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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE ACCOUNTING PROFESSION IN BOSNIA AND HERZEGOVINA: PERCEPTIONS, READINESS AND REGULATORY GAP

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Abstract: *This study offers a detailed examination of the accounting and auditing profession's perceptions, preparedness, and core challenges related to the integration of Artificial Intelligence (AI) within the specific context of Bosnia and Herzegovina (BiH). Main goal was straightforward: to delineate the perceived advantages of AI, concerns related to skill erosion (or "deskilling"), and to determine whether current regulatory and professional training mechanisms in BiH are sufficient to address these challenges. We employed a quantitative approach, utilizing an online survey distributed to a solid convenience sample of 270 accounting and auditing professionals in the country. The statistical methodology involved descriptive statistics, t-tests, and ANOVA to establish significant variances in perceptions across key demographics (including gender, age, and educational attainment). The findings reveal that BiH professionals overwhelmingly perceive AI as an essential, inevitable opportunity to enhance efficiency and accuracy (with an impressive mean readiness score of M=4.21). Crucially, they also demonstrate a high degree of awareness regarding the potential risk of deskilling (M=4.12). However, this individual optimism is overshadowed by a critical and worrying systemic shortfall: extremely modest organizational investment in employee training (M=1.97). Furthermore, a central finding is the widely shared view that existing ethical and regulatory frameworks governing AI are simply not enough (M=2.48), contrasted by a surprisingly muted concern regarding data security (M=1.50). Demographic analysis clearly identifies a generational divide, showing that younger professionals, though more optimistic, are simultaneously more anxious about job displacement. The successful digital transition of the profession is directly tied to professional associations and policymakers urgently taking a proactive role - specifically through developing targeted educational curricula and updating ethical and regulatory standards - to close the current gap between individual readiness and institutional support.*

Keywords: *Artificial Intelligence (AI), accounting, auditing, digital transformation deskilling, regulatory framework*

JEL classification: *M41, M42, O33*

INTRODUCTION

Artificial Intelligence (AI) is a game-changer. It's a revolutionary discipline that simulates advanced human cognitive functions and is continuously reshaping the global business environment. Its influence on professional practice - especially the accounting field, which has long been dominated by repetitive tasks (Kokina & Davenport, 2017) - is fundamentally disruptive. By systematically integrating core AI technologies like machine learning, natural language processing, and Robotic Process Automation (RPA), companies see major boosts in operational efficiency, data accuracy, and the speed of financial report production (Yi et al., 2023), (Beryl Odonkor et al., 2024).

The prevailing view in the literature is that AI is a strategic opportunity rather than an immediate, widespread threat to job elimination (Li & Zheng, 2018); (Sutton et al., 2016) (Milovanovic & Novakovic, 2025). That said, we still need to figure out exactly how specific occupational roles and the macroeconomic structure will evolve, given that AI fundamentally expands what machines can master (Brynjolfsson et al., 2018). Automation primarily serves to relieve accountants of routine chores, letting their function pivot decisively towards analytical, strategic, and advisory business mandates (Chukwuani, 2024). This shift, however, requires a total overhaul of required skills and knowledge, along with a serious update of existing ethical and regulatory mechanisms.

While AI's influence on global accounting practice is well-documented, academic inquiry often skips over specific regional or national contexts. Bosnia and Herzegovina (BiH) faces distinctive barriers in its digital transformation, marked by slower technology adoption and a big lack of clear regulatory guidance (Ablameyko & Ablameyko, 2021). As a result, there's a noticeable scarcity of empirical research dedicated to exploring how local accounting professionals perceive these rapidly unfolding changes, their current readiness to adapt, and their primary professional concerns.

This paper takes an empirical deep dive into the attitudes of accounting professionals in Bosnia and Herzegovina concerning the pervasive integration of artificial intelligence. The study's core purpose is to fill this knowledge gap by offering critical insight into how the local professional community interprets these technological shifts, identifying the principal challenges, and assessing their preparedness to update their competencies and practice.

The main goal of this research is to comprehensively diagnose the preparedness and disposition of accounting professionals in BiH to embrace and apply artificial intelligence. This includes dissecting perceived benefits, key challenges, anticipated shifts in job roles, and evaluating how sufficient current regulatory and educational programs are overall.

