



Work-Life Balance and Data Analytics in Enhancing Internal Auditor Performance

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ABSTRACT

Internal auditors must possess flexible and comprehensive work skills due to advances in digital technology and the increasing complexity of the audit industry. The purpose of this study is to assess the impact of data analytics and work-life balance on internal auditor performance through a systematic literature review (SRB). The SRB methodology was used in this study. PRISMA was applied throughout the research process. To ensure the relevance of the material, a search was conducted for scientific publications published between 2020 and 2025 using leading academic databases including Emerald Insight, SpringerLink, Google Scholar, and PubMed. The keywords used in the list were "work-life balance," "auditor performance," "data analytics," and "auditor." Based on the findings, two significant elements that influence internal auditor effectiveness in the era of digital transformation are work-life balance (WLB) and the use of data analytics (DA). Most studies indicate that work-life balance has a positive impact on professional productivity, psychological health, and job happiness. These findings suggest that businesses' ability to achieve a compromise between the need for data-driven performance and the well-being of auditors as human beings will determine the future of the internal audit profession.

Keywords: *Internal Auditor Performance, Systematic Literature Review, Use of Analytical Data, Work-Life Balance.*

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1. | INTRODUCTION

The development of digital technology and the increasing complexity of work in the audit sector require internal auditors to possess adaptive and balanced work skills. Internal auditors' role is not only to detect irregularities or fraud, but also to be able to add value to the organization through data-driven analysis and strategic recommendations. This situation leads to increased work pressure and responsibility, potentially impacting the balance between personal and professional life.

Work-life balance is a critical issue in modern organizations, including within audit institutions. According to Greenhaus and Allen (2011), A balance between work and personal life can improve psychological well-being, reduce stress, and ultimately positively impact individual performance. However, internal auditors are often faced with tight deadlines, high mobility, and professional demands that make it difficult to maintain this balance. Based on initial interviews with several employees at the Bandung Regional Audit Office, the phenomenon of excessive overtime and pressure to meet audit report targets is still found, which can disrupt work-life balance and reduce productivity. This phenomenon indicates an empirical gap between the importance of work-life balance and actual conditions, which are not entirely ideal in the field.

Furthermore, technological advances require auditors to possess strong digital literacy. Digital literacy encompasses more than just the ability to operate technological devices, but also the understanding and ability to utilize data and information systems to support the audit process (Ng, 2012). Internal auditors who have high digital literacy can increase efficiency and accuracy in carrying out audits, especially in analyzing complex data (Rahman & Ismail, 2022). However, in practice, digital literacy levels among auditors are uneven. Some senior auditors still struggle to adapt to new digital-based audit systems and analytical tools, which can impact performance effectiveness.

A literature review shows that previous research has extensively discussed the relationship between work-life balance and employee performance (Pradana & Saleh, 2020), as well as between the use of analytical data or digital literacy and audit effectiveness (Rahman & Ismail, 2022). However, research that simultaneously combines these two factors in the context of the internal audit profession is still very limited. Most studies are conducted separately and focus on a single dimension—either work-life balance or technology—without examining the potential relationship or joint influence of the two on auditor performance.

Furthermore, the available research is generally empirical and contextual, with coverage of specific regions or organizations, so the results do not provide a comprehensive picture of global patterns and trends related to this issue. Few studies have used a Systematic Literature Review (SLR) approach to identify, compare, and synthesize various empirical findings regarding the relationship between work-life balance, the use of analytical data, and internal auditor performance.

Given the gap in work pressure and uneven digital literacy, coupled with the limited research available on combining these two variables, this research is relevant. This study aims to present a Systematic Literature Review (SLR) on the influence of work-life balance and the use of analytical data on internal auditor performance. The results are expected to contribute to academic understanding by broadening theoretical understanding and providing practical

recommendations for organizations in developing strategies to improve auditor performance through work-life balance and optimal use of analytical technology.

2. | LITERATURE REVIEW

Work-Life Balance

Work-life balance describes an individual's ability to manage and allocate time, energy, and attention effectively so that work and non-work roles (family, health, and leisure) are aligned and mutually supportive, rather than conflicting. This concept encompasses boundary management skills (segmentation versus integration) as well as access to organizational resources such as flexible work schedules and supportive supervision, which enable individuals to maintain control and self-heal (Steffens et al., 2023). Work-life balance is not a static state of equal time allocation, but rather a dynamic process influenced by job demands, individual preferences, technological developments, and organizational policies. For some individuals, an integrative approach is more appropriate, while for others, clear boundaries are more protective of their well-being (Kossek et al., 2023).

Hybrid and flexible work arrangements have been shown to improve perceived balance and reduce turnover rates by providing greater autonomy and reducing travel burdens. However, these arrangements can also create new demands on boundary management and risk overload if not accompanied by adequate organizational support (Bloom et al., 2024). Work-life balance is viewed as the result of multilevel interactions encompassing individual, interpersonal, organizational, and social dimensions that influence employee psychological well-being, job satisfaction, and performance. Effective interventions need to integrate structural supports (policies and technology) with training and changes in managerial leadership styles to maintain healthy boundaries and ensure equitable access to flexibility (Vermaet al., 2024).

