practice and standard-setting.

Material was identified and collected through a structured process combining academic database searches, scanning of professional sources, and monitoring of regulatory releases. Academic sources were retrieved by using search engines such as Google Scholar and Volter database of Turku University, using combinations of keywords related to the future of audit, emerging technologies, audit quality, scenario planning, and reputation of audit profession. Professional publications were gathered from firm websites, public repositories of oversight bodies, and industry platforms such as Thomson Reuters, PCAOB and Accountancy Europe. The selection was guided by inclusion criteria emphasising relevance to technological change, regulatory evolution, talent dynamics, and broader future-of-work themes. Publications lacking identifiable authorship, methodological transparency, or substantive analytical content were excluded. This part of the data collection was essential due to the forward-looking nature of the topic; professional firms and regulators frequently publish insights and analyses that anticipate future developments in audit practice and the regulatory environment.

To ensure coverage and reduce the risk of missing relevant material, the data collection used both forward and backward snowballing. When possible, references cited in key documents were followed to identify additional relevant publications, while influential authors and institutions were monitored for newer contributions. Throughout the process, the selection of material was guided by criteria emphasising topical relevance, analytical substance, and credibility of the source.

By integrating academic, professional, and regulatory perspectives, the study ensures that the constructed future scenarios draw from diverse viewpoints and capture the versatile forces impacting the future of the audit profession.

3.3 PESTEL-Based Content Analysis

The analytical approach applied in this study is based on qualitative content analysis structured through the PESTEL framework. As noted earlier, the audit profession is undergoing significant transformation, particularly due to emerging technologies that are expected to influence both the execution of audit work and the competencies required from future professionals. The PESTEL framework—comprising Political, Economic, Social, Technological, Environmental and Legal dimensions—is used to ensure a

sufficiently broad consideration of external factors and to avoid a narrow analytical focus when examining the forces shaping the audit profession (Yusop, 2018).

External factors affecting the audit profession are identified from the reviewed material and subsequently structured under the PESTEL categories. Political factors relate to governmental policies, regulatory priorities, and public interventions that shape the broader conditions in which audit firms operate. These can include decisions on public services, financial support schemes, infrastructure, or workforce education and training. Economic factors reflect developments in monetary and financial policies, as well as the consequences for inflation, employment and market dynamics. Social factors relate to client expectations, workforce characteristics and broader societal attitudes toward work and professional services. Technological factors encompass innovation, digitalization, research activity and the deployment of new tools. Environmental factors address issues such as resource scarcity, pollution, climate-related regulation and the green transition, all of which increasingly influence business practices and expectations concerning corporate social responsibility. Legal factors, in turn, consist of regulatory requirements, statutory obligations, and compliance expectations that organizations must follow. (Yusop, 2018.)

Within this study, the PESTEL analysis aims to explore political and regulatory pressures affecting auditing standards, economic challenges and opportunities linked to global market developments, and social dynamics shaping both client behavior and audit work itself. It further examines technological transformation and its implications for future audit capabilities, as well as environmental and legal developments that are expected to reshape the profession. The analysis draws on professional publications, white papers, regulatory releases, practitioner commentary and relevant academic literature.

The analytical process began with open coding, during which relevant statements, observations and signals were identified without assigning them to predefined categories. These initial codes were subsequently organized under the six PESTEL dimensions using a directed qualitative content analysis approach, where empirically identified factors are structured under a predefined analytical framework (Hsieh & Shannon, 2005). This categorization made it possible to identify patterns within each dimension, such as regulatory tightening, increasing technological maturity, evolving talent expectations,

and growing demands for sustainability-related assurance. Coding was conducted manually to preserve contextual nuances and to maintain consistency across source types.

After categorization, key factors within each dimension were identified and assessed by the author in terms of their future relevance, level of uncertainty and potential impact on the audit profession. The purpose of this step was to distinguish between developments that represent background trends and those that may serve as critical drivers of change. Cross-comparison of academic literature and professional publications was used to increase robustness, reduce single-source bias and ensure that the analysis captured perspectives from both research and practice.

In this study, the PESTEL framework thus functions not only as an organizing tool, but also as an intermediary step that transforms descriptive insights into structured inputs for the Gausemeier scenario methodology. This approach ensures alignment between the interpretation of source material and the construction of plausible, relevant and internally consistent future scenarios for the audit profession.

3.4 Use of AI

During the thesis process, artificial intelligence tools were used in a limited and supportive role. In line with the guidelines of the Turku School of Economics, generative AI tools were applied to support the early structuring of ideas and the thesis outline (ChatGPT), to assist in identifying potential sources alongside searches conducted in Volter (the University of Turku Library search service) and Google Scholar, and for final language and grammar proofreading (Microsoft Copilot). All content, interpretations, and analyses presented in the thesis are the author's own.

AI tools were used only for support tasks and did not generate the study's analytical content, results, or conclusions. Scenario narratives and other substantive sections were authored by the researcher, with AI tools (Microsoft Copilot) used solely for language refinement and structural clarification. All AI-assisted outputs were critically reviewed and verified against the original sources, and the thesis does not cite AI tools as sources. No confidential, personal, or unpublished material was entered into generative AI tools.

3.5 Ethical considerations

This study has been conducted in accordance with the principles of good scientific practice outlined by the Finnish National Board on Research Integrity (TENK, 2023). The research is based on a qualitative analysis of academic literature and publicly available professional and regulatory publications, and it does not involve human participants, personal data, or confidential material. For this reason, no ethical pre-review or consent procedures were required.

Although the study does not raise specific ethical risks, general principles of research integrity have been taken into account throughout the research process. Particular attention has been paid to the careful selection and accurate interpretation of sources, as well as to transparent reporting of the research process and its limitations. The author's professional background in the audit field is acknowledged as a potential source of perspective, and this has been addressed by adopting a critical and reflective approach to the analysis. Overall, the study adheres to TENK's (2023) principles of honesty, reliability, and responsibility.

In this study, the evaluation of desirable and undesirable future developments is framed explicitly from the perspective of audit firms, which is appropriate given the study's focus on their strategic responses and organizational challenges. The desirability of the scenarios is assessed from the perspective of large audit firms, meaning that favorable developments are defined primarily in terms of business conditions for the Big Four rather than broader societal or regulatory preferences.

3.6 Researcher's positionality

I have nearly 15 years of experience as an audit professional at a Big 4 firm in Finland. This background provides a practical point of reference for understanding current audit practices and ongoing changes in the profession. At the same time, the relevance of physical location in audit work appears to be gradually diminishing.

Recent research shows that many audit procedures can be performed remotely using digital tools, rather than relying on continuous physical presence at client sites. This reflects a broader shift toward more flexible and technology-enabled ways of working

(Lorentzon et al., 2024). In a similar vein, industry research highlights that the financial auditing market is becoming more global, with growing demand for professionals who combine advanced technical skills, remote auditing capabilities, and expertise in international compliance (PMR, 2024).

These developments suggest that both the talent market and the audit risk environment are becoming more interconnected across national boundaries. At the same time, flexible work arrangements and evolving expectation gaps are becoming more common in the audit profession, while technological change challenges traditional approaches to professional education and underlines the importance of continuous learning. In light of these developments, this thesis focuses on generic issues and guidelines that are broadly applicable, rather than on country-specific regulatory or institutional features.

4 Professional publications based PESTEL analysis

4.1 Context and scope of professional publications

As discussed earlier, the Big 4 firms are recognized as the leaders of the audit profession, with the largest capabilities to invest in both technology and competence innovation. Gordieieva and Tsaturian (2023) conducted an analysis of trends and determinants of the Big 4 companies in the global audit market. According to their paper the market in growing and evolving especially due to increasing regulatory requirements and complexity of business environment.

It is also good to point out that the performance of Big 4 companies is noted to be tied to the global economic climate which makes these firms interesting also from macroeconomic perspective. However, this connection means that to maintain performance and profitability, Big 4 companies must stay vigilant to the broader economic landscape. (Gordieieva & Tsaturian, 2023) Their initiatives and thought leadership are therefore critical in shaping the future landscape of the industry and addressing the profession's emerging challenges. As such, Big 4–related professional publications constitute the primary empirical material for this first results chapter, complementing the academic literature reviewed in the theoretical background. Additionally, the review emphasizes releases published within the last five years to ensure relevance in an era of rapid business environment changes. This section examines the key insights and developments presented in these releases, with particular emphasis on technological advancements, competence-related perspectives, and signals from the business environment that are expected to influence the future of the audit profession.

In May 2022 one of the Big 4 companies, Deloitte, organized an Audit Symposium together with University of Kansas (Ho, 2022). In the event one of the guest speakers was Christina Ho, Board member of PCAOB in the US. She talked about the future of audit from audit supervisor's perspective, which is another important standpoint to consider when future of audit is being evaluated. It is important to understand that some of the Ho's (2022) comments are US-specific, such as audit regulation changes that were established after Enron crisis, but there are still several universal points as well.

