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Digital Transformation of the Accounting and Audit Industry in Kosovo

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An Honors Society Project

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Abstract

This capstone project analyzes how Kosovo's audit and accounting industry is being affected by digital transformation. Its aim is to explore how digitalization affects skills gaps, job accuracy, company costs, and productivity in different sectors at a time when technological breakthroughs are drastically changing industry. Professionals from Big 10 accounting and audit firms as well as a local Kosovo accounting business were interviewed to gather insights on the potential and difficulties brought about by digital tools and technologies.

Research findings show that digital transformation is considerably bridging the skills gap in the industry, imposing constant professional development and adjustment to new technological standards. Task accuracy has been significantly improved by digital tools, predominantly through automation and AI, leading to higher efficiency and reduced error rates. Additionally, while initial investments in digital technologies may be extensive, they eventually contribute to long-term cost savings and improved business efficiency. The ultimate effect of these changes is a considerable increase in overall productivity.

This project offers recommendations for effectively navigating the digital transformation in the accounting and audit sectors in Kosovo. These include constant investment in training, strategic employment of digital tools, emphasis on soft skills development, nurturing a culture of innovation within companies, and increased cooperation between IT and accounting professionals for streamlining the digital transformation. The paper highlights the need of implementing a strategic approach to digital transformation, ensuring that businesses in Kosovo can fully reap the benefits of technological advancements while overcoming the obstacles associated with said change.

Key words: digital transformation, AI, audit and accounting industry, Kosovo

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1. Introduction

Nearly all industries are being affected by recent dynamics following digital transformation through artificial intelligence and robotic process automation. The financial services industry, particularly the accounting and audit sectors are no exception to this phenomenon (Higgins, 2022). COVID-19 has been a significant contributor to this change, where the industry was faced with the emergency of developing remote opportunities for accountants, such as e-accounting and even automating some of the repetitive tasks (Matta et al., 2022). These circumstances contributed to the digital transformation of the financial services industry.

Ribiere and Gong (2021) define digital transformation as "A fundamental change process enabled by digital technologies that aims to bring radical improvement and innovation to an entity [e.g., an organization, a business network, an industry, or society] to create value for its stakeholders by strategically leveraging its key resources and capabilities". In other words, digital transformation brings about upgrades in an industry, which serve the goal of reaching targets more efficiently and easily. One way to do this is through business or intelligent process automation. McKinsey (2022) defines this process as "a collection of business-process improvements and modern technologies that combines fundamental process redesign with robotic process automation (RPA), artificial intelligence (AI), machine learning (ML), and cognitive technologies like optical character recognition (OCR) and natural language processing (NLP)" (qtd. in Harvard Business Review). Thus, the mechanical processes in specific industries are coupled with artificial intelligence and they allow for new opportunities, including the accounting and audit sectors. The accounting and audit industries in Kosovo have already started their journey toward digital transformation, and thus it is important to explore the arguments that arise on its potentials as well as the challenges that it entails. The focus of this research is on how digital transformation affects the accounting and audit industries in terms of skill gaps, task

accuracy and its costs. This research targets the Big4[1] and Big15[2] financial services companies operating in Kosovo, as well as the local accounting and audit companies.

This research explores the impact and feasibility of digital transformation in Kosovo's accounting and audit sectors, emphasizing its significance for local and international companies operating in Kosovo. The research topic has been selected since there are no other related studies to digital transformation of this industry in Kosovo. Findings indicate that digital transformation improves productivity through professional development and automation, despite initial investment challenges. The study recommends strategies for effective digitalization, including ongoing employee training, strategic investment in digital tools, and fostering collaboration between IT and financial professionals.