Use of Analytical Data

Analytical data use is a systematic process involving the collection, processing, transformation, and utilization of data by organizations and individuals to generate insights that support effective decision-making, performance improvement, and long-term strategic planning. This concept encompasses the utilization of structured and unstructured data, the application of various analytical approaches such as business intelligence, descriptive, predictive, and prescriptive analytics, and the integration of analytical capabilities into all organizational functions. The implementation of business intelligence and analytics relies not only on technological infrastructure but also on organizational support, effective data governance, and competent human resources (Mohammad et al., 2024).

Optimal use of analytical data contributes to improved decision-making quality through increased accuracy, speed, and the application of evidence-based approaches. This process enables organizations to detect patterns, predict outcomes, and determine appropriate strategic actions. However, its implementation is not without challenges, such as data quality issues, privacy protection, limited technical skills, complex organizational structures, corporate culture, and ethical considerations (Li et al., 2022). Thus, the use of analytical data is a multi-stage and multi-dimensional process that includes the collection of relevant data, quality assurance, the application of appropriate analytical methods, and the interpretation and follow-up of the analysis results. An organization's level of maturity in utilizing analytical data is determined by its ability to develop technological capabilities, governance, human

competencies, and organizational culture. When all these elements are well integrated, the use of analytical data can be a key driver of operational efficiency, innovation, competitive advantage, and improved organizational performance (Srivastava & Dixit, 2023).

Internal Auditor Performance

Auditing is one of the main areas of management function that plays a crucial role in organizational oversight and control. In managing company activities, management is required to maintain sustainability and encourage sustainable company development. To assess the extent of management's ability to optimize profitability, an inspection or audit process is required for operational activities. Audits should ideally be conducted by an independent party and not held by a manager to maintain objectivity and independence. Internal auditor performance reflects the auditor's level of effectiveness and efficiency in carrying out their duties to produce high-quality audit work, add value to the organization, safeguard assets, and ensure compliance with applicable regulations. This performance is influenced by various factors, including technical and behavioral competencies, interpersonal skills, independence, role clarity, and support from management and leadership (Hasibuan et al., 2022).

Furthermore, environmental pressures such as time and budget constraints can play a dual role: they can both trigger improved performance and potentially degrade quality if auditors work under high pressure without adequate support. Emotional intelligence and locus of control also influence an auditor's ability to deal with pressure and ethical dilemmas, ultimately positively impacting work outcomes. In the public sector, internal auditor performance is reflected in audit effectiveness, namely the extent to which audit results contribute to improving organizational governance, detecting irregularities, implementing recommendations, and preventing fraud. In principle, audits aim to assess the development and management of capital owner investments and provide protective and constructive services to management (Ta & Doan, 2022).

The Influence of Work-Life Balance on Internal Auditor Performance

Work-life balance has a significant impact on internal auditor performance by shaping the cognitive capacity, emotional resilience, and motivational commitment necessary to produce high-quality audit work. Auditors who experience adequate work-life balance through a manageable workload, predictable working hours, and organizational support such as flexible scheduling and supportive supervision tend to exhibit higher levels of concentration, lower fatigue, and greater job satisfaction. These conditions contribute to improved risk assessment quality, strengthened professional scepticism, and effective follow-up on audit recommendations (Cheng et al., 2024).

Conversely, chronic workload and poor work-life balance increase turnover intentions and stress, ultimately reducing audit continuity, institutional knowledge, and audit quality. Recent research also suggests that work-life balance acts as a mediating variable between time pressure and audit outcomes, with motivational and structural support mitigating the negative impact of work pressure and maintaining high retention and performance levels among both junior and senior auditors. Furthermore, organizational well-being interventions that increase job autonomy and recovery time have been shown to be positively correlated with measurable improvements in job performance and reduced error rates on complex professional tasks, findings relevant to the technical demands of internal auditing (Yang et al., 2024). Therefore, improving work-life balance for internal auditors is a strategic imperative for organizations to

protect audit quality by preserving cognitive resources, reducing turnover rates, and strengthening an ethical audit culture oriented toward professional diligence.

The Impact of Using Analytical Data on Internal Auditor Performance

The use of data analytics significantly improves internal auditor performance by increasing analytical depth, timeliness, and accuracy in the implementation of assurance and advisory activities. By implementing descriptive, diagnostic, predictive, and prescriptive analytics, internal auditors can transform from a sample-based retrospective audit approach to comprehensive, near-real-time population testing, thereby more reliably identifying anomalies, systemic control weaknesses, and emerging risks. The application of analytics also revolutionizes the audit planning and execution process by enabling risk-based scoping, continuous monitoring, and the provision of richer audit evidence to support recommendations that enhance the effectiveness and perceived quality of the audit (Rakipi et al., 2021).

However, the success of analytics implementation depends heavily on supporting factors such as technology maturity, auditor data competency, leadership support, and integration into audit methodology. Without these elements, analytics can potentially produce inaccurate findings or false positives, hindering efficiency (Foronda et al., 2023). Experimental and empirical studies have shown that integrating analytics with effective visualization, appropriate feedback mechanisms, and adequate analyst training can improve anomaly detection accuracy and reduce false positive rates, thereby strengthening the reliability of audit findings and stakeholder confidence (Smidt et al., 2021). Overall, when implemented with strong governance, continuous capability development, and a systematic methodology, the use of data analytics is a key driver of improved internal auditor performance through enhanced detection capabilities, more comprehensive risk assessments, and the provision of more timely and value-added assurance. (Islam & Stafford, 2022).