In her speech Ho outlined her vision for the auditing profession by posing key questions designed to stimulate conversations about future of audit. When discussing the ultimate goal of auditing, Ho emphasized that the future should be focused on solving more problems than currently exist. She identified three critical challenges within the existing auditing model: timeliness, independence, and competition. According to Ho, the goal of future auditing practices must remain centred on quality, with technology serving as a tool to facilitate more effective and efficient auditing processes. (Ho, 2022.)

Gordieieva & Tsaturian (2023) also mentioned that the adoption of innovative technologies and the employment of highly skilled personnel are crucial key determinants for the sustainable development of Big 4 companies. Due to their position in the market of shifting demands, these elements are also in a pivotal role when Big 4 companies are trying to secure their competitive edge and enable them to adapt to new opportunities that arise. Respectively, Ho (2022) was concerned about the lack of competition in US audit market, where Big 4 companies are auditing 90 % of large US listed companies subject to accelerated SEC filing requirements.

Gordieieva & Tsaturian (2023) also agreed that future success of the Big 4 companies in the audit sector will increasingly depend on their competencies, particularly in area of analytical and technical skills. Especially the integration of advanced technologies requires auditors to not only understand the technological tools but also to interpret and analyse the data those tools generate. This necessitates training and development of competencies in both technology and data science. (Gordieieva & Tsaturian, 2023.)

The 2024 Audit Quality Report from PwC outlines several important aspects related to the future of auditing. Based on the report its key focus is on integrating advanced technologies into the audit process and it aims to improve both efficiency and effectiveness of its audit practices. Additionally, PwC highlights the need to develop a strong talent pipeline for the future. This involves recruiting and training professionals who have the skills necessary to address upcoming challenges in auditing. By promoting mentoring and continuous learning, PwC is making significant investments in its audit personnel to defend the long-term success. (PwC, 2024.)

The report also addresses the necessity of adapting to new risks, particularly those related to distributed ledger technology and cryptocurrencies. PwC emphasizes the importance of conducting thorough risk assessments and updating audit methodologies to effectively manage these innovative areas in business. (PwC, 2024.)

In March 2024, PCAOB conducted a study together with economic researchers to explore the technology in external audit (Boland et al., 2024). In the paper it was noted that all public accounting firms, regulators, and standard setters increasingly recognize the pivotal role of technology in external audits. Audit firms often promote their engagements as technology-driven, asserting that this approach enhances the consistency and efficiency of their services. The findings reveal that the Big 4 audit firms possess significantly more technology-based audit tools than other players in the market, indicating that technology plays a more prominent role in their audit production processes. Moreover, audit firms utilize technology-based audit tools to support quality control by embedding standardized procedures and internally certified methodologies directly into audit workflows. The study indicates that the competitive advantage enjoyed by the Big Four firms in terms of technological resources is likely to persist. (Boland et al., 2024.)

Although technological themes are already visible in this context, they are examined systematically later as part of the PESTEL analysis. The discussion therefore begins with political factors shaping the audit profession.

4.2 Political

Especially financial scandals profoundly impact the audit profession, particularly from a political standpoint. Such scandals highlight information asymmetries between corporate management and external investors, revealing that investment decisions may be based on incomplete or misleading information. This, in turn, creates pressure for governmental and regulatory responses that seek to strengthen investor protection and restore confidence in market integrity.

For example, the collapse of Enron was not simply the bankruptcy of a single company, but a major accounting and auditing scandal. The case revealed extensive financial misreporting and shortcomings in external auditing and oversight. It raised serious

concerns about auditor independence and the effectiveness of self-regulation within the audit profession, thereby weakening trust in auditing as a safeguard of reliable financial reporting. In response, the Sarbanes–Oxley Act was introduced in the United States, tightening corporate governance requirements, strengthening auditing standards, and increasing auditor accountability by replacing audit self-regulation with public oversight, introducing external inspections, and expanding enforcement and sanctioning powers over audit firms. Such scandals are typically followed by closer regulatory scrutiny and more demanding inspection regimes. The establishment of the Public Company Accounting Oversight Board (PCAOB) in the US is a clear example of this strengthened oversight. Political pressure on accounting firms often increases after such events, leading to investigations, legal consequences, or the loss of client engagements. (Ho, 2022.)

In the UK, an anticorruption charity called Spotlight on Corruption released a response to the Consultation on Restoring Trust in Audit and Corporate Governance in July 2021. Consultation was initially inquired by Department for Business, Energy, and Industrial Strategy of British Government. The recommendations reflect a political commitment to reform the audit profession, responding to ongoing corporate scandals and public demands for accountability. This initiative shows the government's intention to prioritize public interests over corporate interests, reinforcing the need for greater oversight. (Spotlight on Corruption, 2021.)

After above mentioned consultation and political pressure towards audit supervision in UK, a new audit regulator called “ARGA” (the Audit, Reporting and Governance Authority) was established in 2024 after several years of planning and delay. (Mason, 2024) From political point of view, a new regulatory body was needed for timely investigations into audit failures, safeguarding public and investor interests. Establishing an Independent Fraud Panel within ARGA was also proposed to investigate serious audit failures, enhancing accountability within the profession. This call for robust regulation underscores the importance of creating a regulatory landscape that better protects public and investor interests. Additionally, there has been a need to clarify legal responsibilities and liabilities for auditors regarding fraud detection. By setting ambitious standards for audit practices and establishing an Independent Fraud Panel within ARGA to investigate serious audit failures, the audit profession can be held more accountable for its actions. The aim of implementation of these changes was to boost the audit profession to work

towards rebuilding public trust and effectively prevent future corporate failures. (Spotlight on Corruption, 2021.)

On the other hand, in April 2025 International Accounting Bulletin (2025) and Finacial Times published articles indicating that there has been discussion how US President Donald Trump's deregulatory agenda will impact audit and audit supervision. Currently it looks like Republican lawmakers are considering dismantle the independent audit regulator Public Company Accounting Oversight Board and transfer organization's responsibilities to the Securities and Exchange Commission. Transferring the PCAOB's responsibilities to the Securities and Exchange Commission would affect the US audit oversight model by potentially reducing the institutional separation between audit supervision and broader securities market regulation. While such a change would be limited to the United States, it could have indirect implications for international audit firms and cross-border oversight practices, given the global role of US capital markets and the PCAOB's involvement in international regulatory cooperation. The move is expected to face opposition from Democrats and may not gain full support from audit firms. However, it can be seen as a signal towards deregulation which has not been the dominating trend in the world of external auditing. (International Accounting Bulletin, 2025; Financial Times, 2025)

4.3 Economic

As discussed later in the Legal chapter, auditing is a regulated activity, and statutory audit requirements are defined separately in each country. Thereby the demand for audit services does not usually face significant decline during economic downturns due to its nature as statutory requirement. In addition to that, it has also been noted that the performance of Big 4 companies is tied to the global macroeconomic situation (Gordieieva & Tsaturian, 2023). However, this chapter focuses on economic factors insofar as they are expected to influence the future development and operating environment of large audit firms and their regulated audit business.

One economic factor impacting the future of audit relates to labour costs and the so-called 'war for talent' which is a consequence of imbalance between service demand and talent supply perspectives. In this context, "war for talent" describes intensified competition for scarce, highly skilled audit professionals in a labour market where demand exceeds

supply. During the last few years, especially after the COVID-19 pandemic, several companies—such as PwC—have faced increasing pressure in the intensity of the war for talent. From economic perspective, according to PwC compensation and benefits are always going to be drivers that matter most to employees. (Marcellus, 2021.)

The European Centre for the Development of Vocational Training, Cedefop's statistics (Cedefop, 2025) on future jobs highlights several areas of interest evaluating organizational readiness in the face of evolving labour market trends. The article indicates that professional services—such as legal, accounting and consultancy — are expected to grow significantly due to increasing demand for knowledge-intensive tasks. These occupations typically require higher qualifications and continuous upskilling, driven by technological change and complex client needs. The sector is likely to see strong employment growth and evolving skill requirements. A major point in Cedefop's (2025) summary is the impact of demographic shifts—by 2035, most job openings in Europe will result from replacing retiring workers rather than from newly created positions. Automation and offshoring pose significant risks to job stability, especially in roles susceptible to technological change or relocation. All these elements might impact labour cost and support PwC's perspective on war for talent.