2. Background Information

The ultimate outcome of the three spheres this research explores is how will they affect the productivity of accounting and audit companies. Digital tools such as automation may make for "higher production rates and increased productivity" (Britannica, 2023), by reducing work hours in manual tasks. However, a disadvantage of automation may be that it will "subjugate rather than serve humankind" as a result of high dependency of humans on automation (Britannica, 2023). Similarly in the accounting and audit sectors while digital transformation may increase productivity, it risks serving the opposite. Bavaresco et al. (2023) note that digital transformation may reduce the hours that an accountant works. By incorporating digital tools such as RPA, repetitive tasks that accountants have to deal with can be automated, allowing for more time to complete tasks that require human capital. Matta et al. (2022) studied the behavior of accountants following digitalization as a result of COVID-19 and they state that "the positive or negative behavior appears to be a matter of subjectivity. What is favorably appreciated by one is not necessarily appreciated by the other" (Matta et al., 2022). Thus, there are risks when

[1] Top 4 accounting & audit companies globally, measured in terms of annual revenues: https://big4accountingfirms.org/

[2] Top 15 accounting & audit companies globally, measured in terms of annual revenues: https://finance.yahoo.com/news/top-15-accounting-firms-world-161236509.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAItgUQ1w2MlObbkHz8zoN5EzLOfYDor99GIR95ZKlr0cLAqnI_foJlW0Q7jmgZQREP-mrURlrdisql6AeQxQt8wsxqnrqb1OM0esglZycT50lyZ1U2oYA6jnN6ECYW8vYInTzVh36LIrFPG2_eSsffyJygKmhBIUAwLL4NuudY0E

undergoing digital transformation, and that is why companies must implement it strategically. Bughin et al. state that managers are even postponing the implementation of digital tools such as AI and ML, because of the uncertainty of how will they help their businesses (qtd. in Clear, Canhoto, 2020). Thus, while there is great potential for this sector to undertake digital transformation, there are also challenges and risks posed to it.

The Human Factor – How Will Digital Transformation Affect the Low Skilled Labor

Digital tools like RPA and AI are automating repetitive tasks, potentially displacing low-skilled workers involved in data entry and other routine jobs. According to Frey and Osborne (2016), a significant percentage of jobs in sectors with high levels of routine tasks are at risk of automation within the next two decades, with bookkeeping, accounting, and auditing clerks having a 0.98 probability of being "computerised". This suggests that such roles are highly susceptible to automation, leading to job displacement in these areas. While digital transformation threatens low-skilled labor, it underscores the need for training and upskilling, with ICAEW noting that 35% of the skills needed in accounting will change (ICAEW, n.d.). Leaders such as Cliff Justice of KPMG emphasize that digital tools currently support human workers (qtd. in Steinhardt, 2023). All Big4 firms agree that momentarily Artificial Intelligence cannot replace the profession (qtd. in Steinhardt, 2023).

3. Literature Review

This section reviews the current literature related to digital transformation in the accounting and auditing sector. The review is structured into four parts: the change digital transformation brings about to the sectors, digital transformation's implications on the skills gap, its impacts on task accuracy, and the cost implications of adopting new technologies.

3.1 How Will Digital Transformation Change the Accounting and Audit Sectors?

Digital transformation holds the potential to significantly alter the accounting and audit sectors. Raewf (2020) et al. explain, "the use of information technologies to simplify accounting processes and reduce the effort of the accountant started more than 140 years ago". According to them, technological tools automate complex accounting tasks, increasing accuracy and efficiency by reducing the time spent on both data entry and analytical tasks (Raewf et al., 2020). The authors suggest that digital tools enhance informed decision-making through real-time data processing and accessibility (Raewf et al., 2020). They also highlight that cloud-based accounting systems improve collaboration and data sharing, and incorporating AI in accounting software leads to predictive analysis and accurate risk assessments (Raewf et al., 2020). Raewf et al. (2020) note that while digital tools can identify unnoticed patterns in manual audits, achieving this change requires training professionals to adapt to these technologies. In other words, such a transition also requires technological proficiency.