3. | RESEARCH METHOD

This study uses a Systematic Literature Review (SLR) approach, which aims to uncover, assess, and compile relevant empirical evidence on the impact of work-life balance and data analytics on internal auditor performance. Because this methodology offers an organized, transparent, and reproducible procedure for comprehensively collecting and evaluating scientific literature, the SLR methodology was chosen. The four key steps of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) are: identification, screening, eligibility assessment, and inclusion.

In the identification stage, researchers searched for scientific articles through leading academic databases such as Emerald Insight, SpringerLink, Google Scholar, and PubMed with publication dates between 2020 and 2025 to ensure the relevance of the information. Keywords used included "work-life balance," "auditor performance," "data analytics," and "auditor." All keywords were combined using Boolean operators such as AND and OR to broaden the search scope.

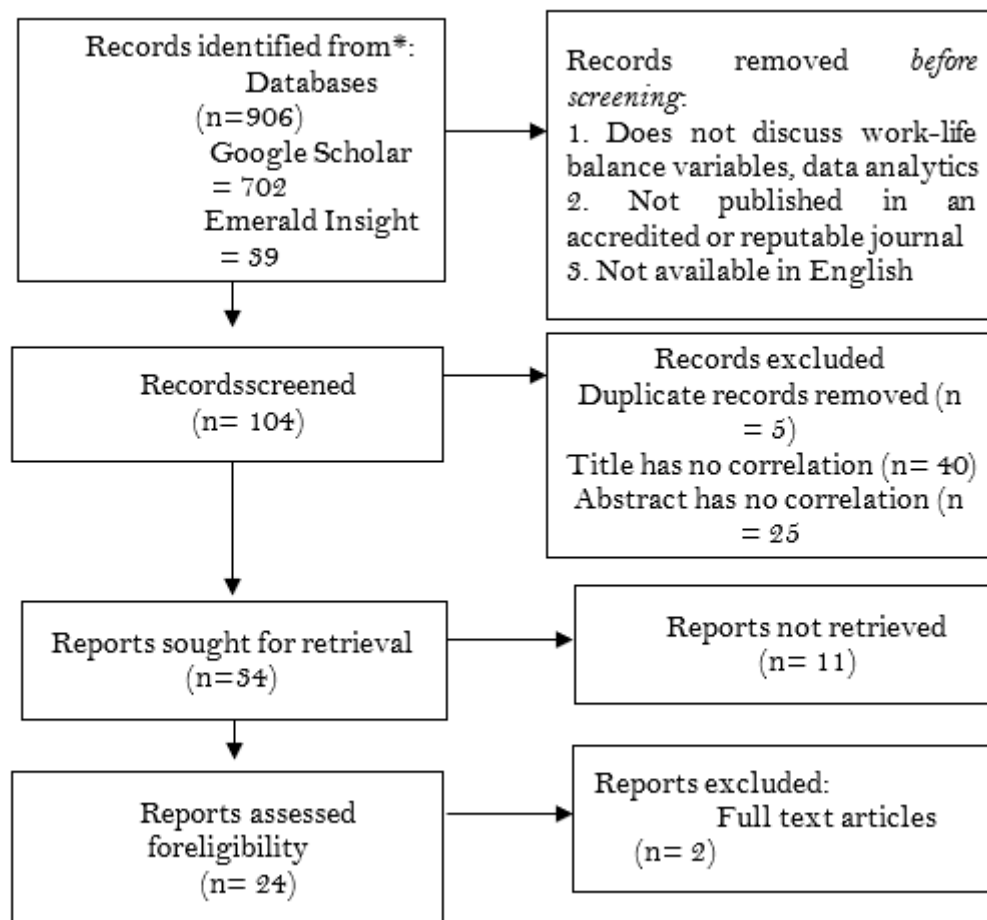


Figure 1. Literature Screening Results

Next, in the screening stage, the obtained articles were evaluated based on their titles and abstracts to determine their relevance to the research focus. Inclusion criteria included articles that: (1) discussed work-life balance variables, data analytics, or both in the context of the audit profession; (2) were published in accredited or reputable journals; and (3) were available in English or Indonesian. Meanwhile, non-academic articles, such as opinion pieces, project reports, or publications without a peer review process, were excluded from the analysis.

Articles that pass the screening stage will undergo a more thorough analysis during the eligibility evaluation stage to ensure their methodology and scientific contribution align with the research objectives. This procedure includes reading the entire paper and evaluating the quality of the research design, methods, and results. Once an article meets the eligibility criteria, it will proceed to the inclusion stage, where a thematic analysis is conducted to identify trends, correlations between variables, and unmet research needs.

A summary table containing the author's name, year of publication, research objectives, techniques used, and key findings was created using all information from the selected publications. The main topics of this qualitative and descriptive research include mapping research trends, the relationship between work-life balance and the use of analytical data on internal auditor performance, and the theoretical and practical implications of previous research findings. This research, which uses the SLR technique, is expected to offer a

comprehensive and in-depth scientific synthesis to enrich knowledge in the field of internal auditing in the digital age.