In line with this aim, we ask four key research questions:

RQ1: What is the self-reported level of familiarity among BiH accountants with core AI tools, and how strong is their motivation to pursue continuous professional development in this area?

RQ2: What are the profession's perceived central benefits and chief challenges of adopting AI, particularly regarding accuracy, efficiency, and fraud prevention?

RQ3: To what degree do professionals perceive the risk of job displacement and the possibility of skill degradation ("deskilling") resulting from increasing reliance on AI systems?

RQ4: Are the existing ethical and regulatory frameworks governing the application of AI within the BiH accounting context deemed sufficient by practitioners?

Building upon the stated research goal, the following hypotheses are tested in this study:

H1: A statistically significant positive correlation exists between professionals' familiarity with AI and their motivation to engage in related training and professional development.

H2: More experienced professionals (specifically older age cohorts) will be less optimistic regarding the financial benefits generated by AI, compared to their younger colleagues.

H3: Professionals who hold higher educational qualifications will express statistically greater concern regarding the potential bias embedded in AI algorithms and the overall adequacy of the current regulatory environment.

This research delivers a significant empirical contribution by mapping the distinct regional context of Bosnia and Herzegovina and establishing the first comprehensive evidence base detailing local accounting community attitudes towards AI. The findings are intended to furnish a vital foundation for policymakers, professional bodies, and educational institutions in BiH to formulate successful strategies for the profession's digital adaptation.

The remainder of the paper is structured into five core sections. Following this Introduction, the Theoretical Framework and Literature Review meticulously examine AI definitions, its opportunities, associated challenges, and the global regulatory landscape. The subsequent section, Research Methodology, details the survey design and its execution. The fourth section, presents descriptive and inferential statistics derived from the primary data collection. Finally, the last part summarize key findings, highlight practical implications, address limitations of the study, and offer focused directions for future research and professional practice.

LITERATURE REVIEW

The accelerating pace of AI technologies, including Machine Learning (ML) and Natural Language Processing (NLP), is fundamentally restructuring the global corporate environment, opening unprecedented avenues for innovation (Beryl Odonkor et al., 2024). At the same time, this rapid, and often uncontrolled, expansion brings with it significant ethical and social dilemmas. While the momentum of global digitalization universally affects the accounting profession, Bosnia and Herzegovina (BIH) faces its own set of specific challenges, from specific political challenges, transitional, privatization (Grujić & Vretenar Cobović, 2024), (Novaković et al., 2024) to challenges that other countries face, such as the slow rate of adoption of digital technologies and limited access to advanced technological resources.

AI-driven systems promise greater reliability in financial reporting, effectively cutting down on errors and fraud, and enabling near real-time financial analytics (Stein

Smith, 2018), (Beryl Odonkor et al., 2024). The automation of repetitive, low-value tasks, predominantly via Robotic Process Automation (RPA), frees up accounting professionals. This reallocation of effort allows them to focus on the strategic side of their roles, such as high-level advisory services and business forecasting (Tandiono, 2023); (Beryl Odonkor et al., 2024). Without a doubt, the use of artificial intelligence in business significantly reconfigures workflows, optimizing both time and money, which can increase productivity and contribute to corporate sustainability (Peng et al., 2023). Moreover, adopting AI drives the creation of intelligent systems specialized in predictive analysis, fraud detection, and robust risk assessment, thereby not only improving data accuracy but also providing deeper, strategic insights for financial planning (Dombrovska, 2023) (Beryl Odonkor et al., 2024)

Other technologies are helping this transition along: Blockchain introduces unparalleled transaction transparency and security, which is especially valuable in audit functions (Stein Smith, 2018) while Cloud Computing facilitates easy, flexible access to critical financial data and applications, drastically reducing the need for substantial in-house IT infrastructure. The most important contribution of artificial intelligence is its ability to assist in real time, enabling immediate evaluation for timely decision-making (Tandiono, 2023). However, despite widespread optimism, the integration of artificial intelligence into business processes poses many significant challenges for employers and employees. Although the complete abolition of the accounting profession is highly unlikely in the foreseeable future, failure to proactively adapt carries a significant risk of professional obsolescence of employees in the sense that they will have difficulty following new procedures and will lose previously acquired knowledge and skill (Novakovic, Milovanovic, & Kondic, 2025)). Namely, the ongoing Fourth Scientific and Technological Revolution requires professional reorientation, moving accounting roles closer to strategic and managerial supervisory functions.