A strand of literature states that digital transformation will significantly change the accounting profession. Green et al. (2022) explore this evolving role, identifying three themes for the profession's development: "The Strategic Advisor with Extensive Human Capital, The Advisor with Extensive External and Internal Social Capital, and The Advisor with Extensive Digital Human Capital Resources". Findings on the first theme suggest that accountants are transitioning from compliance-focused roles to advisory roles, using accounting knowledge to provide strategic insights. This role requires skills in "understanding client needs, strategy, change management" (Green et al., 2022). The second theme emphasizes the importance of strong professional networks, people skills and the "knowledge and skills to work in diverse teams (Green et al., 2022). The third theme involves advisors integrating IT skills with "social

capital" to implement digital tools. Necessary skills for this role include IT proficiency in areas like cloud computing and data analytics (Green et al., 2022).

3.2 Skills Gap Implications

Digitalization requires a skillful workforce to operate the digital tools, and one of the challenges in this journey are the possible skills gap that workers have when using the tools. To benefit from AI, businesses must understand the digital tools involved, as risks and potential "value destruction" can arise it (Clear & Canhoto, 2020). In Roy's et al. (2019) research, it was shown that participants preferred tasks with more "manual control rather than automation, despite much slower performance and regardless of very poor controllability". A European Central Bank Report (2018) revealed that one-fifth of surveyed Eurozone companies expect employment to increase due to digital transformation, primarily because of the retraining and upskilling required post-digitalization, while one-third expect employment to decrease. Thus, digital transformation may give rise to challenges if there is a mismatch between the skills required and the skills possessed by employees. A research conducted by Bavaresco et al. (2023) surveyed accountants whose "statutory reconciliation" task was automated for the study, and found that all the interviewees agreed – with 63% strongly agreeing that the system was easy to use (2023). In this way, Bavaresco et al. derive the "lessons learned" from the research (2023) and as per the "Training and Awareness", the lessons are that employees need to understand the contribution of the automation on their routine, there need to be programs in place which reassures employees that they are not going to be "surpassed" by these technologies, and that IT personnel needs to be trained on implementing the digital tool – Machine Learning (Bavaresco et al., 2023).

Societal and cultural norms seem to also have a role in the challenges raised by digital transformation. Schwertner (2017) states that the greatest challenges that digitization faces are not technological in nature, but rather "human factors" such as "lack of relevant knowledge, cultural traditions, and the employees' resistance to change". Schwertner (2017) also adds that not having the adequate resources is also a "human factor" which hinders digitization, along with lacking the motivation and the risk-taking nature. In this way, literature shows that sometimes the biggest challenges are not financial or technological in nature, but rather cultural factors

which hinder digital transformation. Chen et al., (2021) recommend that governments need to put policies in place that would both enhance digital transformation, which will result in “a far-reaching impact on the economy and society”.

3.3 Task Accuracy Implications

Studies reveal that digital transformation improves accuracy by reducing human errors. Zhang (2019) states that task automation may minimize errors made by humans (qtd. in Bavaresco et al., 2023). Bavaresco et al. (2023) add that this may also decrease the “chances of financial loss due to errors in tax reports”. Furthermore, in the capital market, digital tools may increase accuracy in “information disclosure, reduce information asymmetry, and improve analysts’ interpretation ability” (Chen et al., 2021). Chen et al. (2021) suggest that businesses with healthy “financial status” should apply digital tools to “improve the efficiency of their internal operations”. In the audit process, Huang and Vasarhelyi (2019) found that information collected via Robotic Process Automation matched the process of manual collection. Blanchette and Kokina (2019) observed that one of the reasons companies of their study implemented RPA was to reduce errors.

At the same time, a risk that comes with digital tools and automation is that accuracy might decline, due to incorrect input or improper maintenance. Blanchette and Kokina (2019) emphasize that automation's impact on accuracy relies on the standardization of the process, one of their participants cautioning that "If you automate a bad process, you'll just be automating errors" and another participant stating that they implemented a “test, learn and adjust” mode whereby they monitored their new “digital worker” and adjusted the process accordingly (Blanchette, Kokina, 2019).