PwC (Gorna & Accordi, 2020) mentioned in their future of audit related article that one of the hot topics in the market for years has been an expectation gap. It refers to the difference between the gap between what stakeholders anticipate from auditors (such as broader risk and fraud detection) and the legally defined scope of statutory financial statement audits. PwC's survey of 5,000 stakeholders connected to London also highlights this issue. Addressing the expectation gap requires participation from all stakeholder groups, such as audited companies, audit firms, investors, and regulators. Implementing real-time auditing and expanding the auditor's role depend on changes to companies' financial reporting systems and processes. Gorna & Accordi (2020) also noted that without improvements, market confidence on financial reporting and related audits may remain limited, potentially constraining their perceived usefulness for investors and other stakeholders.

4.4 Social

There are at least two social aspects impacting the audit profession. First, the expectations from the clients. A global survey of business leaders by KPMG and Forbes Insights in 2022 found that almost all executives (98%) reported their external audit firm made extensive use of advanced technology. This reflects a shift in traditional auditing practices toward modern, tech-driven methodologies. So, there are also high client expectations for the technology matters. Moreover, also the expectation for clients to integrate technology comparable to their auditors' is growing. (Banham, 2022.)

Another aspect to social element relates to talent attraction and retain of talent. For example, Ho (2022) mentioned that evolution in audit profession reflects a trend where auditors of the future must be intellectually curious and capable of drawing insights from disparate data sources. She asserts that while technology is crucial, people remain the foundation of the auditing profession. Ho (2022) also agreed with many other authors and studies that no machine can replace people, and technology enables people to focus on more critical and complicated issues. Audit firms should note that many individuals are familiar with current technologies in their daily lives and expect similar ease of use, accessibility, and convenience from workplace technology. This expectation also applies to auditors. (Ho, 2022.)

One of the leading technology companies and media agency Thomson-Reuters highlighted in their white-paper how modern audit practice helps both attracting talent and keeping them engaged (Lindsey, 2024). The integration of emerging technologies, such as AI, within audit firms has the potential to significantly reduce manual tasks. Meaningful and rewarding activities could enhance job satisfaction, employee engagement, and decrease staff turnover. Furthermore, the adoption of advanced cloud technologies to enable remote work capabilities will play a vital role in promoting better work-life balance among associates. Such initiatives are critical for attracting and retaining top talent. Consequently, audit firms should demonstrate a commitment to innovative technological investments, signalling to employees that they are operating as future-oriented and progressive organizations. (Lindsey, 2024.)

Given that some companies are relying more on technology-based audit tools than others, this might have an impact on their attractiveness for talent. Technology-driven approach can thereby turn into competitive advantage also from talent perspective. (Boland et al., 2024.)

4.5 Technological

Modern technologies are challenging the traditional ways of delivering audit work. While the PESTEL framework is applied to ensure a sufficiently broad analytical perspective, the reviewed material suggests that many of the political, economic, and social developments discussed above are closely connected to technological change. As a result, technological transformation emerges as a major and cross-cutting driver shaping the future of audit work. Automation solutions are expected to identify anomalies in transactions, enabling earlier risk detection and increasing accuracy in the audit process. Moreover, there is a growing expectation for clients to adopt technology comparable to that used by their auditors. This alignment is expected to support more effective communication and enhance the overall audit process, thereby reducing the risk of discrepancies between management and auditors' findings. (Banham, 2022.) From an audit supervisory perspective, technology should challenge auditors to strive for greater and more meaningful impact, while enabling agile audit processes that can continuously adapt to emerging risks (Ho, 2022).

Alongside large audit firms, PCAOB (2024) also acknowledges that generative artificial intelligence has the potential to significantly impact the auditing process in several ways. One of the key advantages is its ability to enhance efficiency in administrative tasks. By assisting in the preparation of administrative documents, generative AI can reduce the time auditors spend on these routine activities. Additionally, audit firms are leveraging GenAI tools to improve research capabilities, which allows staff to locate and analyse internal accounting and auditing guidance more effectively. Despite these advancements, PCAOB (2024) emphasizes that human oversight remains paramount. Auditors must review outputs generated by generative AI to ensure they meet the necessary standards and to guard against potential biases or inaccuracies. This responsibility does not introduce a separate layer of oversight but reflects the existing principle that auditors remain accountable for the methods and tools they use, within established audit supervision and inspection frameworks. This also emphasizes the need for a collaborative

approach where technology augments human judgment rather than replacing it. PCAOB (2024) reminds that the integration of generative AI into the auditing process also introduces new risks that must be carefully managed. Firms face challenges related to data privacy and security, particularly concerning confidential company information, and many firms have implemented safeguards and established policies to control utilization of generative AI in audit tasks. (PCAOB, 2024.)

Research conducted by KPMG indicates over 80 % of businesses currently utilizing AI in financial reporting, with projections suggesting this figure will rise to 99% within three years. Executives overseeing financial reporting expect auditors to take a leading role in the AI transformation. AI's integration into auditing is becoming increasingly apparent, with a growing expectation from companies for auditors to evaluate their AI practices and provide assurance regarding AI controls. (Bradley et al., 2024.) On the other hand, according to Fotoh and Lorentzon (2023), a shift to digital audits can also bring new expectation gaps and challenges in addition to expectations relating to technology deployment.

These emerging expectation gaps mainly stem from differences in how technology-enabled auditing is understood by different stakeholders. The use of advanced analytics and generative AI may lead users of audited information to expect continuous auditing, stronger fraud detection, or broader assurance, while auditors remain constrained by statutory mandates, professional standards, and the need for human judgment. As a result, digitalization does not eliminate the traditional audit expectation gap but rather reshapes it by raising expectations more rapidly than audit practices, regulation, and assurance responsibilities can adapt (Fotoh & Lorentzon, 2023).

Blockchain technology is expected to streamline audit process by providing a single, immutable record of financial transactions that organizations can trust. This could mean that auditing enterprises can leverage blockchain to reconcile transactions in real time instead of retrospective procedures and detect anomalies or discrepancies more efficiently. This would mean reduction in time and costs associated with audits and the overall reliability. (Ayobami, 2024.)

One of the market leaders, Deloitte (Psaila, 2018), has also pondered that blockchain technology could be a reliable source for verifying reported transactions because Its design inherently resists modification of stored data. It is possible that this technology allows auditors to access public blockchain ledgers to confirm transactions directly, reducing reliance on traditional verification methods such as bank statements or third-party confirmations. According to Deloitte (Psaila, 2018), blockchain driven solutions could potentially validate transactions in a matter of minutes, compared to traditional methods that may take weeks or months.

However, Deloitte (Psaila, 2018) emphasized, that despite its secure nature, blockchain is not immune to fraud or cyber threats. Auditors must assess – and have competence to assess – the effectiveness of internal IT controls to mitigate risks associated with unauthorized transactions and ensure the integrity of the blockchain environment. As the integration of blockchain technology relies heavily on human-coded software, which can introduce errors or vulnerabilities. Auditors are required to understand the specific IT risks that could affect financial statements and ensure that adequate controls are in place to address these risks. This need for heightened scrutiny emphasizes the evolving role of auditors in a technology-driven landscape. (Psaila, 2018.)

4.6 Environmental

In this study, the environmental dimension of the PESTEL framework focuses on environmental policy, regulation and sustainability reporting requirements that influence audit work. Environmental targets and climate-related objectives have led to new reporting and assurance requirements that auditors need to adopt and be prepared to assure (PwC, 2023; CEAOB, 2024). In addition, travel remains an inherent part of audit work, and changes in business travel practices are also affecting the profession. Audit firms are expected to operate efficiently while at the same time responding to increasing sustainability expectations related to travel and mobility. For example, in the United States, carbon accounting is expected to become a requirement for SEC reporting, requiring companies to disclose their environmental impact more systematically (Travelport, 2024).

This pressure does not solely come from government regulations and environmental organizations; consumers are also increasingly concerned about climate change, and these

concerns persist in the workplace. Business travelers, especially younger individuals who are socially aware, are seeking greater transparency regarding the environmental effects of their journeys. This shared perspective between businesses and employees is evident, as 63% of companies are enhancing their investments in sustainable travel, and 80% of business travelers are looking for more eco-friendly options. (Travelport, 2024.)

The Big Four accounting firms say they understand climate risks and how these affect financial reporting. ClientEarth has told PwC, KPMG, Deloitte, and EY that it is worried there is not enough proof that companies are checking climate risks properly when making their financial statements. These four firms promise to make all their work align with net zero goals by 2050 or sooner, including following the Paris Agreement in their respective business activities. (ClientEarth, 2021.)

Today, companies are accountable for more than just maximizing shareholder value. They must also mitigate environmental externalities, produce safe and healthy products, support the personal development of their employees, and contribute to government revenue through tax payments. As a result, both shareholders and stakeholders are increasingly focused on corporate social responsibility (CSR) and are demanding transparency regarding CSR performance. In response to this demand for non-financial information, more companies are publishing CSR reports in addition to traditional financial statements. Assurance providers often review these reports to verify their accuracy and enhance their credibility. Major audit firms, including the Big 4 (E&Y, KPMG, PwC, and Deloitte), along with CSR assurance specialists, now offer assurance services for sustainability reports. (Paugam, 2019.)