4. | RESULTS

This research identified and reviewed 22 previous studies addressing work-life balance, big data analytics, audit technology, and internal auditor performance. Key conclusions from the various studies, including literature reviews and systematic reviews, as well as quantitative, qualitative, and experimental methodologies, are summarized in Table 1 below. The majority of the studies were contextual and empirical, conducted in the Middle East, Taiwan, Pakistan, Thailand, Indonesia, and Lebanon. The primary objective of this research was to determine how work-life balance affects internal auditor performance and well-being, and how technology and data analytics can improve the effectiveness and efficiency of the audit process.

Table 1. Research Results Related to Big Data Analytics, Technology, and Audit Quality

No	Researcher (Year)	Title / Research Focus	Research methods	Key Findings
1	Yang & Bahar (2023)	The Impact of Big Data Analytics on the Audit Process in Batam City	Quantitative (SEM-PLS)	Big Data Analytics has a significant positive impact on all stages of the audit process.
2	Rakhmawati et al. (2024)	Big Data Technology & Auditor Independence on Audit Effectiveness	Systematic Literature Review (SLR)	Big Data improves audit effectiveness; auditor independence remains important despite concerns about non-audit services.
3	Kanivia et al. (2024)	Implementation of Information Technology on Internal Audit Quality	Literature Review	IT improves efficiency, risk detection, and the quality of internal audits; auditor competence and risk management are critical factors.
4	Afzal (2023)	Internal Audit Quality in Commercial Banks of Pakistan	Quantitative (Logit Regression)	Auditor competence, objectivity, and performance have a significant positive effect on internal audit quality.
5	Betti et al. (2024)	Data Analytics & Consulting Activities on Internal Audit Quality	Experiment (2x2 Design)	The use of data analytics enhances the perception of auditor competence; consulting activities strengthen the auditor–manager relationship.
6	Dushyireha mwe et al. (2024)	Data Analytics in Internal Auditing: A Scoping Review	Scoping Review	Data analytics improves risk detection & audit efficiency, but the main challenges are data quality and auditor skills.
7	Ditkaew & Suttiapun (2023)	Audit Data Analytics on Audit Quality & Review	Quantitative (Path Analysis)	Audit Data Analytics positively impacts audit quality and review continuity;

No	Researcher (Year)	Title / Research Focus	Research methods	Key Findings
		Continuity in Thailand		cybersecurity strengthens relationships.
8	Tanbour et al. (2025)	Internal Auditing Ethics and Bank Risk Management in Palestine	Mixed Methods (Sequential Explanatory)	Integrity and competence enhance the effectiveness of risk management; objectivity is insignificant due to organizational barriers.
9	Hazaea et al. (2024)	Internal Audit System on Bank Performance in Arab Countries	Quantitative (SEM-PLS)	Independence, international standards, and management support have a significant impact on bank performance.
10	Pratama & Komariyah (2023)	Government Auditors' Acceptance of Big Data Analytics	Quantitative (SEM-PLS)	Perceived ease and usefulness influence acceptance of BDA technology; social influence and trust are not significant.
11	Alrashidi et al. (2021)	Big Data Analytics and Audit Procedures in the Middle East	Quantitative (PLS-SEM)	BDA impacts all phases of the audit; helping auditors understand the client environment and improving audit decisions.
12	Ilori et al. (2024)	Advanced Data Analytics dalam Audit Internal	Conceptual	Advanced analytics improves fraud detection and audit efficiency; requiring data integration and ongoing training.
13	Fadhila et al. (2024)	Auditor Work-Life Balance: Study Phenomenology	Qualitative (IPA)	Four themes were found: motivational triggers, balance challenges, gender equality, and personal meaning of WLB.
14	Anggono et al. (2024)	The Influence of Work-Life Balance & Time Pressure on Auditor Performance	Quantitative (Regresi Linear)	Work-life balance and time pressure have a significant positive effect on auditor performance.
15	Setiyawan et al. (2025)	Work-Life Balance and Burnout on Auditor Job Satisfaction	Quantitative (Path Analysis)	Work-life balance has a significant positive effect on job satisfaction; burnout is not significant.
16	Cheng et al. (2025)	Job Well-Being and Performance Audit in Taiwan	Quantitative (Survey)	Curvilinear relationship between job well-being and audit performance; passion strengthens the positive effect.
17	Shouman et al. (2022)	Work-Life Balance & Firm Innovativeness in Lebanon	Quantitative (Survey)	WLB does not directly impact organizational performance; superior support and coping strategies impact well-being.