3.4 Cost Implications

When undergoing digital transformation, costs may vary depending on the degree of the investments, and whether unexpected costs arise along the way. Clear and Canhoto (2020) hold that acquiring and maintaining AI tools can be costly. Besides the initial investment and maintenance costs, businesses may face expenses for training as well (Clear, Canhoto, 2020). Another cost which Clear and Canhoto state that businesses might face is the “reputational

damage" in case using digital tools brings "value destruction" to the company (2020). Like so, besides the initial investment in AI, additional expenses can arise and the risks might actually cost the business more than anticipated. Yet, Schwertner suggests that digital tools such as cloud computing makes costs more predictable and decreases total costs, while another part of digital transformation, mobile technology, offers "greater productivity, 26% more profitable than normal" (2017).

Not all companies undergoing digitalization prioritize reducing costs, instead seeking other benefits, even if costs remain unchanged. The results from Kokina and Blanchette's study in 2019 show that accounting and finance departments want to keep their costs the same. These companies hold that giving their employees more time to "higher level work" is what they are after, and that has increased the workload of these departments (Kokina, Blanchette 2019). A European Central Bank report shows that companies are expecting other benefits from digital transformation, such as increased sales and increased productivity of workers (2018). Thus, reducing employee headcount and consequently costs are not what every company undergoing digitalization is targeting.

Dependent Variable	Independent Variables		
Productivity	Task Accuracy	Skills Gap	Operational Costs

Figure 1 - Theoretical Framework

This project aims to look at how will productivity be affected as a result of task accuracy, skills gap and operational costs. This makes productivity the 'dependent' variable of the three independent variables.

4. Methods Used

The primary data collection was conducted by interviewing financial professionals – namely accountants and auditors operating in Kosovo. The target subjects were managers and employers in the financial services sector. The interviews explored how has digital transformation affected the sector and its workers on their daily tasks and activities, such as whether their attitude and productivity changed, whether they prefer the traditional or the modern way of working, is the software helping improve the quality of their work and how hard they find it to adopt to the new way of working. Furthermore, the interviews investigate the impacts that such a transformation has had on management level, the quality of work, and the costs that the financial services firms incur. The subjects of the interviews were part of the Big4 companies, Big10 companies, and local Kosovo companies of the financial services industry.

The profile of the participants was chosen so as to offer diverse views on the digital transition in the accounting and auditing sector in Kosovo:

1. Participant A (Audit Manager, Big10 Company A):
2. Participant B (Tax Manager, Big10 Company A):
3. Participant C (Audit Manager, Big10 Company B)
4. Participant D (Tax Manager, Big10 Company C)
5. Participant E (IT Specialist in Task Automation, Big10 Company C)
6. Participant F (Managing Partner, Local Accounting Firm, Company D)
7. Participant G (Managing Partner, Local Accounting Firm, Company E)

The interviews, each approximately 30 minutes long, were conducted in a semi-structured format to allow for depth and flexibility in responses. The interview questions were specifically designed to explore the following key areas: Skills Gap, Task Accuracy, Business Costs, and the byproduct of all of these spheres – productivity. Appendix A shows the overall questions asked in the interviews.

The interviews were transcribed verbatim and subjected to thematic analysis. After transcription, the scripts were coded in order to identify common themes among the interviews

which were then further analyzed and defined. This method offered an understanding of digital transformation's impact on the sector in Kosovo.

This methodology provided a comprehensive view of the effects of digital transformation on accounting and auditing in Kosovo, reflecting the professional experiences and insights of those at the forefront of this shift.

4.1 Ethical Considerations

Informed consent was obtained from all participants, and confidentiality was maintained throughout the research. Training was held for this study in order for the ethical aspects to be taken into consideration, whereby I also obtained Citi Certificates regarding ethics of research. Thus, the study adhered to the highest ethical standards, ensuring participant anonymity and responsible data handling. Appendix B shows the consent form which participants of the research had to sign, whereby the ethical considerations are stated.

5. Results

The study was realized by conducting in-depth interviews with distinguished professionals in the field of accounting and auditing in Kosovo. Their experience spanned from globally recognized Big10 firms to local entities, which provided many views of digital transformation in the sector. The diverse perspectives of the participants, whether in audit and tax (accounting), task automation, or leadership in a local firm, supplement the understanding of digital transformation in the field. The table below summarizes the main results of the research, and each of the themes is discussed in detail in the sections that follow.