As expected, the application of AI tools raises concerns about data privacy, security, and ethics (Beryl Odonkor et al., 2024). At the same time, the increased reliance on AI increases exposure to cyberattacks and data breaches, which raises concerns about data security (Yu, 2023). In this regard, the authors emphasize that working in an AI-dependent environment requires the establishment of strict protocols to protect sensitive financial information and ensure unwavering regulatory compliance (Zakaria, 2021). For BiH specifically, the accounting sector faces two pressures at once: the demand for digital transformation coinciding with the necessity of integrating complex new reporting mandates, such as the emerging challenges of ESG reporting (Grujić & Džombić, 2025).

The ethical dimensions must be carefully considered. Autonomous AI analysis and report generation invariably raise big questions of accountability, transparency, and fairness. A core unresolved issue remains: "Who is ultimately responsible for errors in AI-generated financial reports?" (Alghafiqi & Munajat, 2022). Maintaining the integrity and public trustworthiness of financial reporting depends entirely upon establishing robust ethical guidelines and institutional frameworks.

A key requirement is that AI systems must satisfy the criteria of Explainable AI (XAI), allowing users to fully comprehend the basis for the system's decisions. Potential algorithmic bias and discrimination inherently stem from the data used for training (Ferrara, 2023). Consequently, accountants must be equipped to spot and actively mitigate

bias through the deployment of impartial data sets and comprehensive audit procedures (Hussin et al., 2024). Trust and objective decision-making can't happen without significantly greater transparency in AI technologies (Kokina & Davenport, 2017).

These concerns necessitate the urgent formulation of clear regulatory standards (Alghafiqi & Munajat, 2022). Regulatory bodies are increasingly called upon to provide institutional support, specifically to address the disruptive impact of new technologies on financial statement standards and transparency. While nations like the UK and Singapore have proactively updated existing data protection legislation, BiH clearly lacks an adequate solution, resulting in a significant regulatory gap.

AI technology fundamentally changes the accountant's job profile. The core function is predicted to migrate towards advisory services, business development, and sophisticated risk management. The profession's long-term viability depends on its ability to effectively navigate these challenges and capitalize on AI opportunities, thus sustaining a crucial balance between advantage and risk (Beryl Odonkor et al., 2024).

In addition to all of the above, through radical changes, previously acquired skills of employees and the need to acquire new knowledge, titles and skills come under question. Accountants must now seamlessly blend traditional accounting knowledge with technological fluency; understanding and deploying AI tools is becoming an absolute requirement (Beryl Odonkor et al., 2024). Automation serves to free up staff to handle more complex, higher-value tasks (Millman & Hartwick, 1987) (Novaković et al., 2020). In this regard, in the near future, accountants will oversee, among other tasks, three areas: compliance with standards, strategic consulting, and management of robotic and automated systems (Jędrzejka, 2019),

Professionals are thus forced to cultivate advanced "soft skills," including superior communication, collaborative abilities, emotional intelligence, and innovative problem-solving capacities (Jędrzejka, 2019), (Howieson, 2003). These uniquely human competencies are less susceptible to technological replacement, giving a decisive human competitive edge. Concurrently, the demand for IT literacy, programming proficiency, and database design expertise is climbing rapidly (Rebele et al., 1998) The imperative to integrate information systems and technology into accounting pedagogy was recognized early in the digital era (Ahmed, 2003) (Vukovic et all, 2025), highlighting a persistent disconnect between academic preparation and market demands.

Paradoxically, the automation of low-skill, repetitive tasks will likely eliminate many entry-level accounting positions, thereby restricting the critical initial learning opportunities for new cohorts (Kokina & Davenport, 2017) (Jędrzejka, 2019),). This generates the paradox of expertise: professional mastery is achieved through experience, yet task transfer to AI may impede new employees from acquiring a granular business understanding. The Technology Dominance Theory posits that over-reliance on intelligent systems negatively impacts the organic development of human expertise and critical decision-making, potentially leading to a "deskilling" effect (Sutton et al., 2016)

Successful organizational adaptation requires a readiness to fully exploit the capabilities offered by AI (Lee & Tajudeen, 2020), including enhancing client service, deploying automation to reduce fraud, and realizing substantial labor efficiencies. Future scholarly work should aim to devise methodological frameworks to mitigate the "deskilling" effect, focusing on designing systems that actively foster skill development and knowledge accumulation (Jędrzejka, 2019), A hybrid methodology, which

synergistically combines neural and symbolic models, is proposed to encompass the entire spectrum of cognitive and computational requirements (Shabbir & Anwer, 2018). Crucially, regulators and professional bodies must proactively champion the adoption of intelligent technologies while simultaneously deepening the collective understanding of the associated intrinsic risks.