From an environmental perspective, digitalization affects the audit profession through both changing audit work practices and the technologies supporting audit processes. Reduced business travel and the wider use of remote audits can lower emissions linked to travel-intensive engagements, while digital and AI-enabled audit work increases reliance on energy-intensive digital infrastructure. Technological transformation therefore does not simply reduce the environmental impact of audit work but shifts it from physical mobility toward data processing and computing capacity. Like earlier discussions on digital auditing, these developments suggest that technological change

reshapes existing tensions in audit practice rather than eliminating them (Fotoh & Lorentzon, 2023).

4.7 Legal

It important to point out that while there is always country specific regulation in each country regulating the audit, international auditing standards serve as the guiding principles for auditors worldwide. The aim of the standards is to provide a framework for conducting audits effectively and efficiently at an international level. Local auditing standards and regulation are developed and enforced for local needs and country specific circumstances by national regulatory bodies. (Pratama, 2023) It is crucial for policymakers and standard-setting bodies to understand how auditors navigate the complexities of differing auditing standards and the impact on audit quality. (Pratama, 2023). Audit professionals, such as Big 4 companies are also trying to be actively involved in setting standards and complying with regulatory requirements, ensuring that their audit practices align with evolving regulations (PwC, 2024).

Currently it looks like there are several new regulations in different continents expanding the regulatory landscape of audits and the anticipated trend of increasing regulation is supported by several examples. For example, audit and risk management software firm Hyperproof identified several new regulations, as well as changes in the enforcement of existing regulations, which collectively increase transparency, accountability, and process discipline within audit work, in their article *"The Future of Auditing: What to Look for in 2025"* (McGladrey, 2025). On the other hand, as the landscape of auditing evolves with the integration of generative AI, it may also prompt the regulatory authorities to assess current auditing standards. There may be a need for new guidance to ensure that existing standards remain relevant and effective considering advancements in technology. (PCAOB, 2024) Similar thinking was also mentioned in KPMG's study (Bradley et al., 2024) regarding "AI in financial reporting and audit"; as companies increasingly look to auditors for assurance over their AI controls, there is a consensus that regulatory frameworks must evolve to meet these emerging expectations.

In the US, changes to administrative law, together with developments related to the Public Company Accounting Oversight Board, are expected to shape audit regulation. In addition to this, there are also state level additions like California's new climate reporting

laws will require companies to undergo audits for their preparedness for climate and sustainability-related disclosure requirements. Respectively, the EU Network and Information Security Directive (NIS2) will impose cybersecurity control and reporting obligations in critical industries in Europe. The Digital Operational Resilience Act will establish new resilience and cybersecurity standards for financial institutions, which will have implications for audit practices. Additionally, the European Union may reference its harmonized anti-corruption directive, potentially resulting in heightened regulatory oversight, particularly in light of recent amendments to the enforcement of the United States' Foreign Corrupt Practices Act. (McGladrey, 2025.)

In the European Union, a new Corporate Sustainability Reporting Directive (CSRD) went into effect in January 2023. This was not only a significant addition to corporates' reporting requirements, but also a remarkable addition to their auditors. The directive requires companies to publish detailed information about environmental, social and governance matters (thereinafter "ESG"). Directive was a set baseline and EU Member States ratified CSRD in their national regulations without option to eliminate any of the requirements set out in CSRD. In many countries this reporting belongs to the scope of auditor's work from 2024 onwards. This requires auditors to obtain completely new competences and expand their professional knowledge in the field of non-financial reporting. (PwC, 2023; CEAOB, 2024.)

4.8 PESTEL summary

This section brings together the most significant drivers of change identified across the PESTEL dimensions based on the preceding analysis. The purpose of the summary is to synthesise the key external factors shaping the future of the audit profession and to provide a structured foundation for the subsequent scenario-building phase. Summary of PESTEL analysis findings explained in chapters 4.1-4.7 is presented below in a table format.

Political	• Financial and corporate scandals affecting the audit profession. • Governmental and regulatory responses related to investor protection and market integrity. • Political initiatives to reform audit regulation and supervision. • Potential signals of deregulation in certain jurisdictions.
Economic	• Dependence of large audit firms' performance on global macroeconomic conditions. • Growth of knowledge-intensive professional services. • Labour market pressures and competition for audit talent. • Client expectations related to audit assurance levels and pricing.
Social	• Client expectations regarding the use of modern audit technologies. • Workforce expectations related to digital and flexible work environments. • Perceptions of audit work attractiveness and professional identity. • Employer branding and talent attraction within audit firms.
Technological	• Use of automation and data analytics in audit procedures. • Deployment of technology-based audit tools for quality control. • Emerging technologies such as artificial intelligence and blockchain in audit contexts. • Changes in audit risk profiles related to IT-enabled environments. • Audit expectation gap in the context of digitalization.
Environmental	• Sustainability-related regulation and reporting requirements. • Expansion of non-financial reporting and assurance (e.g. CSRD, ESG). • Changes in audit work practices related to mobility and remote work. • Sustainability expectations affecting audit firms and their operations.
Legal	• National audit regulation and audit oversight structures. • International auditing standards and harmonisation efforts. • Regulatory developments affecting audit scope and auditor independence. • Legal implications related to the use of emerging technologies in audit work.

Table 1: PESTEL summary

5 Scenario planning

In the PESTEL analysis, several factors relevant to the future of the audit profession were identified. For each PESTEL dimension, these factors were found to allow for multiple alternative development trajectories, reflecting uncertainty regarding how they may evolve in the future. The next step of the study is the scenario projection phase, in which alternative trajectories are outlined for each PESTEL factor based on the observations made in Chapter 4. These trajectories represent distinct directions of development for individual factors and serve as analytical inputs for the subsequent scenario-building phase, where holistic future scenarios are constructed. In this study, the term trajectory is used to describe alternative development directions of individual change factors, while projections refer to these trajectories as outputs of the scenario-projection phase in the Gausemeier methodology. The term scenario is reserved exclusively for the holistic combinations of projections presented in Section 5.2.

For each identified change factor, three alternative development trajectories are distinguished and labelled as A, B and C. These trajectories represent different possible directions for the evolution of individual factors, ranging from more favourable to more challenging conditions for large audit firms. Trajectory A reflects a development path characterised by relatively favourable conditions and limited constraints, while trajectory B represents a more moderate or "business-as-usual" path, where developments proceed in a predictable but constrained manner. Trajectory C captures a more challenging direction, where increasing complexity, constraints, and frictions shape the operating environment of audit firms.

5.1 Trajectories of key factors

According to Gausemeier et al. (1998) and Sardesai et al. (2021), in the projection phase there are certain criteria that has to be met. First, plausibility is a key criterion, meaning that each trajectory must be internally consistent and credible in light of existing knowledge and observed trends. Secondly, each projection has to take into dissimilarity which means that all projections have to be distinct from each other. A set of projections must also provide a comprehensive set of possible developments which stands for completeness. Relevance is also important criteria, and future relevance has to be checked

for each projection. Last criterion is called information content, because each projection must provide additional value to the set of projections.

When we consider political factors in the light of above covered articles and publications, there have not been clear signals that would indicate political pressure and expectations towards auditors to disappear or public interest to play less significant role than in the past. Respectively, indications of increasing public and political interest exist, recent regulation updates released in the US and UK being the most obvious international examples. This means that the trend of establishing new oversight and supervisory authorities would either remain at current level or increase in the future. Thereby from scenario work perspective can be considered that there possible three alternative development trajectories based on political factors: public interest and audit oversight will either 1) remain at current level, 2) face a moderate increase, or 3) face a significant increase.

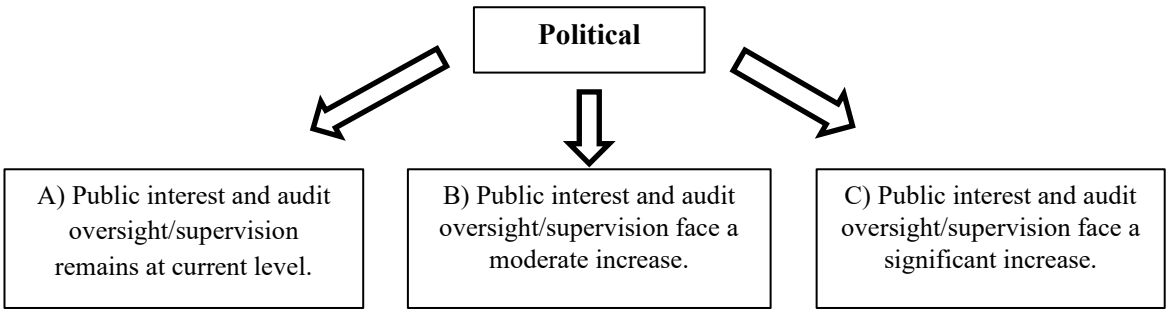

Figure 3: Development trajectories for political factors.