Participants	High Implementation of Digital Tools	Training Requirements	Higher Level of Accuracy and Efficiency	Cost Effectiveness	Increased Productivity
Participant A - Company A	Company has undergone "100% digital transition". Use of CaseWare audit software.	Skills gap in using the CaseWare software, short trainings were required for staff members.	Significant improvement in task accuracy, potential for errors with inaccurate inputs. Lower overtime work.	Highly cost-effective despite initial costs. Reduced staff costs.	Significant increase in productivity, digitalization made work more "fun".
Participant B - Company A	Significant implementation of digital tools, working on software for automatic invoice registration.	Mismatch of skills when implementing digital tools, training was a must.	Increases in accuracy and efficiency, saving time.	Faces unexpected costs, especially with software malfunctions.	Implied through tool effectiveness.
Participant C - Company B	Digitalization of accounting duties on a "day-by-day" basis, use of various software for different clients.	Skills gap linked to demographics, new skill requirements.	Decreased mistakes, increased customer satisfaction.	Investment has been cost-effective, reducing staff needed for tasks.	Implied through efficiency gains.
Participant D - Company C	Use of Alteryxs, Macro Excel, UIPath for automation.	Employed new teams and software to bridge skills gaps.	Automation helps significantly, eager to invest more.	Cost-effective despite initial costs, efficiency in company performance.	Implied increase through professional development focus.
Participant E - Company C	Investment in automation tools, seeking to invest in Power Automate.	Bridging skills gaps with new teams, careful data handling.	Increases when tasks take minutes, notification of errors.	Implied through automation benefits.	Implied through task automation benefits.
Participant F - Company D (Local)	Beginning to digitalize processes, challenges in automation.	Employed IT for training, issues with cybersecurity.	Significant improvements in accuracy, hierarchical review process.	Very profitable investments with quick returns.	Significant increase, enables development of judgment skills.
Participant G - Company E (Local)	Developing in-house MIS for audit task automation.	Necessary training for software use, process improvement trainings.	Increased accuracy in operations, immediate error correction.	Cost-effective, initial costs bearable but unexpected training costs.	Productivity increases with reliable documentation and client acquisition.

Figure 2 - Summary of Key Findings

5.1 High Implementation of Digital Tools

High implementation of digital tools in their companies was reported by all the interviewees. Whether it was task automation, AI or even simpler digital tools such as attaining digital copies of documents, all participants stated that they have already started implementing digital tools in their work.

Indeed, participant A stated that compared to last year, digitalization had a "100%" transition in their company. They stated that they no longer get physical copies of large audit documents, but they are all received electronically. The audit process itself has also had a significant digital transition, whereby companies have implemented a software which snips pdf texts and pastes them as a plain text in excel, which tremendously helps reduce time scanning through documents (Participant A). Furthermore, there is an automation software which matches similar documents with one another. Company A has started using the CaseWare audit software, which is used in 60% of the audits conducted by the company. This software is especially useful in reducing time spent on audits where a lot of IFRS standards are applied (Participant A). Participant A stated that they are constantly pushing the company toward investing in digital tools. The tax department of Company A has also applied digital tools.

Also, in terms of impact in tax department, Participant B claimed that their department has had significant tools implemented in their work during and post-COVID, by saying that COVID was the very fuel to which digital transformation started in their company. The Tax Manager said that their department has still not reached their digital objectives. At the same time, company A's tax department is working on a software whereby an invoice or bill need only be scanned, and then it will automatically be registered in the bookkeeping software. This software is also linked with payments, where once the invoice/bill has been paid, it will automatically be paid for in the software as well (Participant B). Such a software would also offer greater security, knowing that payments need to be approved by all stakeholders before going to the payment system of the invoice/bill (Participant B).