No	Researcher (Year)	Title / Research Focus	Research methods	Key Findings
18	Yu et al. (2022)	WLB Culture, Program Use, and Turnover Intention	Quantitative (Survey, 290 Responden)	An organizational culture that supports WLB reduces turnover intention; the ease of the WLB program has no indirect effect.
19	Abrahams & Phesa (2025)	Declining Number of Global Auditors: Scoping Review	Scoping Review	Factors causing the decline: economic pressure, complex regulations, AI, negative perceptions of the profession, and low WLB.
20	Karagiorgos et al. (2024)	Efficiency and Performance of Internal Audit in the Public Sector	Literature Review	Internal audits increase public sector transparency; hybrid audits between evaluation and traditional audits are recommended.
21	Anggono et al. (2024)	Work-Life Balance and Time Pressure on Auditor Performance (Owner Journal version)	Quantitative (Ex Post Facto)	A significant positive effect of WLB and time pressure on auditor performance at KAP HGZ was found.
22	Bachtiaret al. (2025)	The influence of internal audit, motivation, and work environment on employee performance	Mixed Methods	Auditor integrity and competence enhance the effectiveness of risk management during a crisis.

Based on the analysis of 22 reviewed articles, this study identified ten main themes that reflect global developments, patterns, and trends in studies on work-life balance (WLB), the use of data analytics (DA), and internal auditor performance. Table 2 below presents a thematic synthesis of the results of the Systematic Literature Review (SLR), which describes the focus of discussion, characteristics of research patterns in various regions, existing research gaps, and the direction of current trends in this field. The SLR results indicate that the majority of studies are still empirical, focused on specific national or organizational contexts, and emphasize direct relationships between variables without considering complex mediating or moderating factors. Research on work-life balance is mostly conducted in Asia, with a focus on job stress and auditor job satisfaction, while studies on the use of data analytics are dominated by the topics of technology adoption and data-driven audit effectiveness.

However, few studies combine the use of data analytics to explain internal auditor performance with the concept of work-life balance. The lack of cross-national studies, the lack of integrative conceptual models, and the paucity of studies using a systematic literature review approach to comprehensively identify global patterns and trends are some of the key gaps in the literature, confirmed by these findings. Therefore, Table 2 serves as a conceptual map

depicting the development of research and the potential expansion of theory and practice related to digital transformation and internal auditor well-being in the contemporary period.

Table 2. Thematic Synthesis of SLR Results: Global Patterns and Trends in Work-Life Balance Research, Analytical Data, and Internal Auditor Performance

No	Main Theme	Discussion Focus	Global Research Patterns	Gaps Found	Latest Trends
1	Work-Life Balance and Auditor Performance	The impact of work-life balance on work stress, job satisfaction, and auditor performance	Most studies originate from Asia (Indonesia, Thailand, Lebanon, Taiwan). Quantitative approaches dominate, focusing on the direct WLB–performance relationship.	Cross-national studies are scarce; few have examined mediating factors such as psychological well-being or organizational support.	Increased attention to post-pandemic work-life balance and its impact on auditor productivity.
2	Work Pressure and Internal Auditor Burnout	The impact of deadlines, workload, and audit pressure on performance	Similar patterns are found in developing countries; issues of excessive overtime and high time pressure are common.	There is a lack of a conceptual model that combines psychological and organizational factors simultaneously.	The global trend towards the implementation of flexible work arrangements policies for internal auditors.
3	Digitalization and Auditor Data Literacy	Use of analytical data and digital technology in the audit process	Many studies have emerged in Asia and the Middle East, focusing on the adoption of big data analytics and AI tools.	There has been no global synthesis on human resource readiness and the influence of organizational culture on technology adoption.	The global trend is towards the use of data-driven audit and continuous auditing systems.
4	The Impact of Using Analytical Data on Audit Effectiveness	How BDA improves audit efficiency, accuracy and quality	Most empirical research is descriptive and case-specific (banks, public accounting firms, government agencies).	Lack of integration between BDA and individual auditor performance (human performance).	The emergence of hybrid audit models that combine human and AI capabilities.

No	Main Theme	Discussion Focus	Global Research Patterns	Gaps Found	Latest Trends
5	The Relations hip Between Work-Life Balance and Technology Adoption	The impact of the use of audit technology on auditor work-life balance	Only a few studies (less than 10%) have addressed this relationship.	There is minimal empirical evidence on whether the adoption of data analytics improves or disrupts life balance.	A new research trend is beginning to examine “technostress” in digital auditors.
6	Internal Auditor Performance and Organizational Factors	The influence of managerial support, work culture, and HR policies on auditor performance	Research is still dominant in the context of public institutions and national KAP.	There are few global studies comparing internal audit practices across cultures and regulatory systems.	The trend towards the establishment of a global internal audit competency framework.
7	Methodological Approaches in Internal Audit Research	Characteristics of research methods in WLB and BDA studies	±82% of empirical studies; only a small proportion used a systematic review approach.	Not many SLRs integrate the dimensions of technology and work well-being in one analytical framework.	Increased use of Systematic Literature Review methods to identify patterns across studies.
8	Regional and Global Patterns in Internal Audit Research	Geographic distribution of research on internal auditors	Research is dominated by Southeast Asia (Indonesia, Thailand, Malaysia) and the Middle East; with a small amount from Europe and Africa.	There is no comprehensive global map of trends and comparisons across regions.	International collaborations between Asian and European academics for data-driven audit research are emerging.
9	Auditor HR Readiness in the Digital Analytics Era	Digital competence, training, and resistance to change among auditors	The pattern shows a gap between younger (digital-ready) auditors and senior (less adaptive) auditors.	There is not much research that offers a competency-based adaptive training model.	Global trends: upskilling programs and digital audit certifications from IIA & ISACA.