Rising labour costs and a competitive 'war for talent' are reshaping the audit profession. However, in the past economic downturns have not had a substantial impact on demand for audit services. The other way around, with high demand for qualified auditors and limited supply, firms face increasing compensation pressures. According to industry sources compensation and benefits remain the primary motivators for employees, contributing to competitive pressures across audit and professional services firms. Labor market analyses forecast strong employment growth for knowledge-intensive roles, driven by technological change and complex client needs. Market discussion also highlights the expectation gap in audit, where stakeholders' expectations often exceed what auditors are required to deliver. Addressing this gap requires collaboration among companies, audit firms, investors, and regulators. For example, some counterparties

might expect auditors to both find questionable ways to support clients' business and reduce audit fees despite market circumstances.

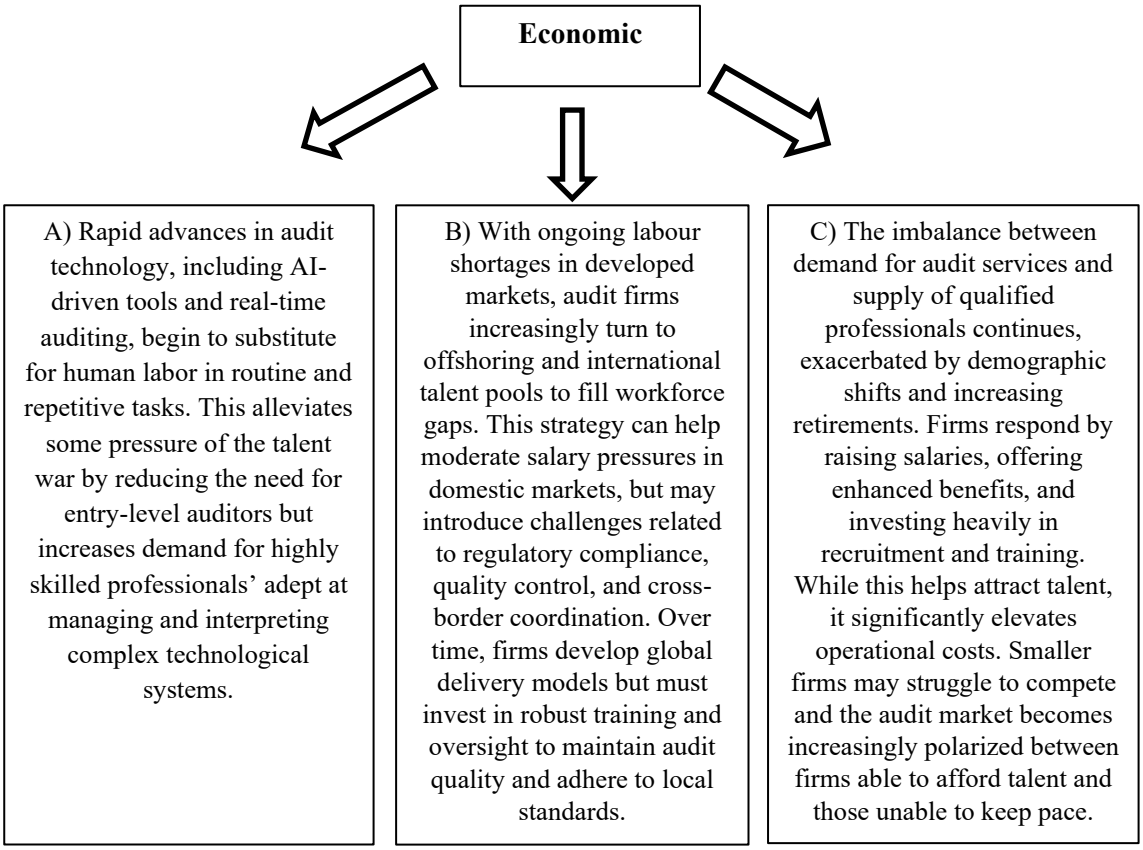

Figure 4: Development trajectories for economic factors.

As discussed earlier, the social aspect of the audit profession is evolving, driven by elevated expectations from both clients and audit professionals. Clients increasingly expect their audit firms to leverage advanced technologies, mirroring the tools and convenience they encounter in everyday life. Additionally, attracting and retaining talent has become crucial; audit professionals seek intellectually engaging work, and a workplace equipped with modern technology that supports flexibility and work-life balance. Firms that invest in innovative solutions not only improve employee engagement but might also be able to gain a competitive edge in the talent market.

Across all development trajectories, the importance of work-life balance is assumed to increase, reflecting broader societal and workforce trends. The following trajectories therefore focus on how the profession, and its clients respond to these expectations.

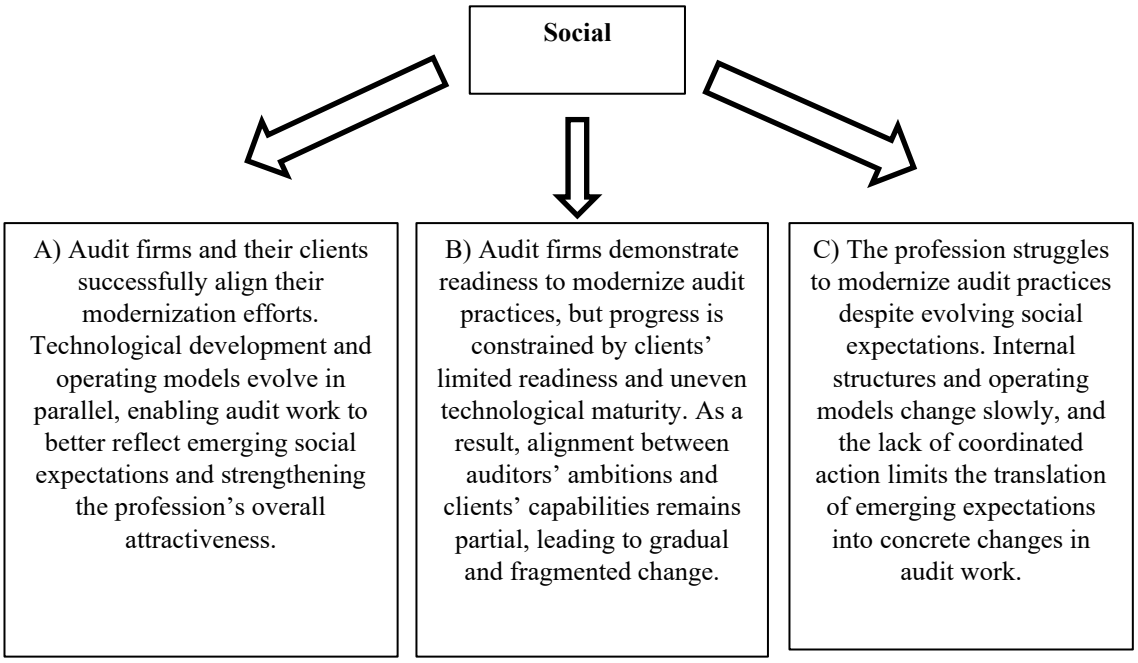

Figure 5: Development trajectories for social factors.

Based on article and literature review, it is obvious that artificial intelligence and other emerging technologies are getting integrated in audit profession across all identified development trajectories. Therefore, difference between the scenarios based on technological factors is related to speed of adaptation and change in risk landscape. However, many of the technological factors are related to availability of competences and talent resources.

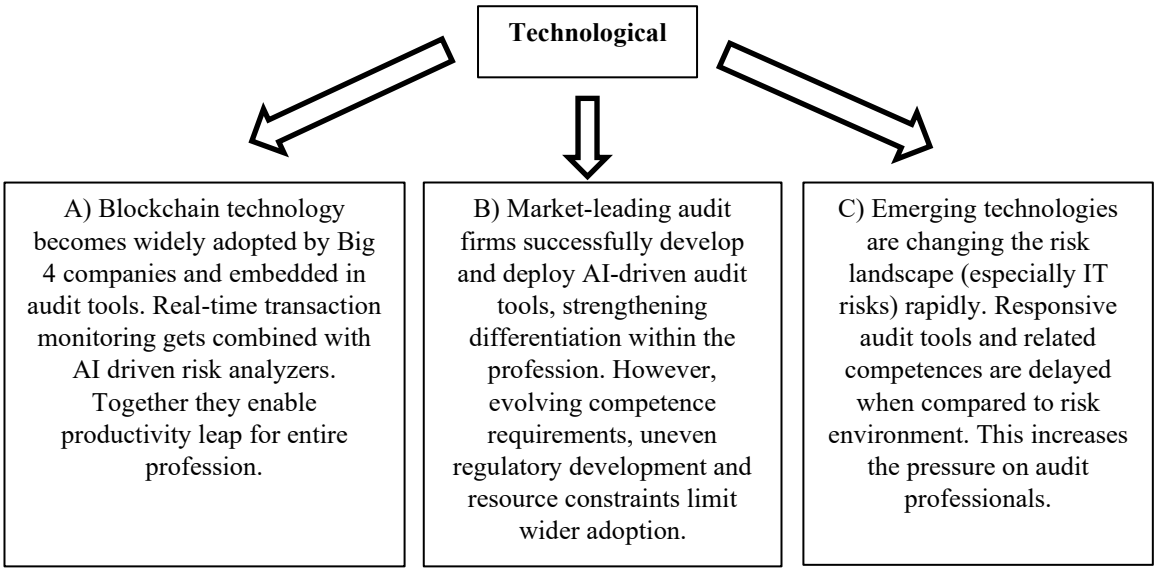

Figure 6: Development trajectories for technological factors.