METHODOLOGY

The research is a combination of literature review and survey research. In the initial phase, a detailed analysis of the relevant scientific literature was conducted, using exclusively data from reputable journals indexed in the Web of Science and Scopus databases. The selection criteria emphasized highly cited papers published in the last decade (2015–2025), with a preference for original research articles. This stage facilitated the rigorous identification of convergences and divergences in findings among various authors, thereby establishing a comprehensive theoretical underpinning and context for investigating the impact of Artificial Intelligence on the accounting profession.

To empirically assess their readiness for and attitudes towards the integration of AI, a survey was conducted on 290 individuals currently employed in accounting positions across Bosnia and Herzegovina. The questionnaire collected extensive demographic data (age, gender, years of experience, education, location, professional position, monthly income, and company size), along with attitude questions that focused on perceived changes, risks, and overall impact of AI on their professional roles. Before final application, the survey was validated and refined based on feedback collected from the focus group, ensuring the clarity and relevance of all items. The survey was conducted using the Google Forms platform. Statistical analysis relied on descriptive statistics, while hypotheses were tested using t-tests and Analysis of Variance (ANOVA). The sample consisted of 176 women and 114 men, predominantly residents of Bosnia and Herzegovina predominantly residents of Bosnia and Herzegovina.

This primary research aimed to accurately assess the perception, challenges and readiness of the accounting profession in BiH for the integration of artificial intelligence. Not all responses were considered.

Responses to where the control question showed an error were discarded. The age of the respondents ranged from 19 to 62 years, with an average age of 43.25 years and a median of 46 years. More than half of the respondents (more than 53.5%) stated that they had at least 20 years of work experience, and a significant share (30.7%) had over 30 years of experience. Almost all respondents (263 people) had a higher professional education (VSS) degree, which emphasizes the high level of education within the sample. The largest contingent of respondents was employed in large companies (139), and those working in medium-sized enterprises (118).

The methodology implemented for this research was fundamentally rooted in a quantitative approach, specifically designed for the empirical assessment of attitudes and readiness among professionals in the accounting and auditing sector in Bosnia and Herzegovina (BiH) toward the integration of Artificial Intelligence (AI).

The investigation adopted a cross-sectional survey design, where data were systematically collected at a single instance in July 2025 via a self-administered online questionnaire.

The target population was defined as all individuals practicing within the accounting and auditing profession in Bosnia and Herzegovina. Acknowledging the inherent difficulties in securing a complete and exhaustive sampling frame, a convenience sampling technique was employed. The questionnaire was disseminated through established professional social networks (specifically LinkedIn) and via direct, targeted outreach to key professional associations and relevant business entities throughout BiH.

A total of 270 responses were validated for inclusion in the study. The sample exhibited a clear dominance of women (approximately 76%), a distribution pattern acknowledged as representative of the feminization trend characterizing the accounting profession in BiH. Age diversity was also evident, spanning a wide range from 20 to 69 years, though the highest concentration of participants was observed within the 24 to 32 age range.

In terms of academic background, Higher Professional Education (VSS) was the predominant qualification, reported by nearly 90% of all respondents. Professional roles were most frequently represented by Certified Accountant (approximately 43%), Audit Assistant (around 21%), Accounting Assistant (around 16%), and Certified Auditor (around 14%).

The measurement instrument utilized was a standardized, strictly anonymous questionnaire, carefully developed following a detailed review of seminal scientific literature (Stein Smith, 2018) (Kokina & Davenport, 2017) (Beryl Odonkor et al., 2024).

The instrument was structured around the following categories of variables:

- Demographic Variables (Gender, Age, Education Level, Work Experience, Professional Position, and Company Size).
- AI Perceptions and Readiness (Items designed to measure self-assessed familiarity with AI and the proactive willingness to engage in professional development).
- Impact of AI (Measures for perceived benefits, such as accuracy, efficiency, and fraud mitigation, contrasted with perceived threats, including job displacement and the "deskilling" effect).
- Ethical and Regulatory Challenges (Variables capturing concerns related to data security, algorithmic bias, and the perceived adequacy of existing regulatory mechanisms).