No	Main Theme	Discussion Focus	Global Research Patterns	Gaps Found	Latest Trends
10	Integration of Work-Life Balance and Data Analytics on Auditor Performance	The simultaneous relationship of WLB and the use of analytical data on performance	There is almost no empirical research that tests both variables together.	The main research gap in this SLR is that there is no integrative conceptual model that explains the WLB–DA–Performance relationship.	Potential future research directions towards a digital well-being-based auditor performance model (Digital Well-Being Audit Model)

5. | DISCUSSION

The results of this Systematic Literature Review (SLR) indicate that research on work-life balance (WLB), the use of data analytics (DA), and internal auditor performance has grown rapidly in recent years, particularly in Asia and the Middle East. Of the 22 articles analyzed, the majority were empirical and focused on specific organizational contexts, such as public accounting firms (KAP), financial institutions, and government agencies. This indicates that research in the field of internal auditing still tends to be contextual and fragmented, thus failing to provide a comprehensive understanding of the simultaneous relationship between work-life balance, technology utilization, and auditor performance (Yang & Bahar, 2023).

Ten key themes indicating the direction of global research breakthroughs are revealed through the synthesis of findings in Table 2. Because work-life balance is closely related to job stress, job satisfaction, and auditor productivity, it remains a key topic. Several studies conducted in Taiwan, Thailand, Indonesia, and Lebanon emphasize the importance of organizational strategies in maintaining work-life balance, especially after the COVID-19 pandemic. One of the main factors hindering the performance of internal auditors in developing countries is work pressure and burnout. Recurring trends indicate that auditors often face heavy workloads and short turnaround times without adequate support from flexible work arrangements (Rakhmawati et al., 2024).

A strong trend is emerging toward digitalization of the audit process and increased data literacy among auditors. Studies on big data analytics and digital technologies indicate that the use of data analytics can improve audit efficiency and accuracy, but its effectiveness is highly dependent on the readiness of human resources and organizational culture. Gaps remain in the integration of analytical skills and individual auditor performance. Little research has explored the impact of technology use on auditors' work-life balance. New phenomena such as technostress have begun to be identified as potential issues in the era of audit digitalization, but empirical evidence regarding its impact on well-being and performance remains limited (Afzal, 2023).

Furthermore, research from Europe, Africa, and Latin America remains limited, while Southeast Asia and the Middle East dominate the global study landscape. Consequently, cross-cultural perspectives are insufficient to understand how social, economic, and regulatory

factors influence the implementation of WLB and DA. In terms of methodology, conceptual investigations and systematic reviews are relatively rare, with approximately 82% of studies using quantitative techniques such as regression analysis or Structural Equation Modeling (SEM). These limitations highlight the need for longitudinal and comparative studies to examine shifts in long-term trends (Pratama & Komariyah, 2023).

The most important finding of this SLR is the lack of an integrative conceptual model that simultaneously links work-life balance, data analytics use, and internal auditor performance. Most studies examine only two variables separately—the relationship between WLB and performance or DA and audit effectiveness—without considering how digital well-being and analytical skills may influence each other. Therefore, the main research gap identified is the need to develop a digital well-being-based auditor performance model (Digital Well-Being Audit Model). This model is expected to explain how work-life balance and technological competency contribute jointly to increased audit effectiveness and efficiency in the era of digital transformation (Setiawan et al., 2025).

6. | CONCLUSION

Work-life balance (WLB) and the use of data analytics (DA) are two critical elements influencing internal auditor performance in the era of digital transformation, according to findings from a systematic literature review of 22 related studies. Most studies indicate that work-life balance has a positive impact on professional productivity, psychological health, and job satisfaction. While digital literacy and organizational support play a key role in performance, the use of data analytics has been shown to improve the efficacy, efficiency, and accuracy of the audit process. Research on WLB and DA is rarely combined into a cohesive analytical model, according to the results of this systematic literature review, which also shows that most research remains contextual and disparate.

Furthermore, global research patterns demonstrate geographic disparities, with research predominantly conducted in Asia and the Middle East within the context of public institutions or local accounting firms, while cross-country studies and multinational organizations remain limited. Methodological approaches also tend to be quantitative, focusing on direct relationships between variables, without considering mediating or moderating factors such as digital well-being, organizational support, or work culture. This reinforces a significant research gap in the literature: the need for an integrative conceptual model that simultaneously links work-life balance, data analytics use, and auditor performance.

Theoretically, further studies are recommended to create a Digital Wellbeing Audit Framework model that uses auditors' digital wellbeing mechanisms to explain the relationship between performance, data literacy, and work-life balance. This method can combine psychological and technological aspects into a more comprehensive conceptual framework. To understand variations in work culture, audit legislation, and technology readiness across geographic locations, cross-country studies are also needed.

Practically, audit businesses should implement work-life balance initiatives, flexible work schedules, and ongoing training in audit technology and data analytics. To prevent technology-induced stress and burnout, management should ensure that technology use improves auditor well-being while increasing productivity. Furthermore, to help internal auditors meet the demands of data-driven audits, professional organizations such as ISACA and the Institute of Internal Auditors (IIA) should enhance digital certification and training.

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The authors declare that there is no conflict of interest.