Digital transformation in the field of accounting and audit is ultimately "inevitable" (Participant C). Participant C claims that accounting duties are being digitalized "day-by-day". Companies (B) now use different software for different clients, so as to attend to their custom

needs. This may really help workers of companies to generate timely reports which saves companies time which can be allocated elsewhere (Participant C). Another advantage that companies (B) are experiencing from digitalization is getting electronic copies of documents rather than physical ones. This undoubtably eases the process outstandingly, since access to documents is way faster once this is implemented (Participant C).

Company C's employees, namely Participant D and E have also shown that their company has invested a lot in digital tools. They stated that they use tools such as Alteryxs, Macro Excel and UIPath to automate their tasks. As such, a lot of the tasks are automated, and this significantly eases a worker's day-to-day tasks (Participant D). Some of the tasks which are being automated are: payroll, financial statement preparation, VAT, reconciliation, controlling financial statements, bank statement extraction, bank reconciliation, extraction of verdicts etc., (Participants D and E). Such automations tremendously help companies, since the time spent on manual tasks decreases significantly, and companies are big companies are eager to invest in even more software so as to automate even more tasks (Participants D and E). Participant E claims that Company C is seeking to invest in Microsoft's Power Automate.

The interview results indicate that Kosovo's local accounting and audit companies (D and E) are also forward-looking in investing in digital equipment (Participant F). While these companies have not reached the point of task automation yet, they have already started to digitalize a lot of processes (Participant F). Participant F mentions digitalized processes such as enabling their employees to work remotely, getting electronic copies of documents, digitalized accounting checklist and using bookkeeping software. Participant F also stated that they have also tried to automate invoicing and bookkeeping processes by using a certain software, but that is rather challenging to attain in Kosovo at this time. As is the case in local companies (D and E), VAT reporting consumes less time knowing that all data on sales and purchases is now automatically transferred from the bookkeeping software to the VAT template of the Tax Administration of Kosovo (Participant F). Companies (E) have also created excel models in order to automate some of their tasks, such as payroll calculation and financial modeling (Participant G). Participant G states that their company is developing an in-house management information system, called MIS. This software seeks to automate certain tasks in audit and the software contains and updates information which concerns management, in other words, it

includes all information on business operations (Participant G). Local accounting service companies (D and E) see a ton of benefits as a result of these processes, and they are interested in digitalizing their work even further.

This shows that Kosovo is already starting to acknowledge the importance of digital transformation. Even though local companies find it harder to implement as many tools as the globally operating firms, they still strive to implement at least some level of digital tools in their companies. A quote worthy of noting is that of Participant A, whereby they claimed that "The digitalization process began in our company not to hire less staff, but to reduce inefficiencies and overtime". That shows that digitalization may not have the purpose of hiring less staff and cutting jobs, as the traditional way of thinking suggests, but rather help those already working in the sector to increase efficiency of their work.

5.2 Training Requirements

When digital tools are implemented, it appears that a skills gap is usually the case initially. All participants confirmed that the accountants/auditors initially do not have the technological knowledge of newly implemented digital tools. Company A had witnessed skills gaps in both the tax and audit department. The tools that were implemented in excel, for the audit department, required short trainings, however, approximately 30% of employees had significant skills gaps when it came to using the CaseWare audit software (Participant A). Additionally, it is of the essence that trainings are balanced with accounting trainings as well, such as keeping up with financial reporting standards, or taking part in Continuous Professional Education (CPE) which is mandatory for certified accountants and auditors. Similarly in the tax department, Company A has seen a mismatch of skills when implementing digital tools. For this department, training was a "must" and there were certain trainings which lasted two months, depending on the software (Participant B). However, now the tax department is able to employ people who are not experts in accounting, since the software made the deep understanding of some parts of the job unnecessary (Participant B).

Companies (B) that faced skills gap noticed that skill gaps are also linked based on demographics. Usually, it is the senior workers who have not been exposed to working with a software which experience the highest skills gap (Participant C). Also, workers who have entry

level jobs in the sector and who have not had the chance to work with the software and not very experienced with the work itself experience a significant skills gap as well (Participant C). With that, accounting services companies have also switched the skills requirement for attaining new employees, whereby technological knowledge and fluency in English is one of the more important skills that companies require (Participant C).