The survey underwent rigorous pilot testing before its full launch. The questions were refined based on substantive feedback from the focus group to ensure absolute clarity and relevance. Furthermore, formal validation was conducted during the pilot phase, which included factor analysis and Cronbach's alpha coefficient to ensure the instrument's construct validity and internal consistency. All attitudes and perceptions were measured using a five-point Likert scale (ranging from 1 = Strongly disagree to 5 = Strongly agree).

Data processing and analysis were executed using the statistical software package SPSS. The analytical framework encompassed both descriptive statistics and hypothesis testing. Descriptive measures were used to summarize and characterize the fundamental aspects of the sample and key respondent perceptions (frequencies, percentages, arithmetic means/average scores, and standard deviations). Hypothesis testing was conducted to systematically evaluate the statistical significance of differences

in perceptions across defined demographic stratifications (gender, age, education). The following inferential methods were applied:

- T-tests: Utilized for comparing the mean scores between two independent groups (e.g., male versus female respondents).
- ANOVA (Analysis of Variance): Employed for comparing the mean scores across three or more independent groups (e.g., distinct age cohorts or various education levels).
- Correlation Analysis: Applied to examine and quantify the strength and direction of the relationship between key variables (e.g., familiarity with AI and willingness for professional development).

Our research design was two-fold: it combined a structured secondary analysis (the literature review) with primary research conducted via an online survey.

The research adopted a quantitative, cross-sectional design, meaning data was systematically collected at a single point in time via a self-administered questionnaire. Since securing a complete list of all accountants in BiH is nearly impossible, we used a convenience sampling technique. The questionnaire was shared through established professional networks (like LinkedIn) and via direct outreach to key professional associations and relevant business entities throughout BiH.

The sample showed a clear dominance of women (about 76%), a pattern that reflects the feminization trend in BiH's accounting profession. Age diversity was evident, ranging from 20 to 69 years, although most participants fell into the 24 to 32 age bracket.

In terms of academic background, Higher Professional Education (VSS) was the predominant qualification, reported by nearly 90% of all respondents. Professional roles were most frequently represented by Certified Accountant (about 43%), Audit Assistant (around 21%), Accounting Assistant (around 16%), and Certified Auditor (around 14%).

The standardized, anonymous questionnaire was carefully developed based on a detailed review of seminal scientific literature (Stein Smith, 2018), (Kokina & Davenport, 2017). Data processing and analysis were executed using the statistical software package SPSS. The instrument was structured around four main categories:

- Demographic Variables (Gender, Age, Education Level, Work Experience, Professional Position, and Company Size).
- AI Perceptions and Readiness (Measuring self-assessed familiarity with AI and willingness for professional development).
- Impact of AI (Gauging perceived benefits like accuracy and fraud mitigation, contrasted with perceived threats such as job displacement and "deskilling").
- Ethical and Regulatory Challenges (Capturing concerns related to data security, algorithmic bias, and the adequacy of existing regulations).

Our analytical framework included both descriptive statistics and hypothesis testing. Descriptive measures (frequencies, means, and standard deviations) were used to summarize the sample's fundamental characteristics and key perceptions. We applied the following inferential methods:

- T-tests: Used for comparing mean scores between two independent groups (e.g., male vs. female respondents).
- ANOVA (Analysis of Variance): Used for comparing mean scores across three or more independent groups (e.g., distinct age cohorts or various ed-

ucation levels).
- Correlational Analysis: Applied to examine and quantify the strength and direction of the relationship between key variables (e.g., familiarity with AI and willingness for professional development).

In this regard, hypothesis testing was systematically conducted to assess the statistical significance of differences in perceptions among defined demographic groups (gender, age, education).

RESEARCH RESULTS

The analysis of the data from the survey revealed a high level of awareness and proactive readiness among accounting experts in BiH. Respondents reported a strong level of self-assessed knowledge of artificial intelligence tools (M=4.20 on a 5-point scale). The linear equation is y=0.0914x and R^2 is 0.8985, which means that it indicates a very strong positive relationship between the number of years and the results. This knowledge was consistent across genders and showed a moderate association with both higher income brackets and greater exposure to advanced technological resources. Furthermore, there is a consensus regarding the inevitable and growing importance of artificial intelligence in the business environment in BiH in the next five years, which is reflected in a very high average score (M=4.43). This strong belief permeates all demographic groups, showing no statistically significant variation based on gender or age. It is important to note that the readiness for continuous professional development was also very high (M=4.21), which emphasizes a strong individual motivation to adapt.