Ethical Approval and Originality Statement

Ethical approval was obtained for this study. The manuscript represents original work and has not been previously published, nor is it under consideration by another journal.

Data Disclosure Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

REFERENCES

- Abrahams, T., & Phesa, M. (2025). Analysing the Factors Contributing to the Decline of Auditors Globally and Avenue for Future Research: A Scoping Review. *Journal of Risk and Financial Management*, 18(7), 363. <https://doi.org/10.3390/jrfm18070363>.
- Afzal, M. (2023). Evaluation of Factors Contributing to the Effectiveness of Internal Audit Quality in Pakistani Commercial Banks. *International Journal of Financial Studies* 11: 129. <https://doi.org/10.3390/ijfs11040129>.
- Alrashidi, M., Almutairi, A., Zraqat, O. (2021). The Impact of Big Data Analytics on Audit Procedures: Evidence from the Middle East. *Journal of Asian Finance, Economics and Business*, 9(2), 0093–0102.
- Anggono, A., Teng, S., Nasution, S., Irawan, A., Tarwiyah, T. (2024). Pengaruh Work-Life Balance Dan Time Pressure Terhadap Kinerja Auditor. *Owner*, 8, 4251-4261. [10.33395/owner.v8i4.2470](https://doi.org/10.33395/owner.v8i4.2470).
- Anggono., Teng, S. H., Nasution, S. A., Irawan, A., Tarwiyah. (2024). Pengaruh Work-Life Balance Dan Time Pressure Terhadap Kinerja Auditor. *Owner: Riset & Jurnal Akuntansi*, 8(4).
- Bachtiar, A., Putra, R., Meidawati, N., Puspaningsih, A. (2022). The influence of internal audit, motivation, and work environment on employee performance. *Journal of Contemporary Accounting*, 150-161. [10.20885/jca.vol3.iss3.art4](https://doi.org/10.20885/jca.vol3.iss3.art4).
- Betti, N., DeSimone, S., Gray, J., Poncin, I. (2024). The impacts of the use of data analytics and the performance of consulting activities on perceived internal audit quality. *Journal of Accounting & Organizational Change*, 20 (2), 334–361. <https://doi.org/10.1108/JAOC-08-2022-0125>.
- Bloom, N., Han, R. & Liang, J. Hybrid working from home improves retention without damaging performance. *Nature* 630, 920–925 (2024). <https://doi.org/10.1038/s41586-024-07500-2>.
- Cheng, K.-C., Lin, Y.-S., Yang, T.-C., Chuang, T.-F., Lai, H.-M., Lin, L.-H., & Chung, S.-H. (2025). How Does Job Well-Being Optimize Audit Performance? The Moderating Effect of Passion. *Behavioral Sciences*, 15(1), 42. <https://doi.org/10.3390/bs15010042>.
- Cheng, Z., Liu, Z., Wang, I. Z., & Zhao, X. (2024). Reverse merger audit fee premium: Evidence from China. *International Review of Financial Analysis*, 94, 103318. <https://doi.org/10.1016/j.irfa.2024.103318>.
- Ditkaew, K., & Suttipun, M. (2023). The impact of audit data analytics on audit quality and audit review continuity in Thailand. *Asian Journal of Accounting Research*, 8 (3), 269–278. <https://doi.org/10.1108/AJAR-04-2022-0114>.
- Dushyirehamwe, A. M., Utami, H., Irafahmi, D. T. (2024). Data Analytic in Internal Auditing: A Scoping Review. *Journal of Applied Business, Taxation and Economics Research (JABTER)*, 4(1), 77-92.
- Fadhila, L. S., Susilowati, D., Budiarti, L., Barika, C. R. (2024). Auditor Work-Life Balance: Study Phenomenology. *Forkommsa*.
- Greenhaus, J. H., & Allen, T. D. (2011). Work–family balance: A review and extension of the literature. *Journal of Management*, 37(1), 165–171. <https://doi.org/10.1177/0149206310380103>.
- Hasibuan, D. H., Amyar, F., & Hidayah, N. N. (2022). Government audit quality: audit expectation-performance gap. *Asian Journal of Economics, Business and Accounting*, 22(23): 373-386