Environmental factors are linked closely to sustainability reporting and related targets. One factor is also the limitation of work-related travelling that can already now be seen as a weak signal. Remote and hybrid work might lead to challenges in audits' efficiency and reliability. On the other hand, sustainability reporting can bring a lot of transparency in the capital markets and new business opportunities for audit firms as there will be assurance or audit requirements linked to reporting requirements.

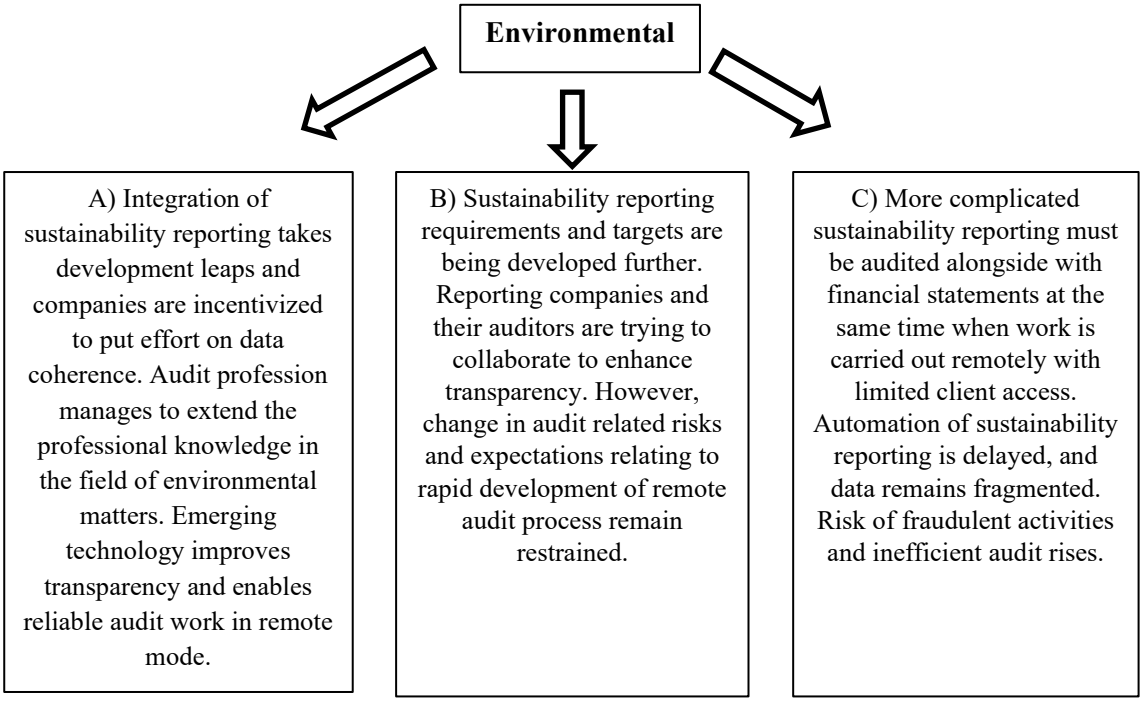

Figure 7: Development trajectories for environmental factors.

From a legal perspective, the extent and pace of regulatory development may vary across countries and continents. However, neither academic literature nor professional publications provide indications that audit regulation would be reduced or rolled back. Instead, the prevailing trend points toward sustained or increasing regulatory demands, which aligns with political factors emphasising public interest, audit supervision, and accountability rather than the streamlining of audit requirements. At the same time, particularly the Big 4 companies actively interact with regulators on a regular basis, indicating continued efforts to influence the development of the regulatory environment shaping future audit practice.

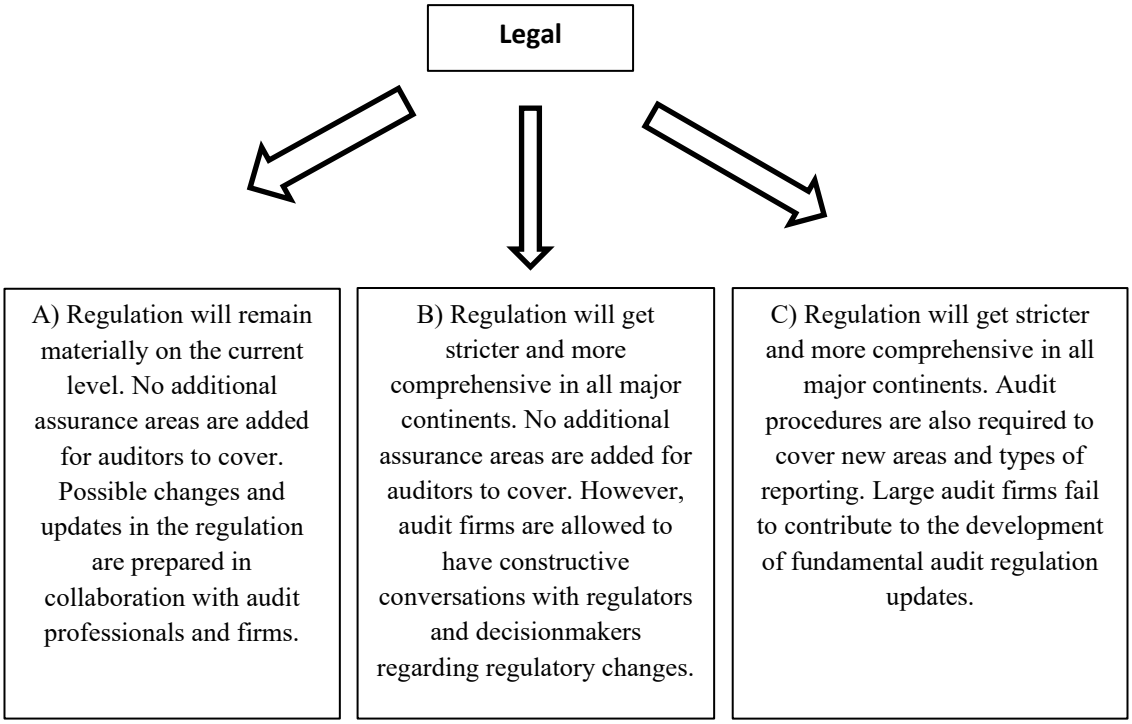

Figure 8: Development trajectories for legal factors.

These development trajectories represent alternative future directions of individual PESTEL factors and serve as analytical inputs for the subsequent scenario-building phase. In the following chapter, these trajectories are combined across dimensions to construct holistic and internally consistent future scenarios for the audit profession.

5.2 Creation of Scenarios

The development trajectories identified in the previous section describe alternative future directions of individual political, economic, social, technological, environmental, and legal factors affecting the audit profession. In this chapter, the trajectories are combined across the PESTEL dimensions to construct holistic and internally consistent future scenarios for the audit profession. Following the Gausemeier approach, the scenarios are developed by bundling projections in a systematic manner, allowing the analysis to move from factor-specific developments toward comprehensive future configurations.

Three exploratory scenarios are presented in the following sub-chapters. Each scenario represents a distinct combination of development trajectories and illustrates how different constellations of technological progress, regulatory evolution and workforce dynamics may jointly shape the future operating environment of audit firms.

5.2.1 Scenario A: Cohesive techno-driven transformation

The first scenario is based on the "A" development trajectories identified for the key factors in the PESTEL analysis. In this scenario, the audit profession stands on the precipice of transformation. Despite the constancy of public interest and regulatory oversight, which remain stable, the landscape is still evolving beneath the surface, driven by advances in technology and shifting societal expectations.