Regarding AI's potential to enhance corporate financial performance, professionals expressed a moderately positive, yet cautious, attitude (M=3.23). We observed significant variation across age groups: younger respondents demonstrated greater confidence in financial benefits (thus supporting Hypothesis H2), while their older counterparts remained more reserved. Interestingly, Master of Science holders and those in micro-enterprises reported the highest confidence, likely due to greater theoretical exposure and organizational agility, respectively.

The perceived operational impact and the transition of professional roles were more nuanced. There was moderate agreement (M=3.44) that AI makes financial data analysis faster and more efficient. Notably, male respondents reported a significantly higher level of agreement than female respondents, and increasing age tended to correlate with greater caution. A tempered optimism (M=3.45) exists concerning AI's capacity to mitigate risks like fraud and errors, although professionals clearly don't view AI as a definitive, risk-free cure-all. The assertion that AI significantly boosts absolute accuracy received only moderate agreement (M=2.73), indicative of an underlying cautiousness. Confidence in this area was high among the youngest professionals but notably lower across certain older and middle-aged groups.

Cautious optimism prevails regarding the potential of artificial intelligence to free accountants from routine tasks, which would enable the necessary transition to strategic activities (M=3.38). Age differences were particularly pronounced here, with high confidence observed in younger cohorts contrasting with significantly lower agreement among middle-aged and older groups, confirming an apparent generational gap.

The study found moderate levels of concern (M=3.24; R^2 = 0,7079; in men, the relationship between grade and number of years is y = 0.0715x and R^2 = 0.6966, and in

women it is y = 0.07x and R^2 = 0.7079.) regarding job loss, with female professionals expressing slightly higher levels of fear. Worryingly, younger age groups reported very high levels of concern, indicating the need for targeted support strategies for younger professionals entering the labor market. Given that age is an indicator of more work experience, or longer work experience, these results indicate that employers should focus on how to provide older employees with security and opportunities to learn and adapt to new technologies.

A significant finding is the paradox in skill perception: while there was a relatively low level of agreement (M=2.38) that AI will necessitate major fundamental changes in skills, this was contradicted by an overwhelmingly high level of agreement (M=4.12) that the loss of skills due to technology dependence - the "deskilling effect "represents a real and serious threat. This dichotomy underscores a high awareness of the necessity to actively develop and sustain human competencies alongside technological integration.

The analysis highlighted several challenges. First, the perceived adequacy of existing ethical and regulatory frameworks received a low score (M=2.48), a finding that highlights the urgent need to update guidelines and legislation. Second, organizational commitment was found to be low. The extremely low average score (M=1.97) indicates that organizations are largely unwilling or unable to invest in training their employees for the application of AI. This low figure indicates a profound lack of educational strategy and represents a significant systemic barrier to competitiveness.

Finally, the survey yielded two contrasting findings in the ethical domain. A surprisingly low level of concern (M=1.50) was recorded regarding data security and privacy. This observation stands in stark opposition to global risk discussions and suggests potentially insufficient local awareness regarding the complexities and vulnerabilities inherent in AI systems. Conversely, a moderate level of concern (M=3.07) was registered regarding algorithmic bias, with female respondents expressing a statistically higher level of concern (thus supporting Hypothesis H3 regarding ethical sensitivity).

DISCUSSION

The research confirms the general stance in the literature that AI represents an unavoidable opportunity rather than a threat (Sutton et al., 2016), recognizing its pivotal role in increasing business value and firm performance (Wamba-Taguimdje et al., 2020). High self-assessed familiarity with AI tools (M=4.20) and exceptional readiness for professional development (M=4.21) point directly to the proactivity of individuals within the professional factor critical for future adaptation.

However, a key imbalance lies in systemic support. A very low level of agreement with the statement that organizations actively invest in training (M=1.97) creates a significant gap between the desires of professionals and the actual support provided by employers. This finding directly suggests that organizations in BiH are not actively supporting the transition, which may impede the synergy of "human ingenuity and intelligent automation". This discrepancy indicates an alarming level of corporate short-termism, where AI is viewed as a costly overhead rather than a long-term productivity investment. The immediate need to comply with often-changing local regulations may be consuming training budgets, creating a "compliance trap" where spending is prioritized on current legal mandates over future competitive necessities.