- Hazaea, S.A., Al-Matari, E.M., Omer, A.M. et al. The impact of internal audit system on performance: evidence from emerging markets. *Humanit Soc Sci Commun* 11, 1307 (2024). <https://doi.org/10.1057/s41599-024-03835-3>.
- Ilori, O., Nwosu, N. T., Naiho, H. N. N. (2024). Advanced data analytics in internal audits: A conceptual framework for comprehensive risk assessment and fraud detection. *Finance & Accounting Research Journal*, 6(6), 931-952.
- Islam, S., & Stafford, T. (2022). Factors associated with the adoption of data analytics by internal audit function. *Managerial Auditing Journal*, 37 (2), 193–223. <https://doi.org/10.1108/MAJ-04-2021-3090>.
- Kanivia., Puspitarini, D. A., Dewi, D. K., Akbari, S., Chandra, A. K., Badriana, S. G. (2024). Implementasi Teknologi Informasi Terhadap Kualitas Audit Internal. *Jurnal Digit*, 14 (2), 170-178.
- Karagiorgos, A., Pantelidis, P., & Syllaidopoulos, P. (2024). Efficiency and Performance Factors in Internal Audits in the Public Sector: A Literature Review. *Proceedings*, 111(1), 19. <https://doi.org/10.3390/proceedings2024111019>.
- Kossek, E. E., Perrigino, M. B., & Lautsch, B. A. (2022). Work-Life Flexibility Policies from a Boundary Control and Implementation Perspective: A Review and Research Framework. *Journal of Management*, 49(6), 2062-2108. <https://doi.org/10.1177/01492063221140354> (Original work published 2023).
- Li, L., Lin, J., Ouyang, Y., & Luo, X. (2022). Evaluating the impact of big data analytics usage on the decision-making quality of organizations. *Technological Forecasting and Social Change*, 175, 121355. <https://doi.org/10.1016/j.techfore.2021.121355>.
- Mohammed, A. B., Al-Okaily, M., Qasim, D., & Al-Majali, M. K. (2024). Towards an understanding of business intelligence and analytics usage: Evidence from the banking industry. *International Journal of Information Management Data Insights*, 4(1), 100215. <https://doi.org/10.1016/j.jjime.2024.100215>.
- Ng, W. (2012). Can we teach digital natives' digital literacy?. *Computers & Education*, 59(3), 1065–1078. <https://doi.org/10.1016/j.compedu.2012.04.016>.
- Pradana, A., & Saleh, A. (2020). The influence of work-life balance and work stress on employee performance in the public sector. *Jurnal Manajemen dan Kewirausahaan*, 22(1), 15–25.
- Pratama, F. W., & Komariyah, E. F. (2023). Examining the Auditors' Acceptance of Big Data Analytics Technology Platform: Evidence from Government Auditors in Indonesia. *The Indonesian Journal of Accounting Research*, 26(2), 273-302.
- Rahman, N. A., & Ismail, Z. (2022). Digital competency and its impact on internal audit effectiveness: Evidence from Malaysian public sector. *Asian Journal of Accounting and Governance*, 18, 45–56. <https://doi.org/10.17576/AJAG-2022-18-04>.
- Rakhmawati, I., Maulida, N. N., Rahmatika, D. N. (2024). Pengaruh Penerapan Teknologi Big Data dan Independensi Auditor terhadap Efektivitas Proses Audit. *Jurnal Kendali Akuntansi*, 2(3), 85-102.
- Rakipi, R., De Santis, F., & D'Onza, G. (2021). Correlates of the internal audit function's use of data analytics in the big data era: Global evidence. *Journal of International Accounting, Auditing and Taxation*, 42, 100357. <https://doi.org/10.1016/j.intaccaudtax.2020.100357>.
- Setiawan, I., Wanta., Hidayaty, D. E. (2025). Pengaruh Work Life Balance Dan Burnout Terhadap Job Satisfaction Auditor Pada Kap Di Wilayah Jakarta Selatan. *Management Studies and Entrepreneurship Journal*, 6(3), 1549-1563.

- Shouman, L., Vidal-Suñé, A., & Alarcón Alarcón, A. (2022). Impact of Work-Life Balance on Firm Innovativeness: The Different Strategies Used by Male and Female Bosses. *Administrative Sciences*, 12(3), 115. <https://doi.org/10.3390/admsci12030115>.
- Srivastava, S., & Dixit, G. (2023). Value of Analytics for Decision-Making: Role of Managers and Analysts. *Journal of Computer Information Systems*, 65(1), 28–46. <https://doi.org/10.1080/08874417.2023.2255557>.
- Steffens, K., Sutter, C., Sülzenbrück, S. (2023). The concept of “Work-Life-Blending”: a systematic review. *Front. Psychol.* 14:1150707. doi: 10.3389/fpsyg.2023.1150707.
- Ta, T. T., & Doan, T. N. (2022). Factors Affecting Internal Audit Effectiveness: Empirical Evidence from Vietnam. *International Journal of Financial Studies*, 10(2), 37. <https://doi.org/10.3390/ijfs10020037>.
- Tanbour, K.M., Ben Saada, M. & Nour, A.N.I. The impact of applying internal auditing ethics on bank risk management during crises: a field study on banks operating in Palestine. *Discov Sustain*, 6, 901 (2025). <https://doi.org/10.1007/s43621-025-01435-y>.
- Verma, N., Dhiman, B., Singh, V., Kaur, J., Guleria, S., & Singh, T. (2024). Exploring the global landscape of work-life balance research: A bibliometric and thematic analysis. *Heliyon*, 10(11), e31662. <https://doi.org/10.1016/j.heliyon.2024.e31662>.
- Yang, F., & Bahar, H. (2023). Analisis Pengaruh Big Data Analytics dalam Proses Audit di Kota Batam. *AKUISISI: Jurnal Akuntansi*, 19(02), 410-422.
- Yu, H.-S., Lee, E.-J., & Na, T.-K. (2022). The Mediating Effects of Work–Life Balance (WLB) and Ease of Using WLB Programs in the Relationship between WLB Organizational Culture and Turnover Intention. *International Journal of Environmental Research and Public Health*, 19(6), 3482. <https://doi.org/10.3390/ijerph19063482>.