Rapid development in audit technology, particularly the rise of AI-driven tools and real-time auditing systems, is revolutionizing workflow efficiencies across the sector. Routine and repetitive tasks, traditionally performed by entry-level auditors, are increasingly automated, reducing the pressure of ongoing talent shortages. However, this technological substitution does not eliminate the human element; rather, it pivots demand toward highly skilled professionals who possess the expertise to manage, interpret, and leverage these complex systems. The profession is thus challenged to foster new competencies among its ranks, as the routine gives way to the analytical and the strategic.

From a social perspective, audit firms actively modernize their operating models and working practices in response to changing professional expectations. Investments in digital tools, flexible working arrangements and new competence development pathways strengthen the profession's attractiveness and support the integration of technological change into everyday audit work. Clients, in turn, demonstrate sufficient readiness to adopt compatible technologies, enabling smoother collaboration and supporting more data-driven audit approaches.

On the technological front, the widespread adoption of blockchain technology by leading audit firms heralds a new era in transaction monitoring and risk analysis. The integration of real-time monitoring with artificial intelligence not only enhances productivity but also redefines the very nature of audit work. These advancements enable auditors to deliver timely and insightful assurance, supported by transparent, immutable data streams.

Simultaneously, the environmental dimension takes on greater prominence. Sustainability reporting undergoes significant development, with companies incentivized to ensure the

coherence and reliability of their data. The audit profession responds by expanding its expertise in environmental matters, leveraging emerging technologies to boost transparency and facilitate remote audit operations. This forward movement not only advances professional standards but also aligns with broader societal demands for accountability in environmental stewardship.

From a legal perspective, regulation remains materially unchanged, maintaining clarity and continuity within the profession. No new assurance requirements are imposed, and any modifications to the regulatory framework are thoughtfully prepared in collaboration with audit professionals and firms. This approach ensures stability, while allowing the sector the flexibility needed to embrace innovation.

Taken together, these developments describe a future in which technological progress acts as the primary driver of transformation within the audit profession. Rather than incremental adjustment, Scenario A illustrates a coordinated shift toward a more data-driven, technologically integrated and strategically oriented audit model.

5.2.2 Scenario B: Moderate audit evolution

Scenario B is based on the "B" -level development trajectories of the key PESTEL factors. In this scenario, the audit profession navigates a shifting landscape shaped by moderate increases in public interest and more intensive audit oversight. This environment compels firms to enhance their supervisory frameworks and respond diligently to the heightened scrutiny of their activities. At the same time, persistent labor shortages in developed markets drive audit organizations to offshoring and the recruitment of international talent to bridge workforce gaps. These strategic HR responses alleviate domestic salary pressures but also introduce new challenges, particularly in maintaining regulatory compliance and coordinating complex audit operations.

Concurrently, socio-cultural dynamics are evolving, with a growing emphasis on work-life balance within the profession. Although audit firms stand ready to embrace modernization - particularly through the adoption of modern technologies and practices - progress is hampered by clients' limited readiness and insufficient appetite for change. Amidst these constraints, dominant market participants distinguish themselves through

the selective and incremental deployment of AI-driven audit tools, enhancing their competitive advantage without fundamentally transforming audit practices across the profession. Nevertheless, the full deployment of such innovations remains impeded by evolving regulatory frameworks, ongoing resource constraints, and the persistent need to cultivate the requisite competencies among professionals.

Environmental considerations are also advancing, as the momentum behind sustainability reporting strengthens. Auditors and reporting entities are increasingly encouraged to collaborate in pursuit of greater transparency and alignment with emerging sustainability targets. However, the evolution of audit-related risks and expectations, particularly in relation to remote auditing processes, proceeds at a cautious pace.

Legally, the regulatory environment is tightening across major areas, with more comprehensive and stringent requirements being implemented. While no new assurance responsibilities are introduced, audit firms are afforded opportunities to engage constructively with regulators and policymakers, positioning themselves as stakeholders in the ongoing refinement of audit standards. Collectively, this scenario illustrates an audit sector undergoing gradual and path-dependent evolution, where adaptation and selective innovation dominate over rapid or disruptive change.

5.2.3 Scenario C: Strained resources and rising demands

Scenario C is based on the “C” -level development trajectories of the key PESTEL factors and depicts a rapidly evolving and increasingly complex audit environment characterized by heightened public scrutiny and intensified regulatory oversight. The audit profession faces a significant surge in public interest, prompting authorities to introduce stricter and more comprehensive regulations. These regulations not only broaden the scope of audit procedures - requiring assurance over new areas such as sustainability reporting - but also increase the expectations around audit quality. In addition to this, large audit firms cannot feed their comments into the political decision-making process and thereby contribute to the development of fundamental regulatory updates.

At the same time, the audit labor market suffers imbalances. Demographic changes, particularly the retirement of experienced professionals, worsen the gap between the

demand for audit services and the supply of qualified practitioners. The audit profession becomes increasingly less attractive to a significant share of business students that are in the core of targeted talent mass. In response, audit firms escalate compensation, maintain benefits, and invest heavily in recruitment and ongoing training. While these strategies help attract new talent, they significantly inflate operational costs. This economic strain leads to a polarized market, where only the largest and most attractive firms can remain competitive in talent acquisition.

Social dynamics further shape the profession, as the importance of work-life balance becomes increasingly central to practitioners and new talents. Audit firms are compelled to modernize their practices, aligning audit processes with both the evolving technological landscape of their clients and shifting professional expectations. However, this modernization occurs alongside rapid technological advancement - particularly in IT risks - where the development and implementation of responsive audit tools and competencies lag the risk environment. As a result, audit professionals operate under growing pressure to bridge the gap between emerging risks and the slower pace of technological adaptation within their own firms.

Environmental considerations add further complexity. Sustainability reporting, now required to be audited in connection with financial statements, involves complex and fragmented data and delayed automation of the audit process, particularly as much of the audit work must be conducted remotely with limited access to client sites. These factors together make the risks of fraudulent activities and inefficient audit processes higher.

These factors together describe an audit profession under significant strain, where structural pressures, regulatory burdens and resource constraints force reactive change rather than deliberate transformation. The convergence of public demand, regulatory tightening, talent shortages, technological delays, sustainability reporting requirements, and increasing operational costs drives a scenario where only the most adaptable and well-resourced firms prosper. This environment calls for coordinated innovation and collaboration across firm sizes and regulatory bodies to ensure that audit quality, public trust, and market stability are preserved in the middle of ongoing change.

6 Discussion

6.1 Summary of results

This section summarises the main findings of the study by returning explicitly to the research questions presented in Chapter 1. The primary research question addressed how emerging technologies, evolving regulation, and broader changes in the nature of work may shape the future of the audit profession. In addition, the sub-questions focused on the implications of technological development for audit work and competence requirements, as well as on other key external factors influencing the profession's future operating environment. The findings presented below provide consolidated answers to these questions by outlining the central drivers, uncertainties, and development paths identified in the analysis. In this context, the scenarios are exploratory in nature and are intended to illustrate plausible development paths rather than to predict or exhaust future outcomes. Across the three scenarios (A–C), the findings highlight how different combinations of technological development, regulatory evolution and talent dynamics shape the future operating environment of audit firms.

The evidence suggests technology will dramatically reshape the audit profession, simultaneously influencing its progress, velocity, and depth. Although the advantages of technological innovation are clear, the extent and pace of change, along with the required investments, remain to be seen within the audit sector. Rising standards of quality, shifting client expectations, and regulatory demands fuel the imperative for innovation. Yet, technological advancement alone does not ensure transformation; it must deliver tangible improvements in quality and efficiency to justify investment and foster new capabilities in audit organizations.

The competent deployment of technological solutions is essential for staying compliant with increasingly complex regulatory landscapes and for embracing more effective operational models. Such an adoption creates opportunities to address new assurance domains, for instance, sustainability reporting. Automating routine audit processes is anticipated to liberate professionals, allowing them to concentrate on higher-value activities such as more advanced risk evaluation and strategic advisory perspectives. This evolution not only has the potential to attract and inspire talent but also demands new

skillsets from auditors, including the integration of traditional auditing knowledge with technological proficiency and data analytical expertise.

Scenario work steps	Key content (Gausemeier approach)	Application in this study
Step 1: Scenario-Preparation	Project is described and both timespan as well as anticipated scope are defined.	The theoretical background and an overview of academic releases regarding future of the audit. Timespan is discussed in introduction and literature review phases. PESTEL was defined to be applied for mapping the key factors impacting the audit profession.
Step 2: Scenario-Field Analysis	Influence areas, influencing factors and key factors are identified.	Trend analysis in PESTEL. Review of professional publications and releases.
Step 3: Scenario-Projection	Key factors are prepared, and future projections are identified.	For each PESTEL dimension, key factors, and alternative development trajectories (A, B and C) were identified and compiled as outputs of the projection phase.
Step 4: Scenario-Building	Consists of projection bundles, possible pre-scenarios, future mapping, and description of scenarios.	Three holistic scenarios (A, B and C) for the audit profession are developed by bundling the A/B/C-level development trajectories identified for each PESTEL dimension.
Step 5: Scenario-Transfer	Consequences, opportunities and threats, strengths, and weaknesses as well as strategies.	All three scenarios and related consequences and possibilities are discussed in Chapter 6. Comments and reflections are primarily based on professional publications that were used in the PESTEL analysis.