This inertia jeopardizes the ability of BiH firms to realize the strategic benefits acknowledged by their own employees.

A significant paradox in skill perception was established. Professionals express a high awareness of the threat of "deskilling" (the loss of skills due to reliance on technology) (M=4.12), thereby confirming the predictions of the Technology Dominance Theory (Sutton et al., 2016). Simultaneously, they show a low level of agreement with the claim that AI will necessitate significant changes in skills (M=2.38). This finding suggests that professionals underestimate the depth of the transformation of the accountant's role from a transaction processor to a strategic advisor. The high concern about deskilling (losing the "instinct" for basic accounting) is a powerful indicator that professionals fear losing the foundation of their expertise, but the low perceived need for skill shifts suggests they fail to grasp that the new core competence will be analytical validation and strategic interpretation—not just operation—of AI output. This lack of awareness regarding the need for fundamental skill shifts (towards analytical, communication, and advisory competencies) poses a substantial risk to the profession's competitiveness. The future accountant must evolve from a master preparer of financial statements to a master interrogator of financial algorithms.

Furthermore, the low score on the perceived adequacy of ethical and regulatory frameworks (M=2.48) is an important finding. This finding, combined with moderate concerns about algorithmic bias (M=3.07) (which confirms hypothesis H3), highlights the need for regulatory intervention. This regulatory deficit creates a "black box" problem where accountability remains undefined. When an AI system makes a mistake or facilitates fraud, local legislation currently lacks the clarity to assign liability effectively (e.g., programmer vs. software owner vs. supervising accountant). The need to establish a "human-in-the-loop" principle, where final human oversight is mandatory and accountable, is therefore paramount. The analysis also showed that there is a low level of concern about data security and privacy (M=1.50), which contrasts with global discourse (Zakaria, 2021). This low score is particularly alarming and suggests a potential underestimation of the severity of risks associated with data governance in complex AI ecosystems, possibly due to a lack of exposure to large-scale data breaches or sophisticated cyber threats prevalent in more developed markets. These data point to a potential lack of understanding of the complexity and risks associated with AI systems among local experts. Without adequate investment in both technical safeguards and ethical training, the lack of regulatory clarity and the low perceived data risk combine to create a vulnerable environment for AI adoption.

CONCLUSION

The research successfully analyzed the readiness and attitudes of the accounting profession in Bosnia and Herzegovina toward AI integration. The findings affirm that AI is an unavoidable opportunity, with professionals highly motivated and prepared for personal development (supporting Hypothesis H1).

However, the biggest systemic challenge lies in the disconnect between high individual readiness and inadequate organizational and regulatory support. In particular, lack of investment in training and inadequate ethical and regulatory guidance represent key obstacles to an effective and ethical digital transformation of the accounting profession in BiH. Furthermore, the study reveals a critical paradox: while professionals

are highly concerned about skills depletion (M=4.12), they simultaneously underestimate the fundamental nature of the necessary skill shift towards strategic and analytical competencies. This finding highlights a vulnerability where accountants are aware of what they could lose but are less certain about what they need to gain. In addition, a significant generational and hierarchical difference was identified, with older professionals and operational staff (e.g., audit assistants) showing higher levels of fear of job loss, which is in sharp contrast to the strategic optimism of CFOs and younger cohorts.

The study has several limitations. Due to the convenience sampling methodology, the results primarily reflect the attitudes of respondents who were accessible and willing to participate, which limits the generalizability of the findings to the entire population of accountants and auditors in BiH. The self-administered survey method carries the risk of obtaining desirable responses and the possibility of an inaccurate or inconsistent understanding of all questions. Finally, the dynamic and rapid pace of AI technology means the results represent only a "snapshot" at a specific point in time.

To obtain a deeper and more comprehensive picture, further research is recommended. Future studies could include a larger and more diverse sample, focusing on specific segments of the profession (e.g., internal auditors). The application of qualitative methods is particularly recommended, such as in-depth interviews and focus groups with key stakeholders (CFOs, auditing firm managers) to gain more detailed insights into concrete adaptation strategies. It would also be beneficial to focus on longitudinal studies that track changes in perceptions and skills over an extended period.