Table 2: Summary of scenario work steps and application of Gausemeier approach (own representation following Sardesai et al., 2021)

Nevertheless, investing in innovative technologies poses considerable challenges. Variations in national regulations and inconsistencies in accounting data further complicate the cross-border implementation of technological solutions. As the range of competencies required in the audit field broadens, firms must seek out individuals whose expertise may diverge from conventional audit career pathways. Technological advancement simultaneously introduces risks, for example data security issues, rapid skills obsolescence, and workforce shortages that can elevate costs and put pricing pressure on auditors. These dynamics have the potential to increase dissatisfaction among clients, especially as the costs of audit services are growing. While the sector has long forecasted transformative changes, such as those promised by blockchain technology, concrete outcomes have been slow to emerge, and widespread adoption remains questionable even after discourse spanning more than ten years.

A defining characteristic of the audit profession lies in its statutory status; statutory audits are compulsory and cannot be suspended, which sustains the essential role of audit services. However, this statutory nature also embeds the industry in a challenging regulatory context, bringing forth significant risks and uncertainties. The audit sector faces a pivotal moment, shaped by technological disruption, regulatory pressures, and changing workforce requirements. Achieving equilibrium among these factors will be crucial to determining future direction, necessitating careful investment and strategic adaptation to maintain relevance and robustness.

Recent analysis from Cedefop (2025) reinforces the importance of aligning organizational strategy with anticipated labor market trends. It is vital for companies to base workforce development plans on reliable market forecasts and to maintain sufficient agility to accommodate evolving employment patterns. The growing need for highly skilled employees, the imperative for ongoing reskilling and upskilling, and the impact of automation and digitalization are likely to affect future labor expenses.

6.2 Methodological considerations

The findings of this study should be interpreted in light of certain methodological considerations. The research is based on a qualitative analysis of academic literature and professional publications, combined with a PESTEL-structured review and scenario planning. The chosen approach also involves inherent limitations. The analysis relies on

the interpretation of secondary sources, which reflects the perspectives and priorities present in existing academic and professional discourse. As a result, the identified drivers and scenarios do not represent predictions, but rather plausible development paths derived from the reviewed material. The scenario construction process also involves a degree of subjectivity, as the selection, weighting, and combination of influencing factors require analytical judgement.

In addition, a significant share of the professional publications reviewed originates from large international audit firms and regulatory bodies. While these sources provide valuable insights into anticipated developments in the audit profession, they may emphasize perspectives that are more relevant to large audit firms than to smaller market participants. Finally, the future-oriented nature of the study means that the relevance of specific drivers and scenarios may evolve over time as technological, regulatory, and labor-market conditions change. Despite these limitations, the applied methodology provides a structured and transparent framework for examining the future of work in the audit profession and supports the analytical objectives of the study.

Further methodological consideration relates to the structure of the scenario construction. In this study, the overall character of each scenario is largely determined by the selection and bundling of the A/B/C-level development trajectories across the PESTEL dimensions. While this approach produces clear and internally consistent scenario narratives, it may also render the scenario set somewhat one-dimensional by framing the future primarily along a favorable–neutral–challenging continuum for the profession as a whole.

In practice, the audit profession may evolve through more heterogeneous pathways. Different actors may interpret technological, regulatory, and labor-market developments in divergent ways and pursue contrasting strategic responses, resulting in qualitatively different development trajectories rather than a single directional axis. Future research could therefore broaden the scenario space by applying morphological analysis or other cross-consistency approaches, where individual scenarios would combine different projection levels across PESTEL factors instead of consistently relying on a single projection type.

6.3 Conclusion

These conclusions address the research questions by synthesizing how emerging technologies, regulatory evolution and broader environmental forces shape alternative future scenarios for the audit profession. Conclusions also build directly on the reflections presented in Chapter 5, where the implications of the scenario work for the audit profession's development were analyzed.

Based on this study, it is possible to identify three exemplary scenarios that are clearly distinct from one another. As noted by Fotoh and Lorentzon (2023), digitalization is expected to transform the audit profession, while many of its broader implications and longer-term consequences remain insufficiently understood. Against this background, the present study aims to provide further insight into how large audit firms may approach the ongoing transformation of the profession and the challenges they are currently facing and are likely to encounter in the near future. From a theoretical perspective, this finding is consistent with prior audit research suggesting that digitalization reshapes not only audit processes but also the nature of professional judgement and competence requirements, particularly in contexts where auditors increasingly collaborate with advanced analytical and AI-based systems (Gu et al., 2024). This interpretation is also supported by prior research emphasizing that increasing complexity and changing competence requirements place growing pressure on auditors' work practices and organizational structures, with implications for both audit quality and the attractiveness of the profession (de Vries & Speklé, 2025).

In the most optimistic scenario, the audit profession changes quickly due to the adoption of modern technologies like AI and blockchain. Regulations remain steady, and sustainability reporting becomes more important. The work-life balance is valued, though leaders and clients are sometimes slow to adapt. As a result, firms work on developing new skills and slowly adjusting their practices, aiming to balance tradition with innovation.

In a moderate scenario, the audit industry sees a moderate rise in public interest and increased regulatory oversight. This leads firms to improve their internal controls and consider offshoring and hiring international talent to address labor shortages. Although

modern technologies are introduced, progress is slowed by clients' preparedness and complex regulations. Sustainability and employee well-being continue to grow in importance, and firms have more opportunities to collaborate with regulators to improve industry standards.

In the conservative, or more pessimistic, scenario, the audit business faces significant pressure from greater public scrutiny and stricter regulations. The demand for audits rises, especially in sustainability reporting. Talent shortages grow due to demographic changes and less interest in audit careers among students. Firms must increase pay, maintain benefits, and invest more in hiring and training, which raises their costs and creates a more divided market. Rapid technological change adds further pressure, as firms struggle to respond to new risks and adapt their audit tools. Sustainability reporting adds complexity, especially with remote work and scattered data sources, raising the risk of inefficiency and fraud. In all scenarios, adaptability, collaboration, and innovation are essential for maintaining audit quality, public trust, and market stability. Across these scenarios, a consistent theme emerges: the interplay of technology, regulation and talent dynamics determines how the audit profession is likely to evolve.

In summary, this study supports the same idea as Fotoh and Lorentzon (2023) and indicates that emerging technologies and evolving talent requirements are significantly shaping the future of work in the audit profession. Taken together, the scenarios suggest that the audit profession may be moving towards a more technology-driven and strategic approach, particularly under conditions resembling Scenario A. This direction would require auditors to continuously update their skills and adapt to the changing risk and regulatory landscape. These scenario outcomes highlight the strategic implications for audit firms and professionals, emphasizing the need for proactive capability development and adaptation. Auditors can improve their skills for new demands by focusing on several key areas and keeping continuous learning in mind. Auditors may need to become proficient in emerging technologies and data analytics. This includes understanding how to use these tools to analyze large datasets, identify patterns, and generate insights that can enhance the audit process. Additionally, with the increasing importance of IT systems and data security, auditors need to have more expertise. for example, in cybersecurity principles.

Auditors should commit to professional development courses and stay updated with the latest industry trends and best practices. Auditors should develop their soft skills. Critical thinking, problem-solving, and effective communication are essential for providing strategic advisory services and collaborating with clients and colleagues. As said, because of the growing need for highly skilled employees, it is likely that there will be pressure for future labor expenses to increase.

Based on factors identified in PESTEL legal section, it seems to obvious that global audit firms represent thought leadership in the business and it gives them the ability to influence the development of globally adopted auditing standards. These standards are often basis for country-specific regulations and relevant topic from the standpoint of auditors' legal protection. Thereby it is crucial for these firms to use all possibilities to leverage their insights and knowledge-based capital in discussions with regulators and policy makers.

Taken together, the scenarios indicate that the future of the audit profession will be shaped by the interaction of technological development, regulatory evolution, and talent dynamics rather than by any single driver in isolation. While the pace and direction of change may vary, the analysis suggests that audit work is becoming more complex, interdisciplinary, and strategically significant. In this context, the long-term resilience of the audit profession depends less on individual technologies or regulatory reforms than on the profession's broader capacity to adapt. Integrating advanced technologies responsibly, developing new forms of expertise, and responding credibly to rising societal expectations are central to maintaining audit quality and public trust. From this perspective, the future of audit is not defined by a single outcome, but by the profession's capacity to continuously learn, reconfigure, and remain relevant in an increasingly demanding assurance environment.

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