For successful digital adaptation, key stakeholders must act decisively. Professional associations should urgently develop tailored Continuous Professional Development (CPD) programs focused on core AI competencies, such as data analytics, AI ethics, and essential soft skills. They must also employ targeted educational strategies to bridge the observed generational gap. Simultaneously, educational institutions must execute fundamental curriculum reform, integrating robust IT knowledge and programming skills to prepare future generations for strategic and advisory functions, thus actively countering the potential "deskilling" effect. At the organizational level, firms are required to significantly increase investment in AI training, moving decisively from a passive stance to a proactive approach, and actively encouraging technological experimentation. Finally, regulators and policymakers must prioritize establishing comprehensive ethical and regulatory frameworks for AI applications in accounting, dedicating specific attention to data protection, algorithmic transparency, and defining clear lines of accountability for errors, particularly by implementing a mandatory "human-in-the-loop" principle to ensure human responsibility remains central to the audit process.

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APPENDIX - Average answers by groups of examinees

Perceptions	Overall Mean	Men	Women	Secondary Education (SSS)	Higher Education (VSS)	Master	Master of Science	Ph.D.	Micro Enterprise	Small Enterprise	Medium Enterprise	Large Enterprise	Accounting Assistant	Audit Assistant	Financial Director	Certified Auditor	Certified Accountant
Familiarity with AI tools.	4.2	4.22	4.19	4.08	4.19	4.5	4.17	4.11	4.22	4.23	4.22	4.13	4.27	4.18	4.21	4.2	
AI improves financial performance.	3.23	3.2	3.23	3.25	3.19	3.17	4	3.17	3.44	3.19	3.27	3.09	3.3	3.11	3.12	3.29	3.22
AI will be important in 5 years.	4.43	4.43	4.43	4.5	4.41	4.33	4.75	4.33	4.22	4.45	4.38	4.43	4.37	4.44	4.53	4.45	4.44
Readiness for skill development.	4.21	4.27	4.19	4	4.22	4.17	4.75	4	4.11	4.19	4.23	4.2	4.22	4.26	4.29	4.25	4.21
AI significantly increases accuracy.	2.73	2.67	2.74	3.17	2.7	2.67	2.5	2.67	2.33	2.8	2.62	2.82	2.6	2.68	3.29	2.75	2.71
AI enables faster/ more efficient analysis.	3.44	3.86	3.37	4	3.42	5	3.5	3.67	3.22	3.45	3.38	3.37	3.45	3.61	3.76	3.5	3.43
AI reduces risk of fraud and errors.	3.45	2.86	3.55	3.75	3.43	3	2.25	3.67	3.44	3.43	3.46	3.42	3.62	3.58	3.06	3.15	2.79
AI frees up time for strategic activities.	3.38	3.36	3.38	4.25	3.33	2.25	3.75	3.67	3.78	3.35	3.15	3.4	3.43	3.68	3.41	3.63	3.39
Concern about job loss.	3.24	3.19	3.25	3.75	3.23	3.5	5	3.33	3.44	3.26	3.15	3.26	3.1	3.47	2.88	3.25	3.22
AI requires significant skill changes.	2.38	2.36	2.39	2.25	2.4	1.5	1	2	2.44	2.38	2.38	2.43	2.38	2.51	2.12	2.25	2.4
Concern about data security and privacy.	1.5	1.5	1.5	1.75	1.48	1.25	2	2	1.67	1.46	1.46	1.46	1.62	1.51	1.18	1.53	1.49
Concern about AI algorithm bias.	3.07	2.78	3.12	2.92	3.03	4	3.75	3.83	3	3.6	2.87	2.85	3.4	3.39	2.76	3.15	2.79
Organization invests in AI training.	1.97	2.08	1.95	2	1.98	1.5	2.25	1.67	1	2.01	2.05	1.99	1.88	1.96	2	1.82	2.06
Deskilling' effect is a real threat.	4.12	4.27	4.07	5	4.04	3	4	5	3.5	4.64	3.38	4.11	4.11	3.38	4	4.75	4.16
Existing ethical/ regulatory frameworks are adequate.	2.48	2.78	2.43	2.33	2.46	2	2.75	3.67	2.11	2.71	2.26	2.45	2.38	2.4	3	3	2.31

Source: Processing of survey results