However, new workers are not expected to know how to use the software and they are not tested on those skills in the interviews (Participant E). Companies (C) have faced skills gaps, but have employed new teams and even software in order to bridge those skill gaps (Participants D and E). These teams have the duty of automating accounting tasks, and then training the accounting professionals so that they are up to date with the software implemented (Participants D and E). Furthermore, companies attained licenses such as Microsoft Bing in order to use their AI features for work purposes, however the employees have to be careful not to share confidential data (Participant E). Employing monitoring systems for performance indicators is crucial for identifying the skills gap and then investing toward bridging that gap (Participant D).

Local accounting companies also noticed skill gaps for their newly implemented digital tools. Participant F stated that their company has recently employed an IT person in order to train the staff on the usage of the digital tools. However, companies are prone to cybersecurity issues and when digital tools are implemented data security must also be enhanced (Participant F). Company D has had a similar experience, whereby their system was hacked and their data was stolen, and now they are working on creating backups so as to secure their data (Participant F). Companies are trying their hardest to make the software user-friendly, however further training on using them is still necessary (Participant G). Company E requires its employees to have one-week long trainings for each digital tool that the company has introduced so far, and besides that, they also hold weekly process improvement trainings where they identify the areas which need improvement and tackle them (Participant G). At the moment, the CEO along with the IT professional of the company are conducting the training, however the owner stated that in the future the company may need a specific team which only deals with training (Participant G).

While there is a prevalent skill gap in the industry once digital tools are implemented, companies have already come up with ways to bridge these skill gaps. Training prior to using the software is one of the precautions, however companies have also changed the skill requirements

for job openings in order to take measures for these gaps. Furthermore, the results have shown that companies hold regular meetings and address the issues that employees might have with using the software. Although some Big10 companies have already created new roles for training and maintaining digital tools, local companies who are working toward that goal see that in the future, they might have to create teams that deal with those specifics as well.

5.3 Higher Level of Accuracy and Efficiency

As a result of digital transformation, companies operating in Kosovo, both international and local, see an increase in the accuracy of tasks, and the efficiency with which the work is done.

Company A has seen a significant improvement in task accuracy and efficiency. Ten days prior to the interview there was a quality control for the international company operating in Kosovo, and one of the most positive responses was the accuracy improvement (Participant A). However, errors may occur whenever the input by employees is inaccurate (Participant A). The tax department has also been faced with increases in accuracy and efficiency (Participant B), which is leading to a lot of time being saved and accountants can now focus on higher-value work (Participant B). But some processes which require human judgement are unable to be automatized, and as such require manual input from the accountants, such as complying with tax laws (Participant B).

Similarly, Company B has also associated a positive relationship with accuracy, efficiency and digitalization. Participant C states that the probability of making mistakes has significantly decreased as the company implemented digital tools. Furthermore, the quickly accessible information and generating timely reports has also increased the quality of the services being offered to the customers, which has led to increased customer satisfaction (Participant C).

This increase in accuracy is motivating companies to invest even more in digital transformation. Companies (C) which have these products pre-tested globally experience even less errors, and as such they are eager to invest in even more digital tools, whereby task automation is their main focus (Participant D). That comes as no surprise, knowing that

automation significantly reduces the time spent on manual tasks and allows employees to focus on other tasks which require judgement (Participant D). Company C reports that their clients are way more satisfied with their work post implementation of digital tools, seeing that the quality of the work has increased significantly (Participant D). Accuracy and efficiency increase tremendously when tasks that would usually take hours to complete now only take several minutes (Participant E). Company C's IT professional states that their team gets a notification every time that a robot runs into errors, and then the team can work on the software so as to not repeat the same error (Participant E). They state that some of the challenges of implementing these digital tools however is when Captcha is enabled and then the team has to retire certain robots (Participant E).

Similarly, local financial services companies have stated that increased accuracy and efficiency is one of the benefits of digitalization. Company D has seen significant accuracy improvements after implementing digital tools (Participant F). Implementing a hierarchy whereby tasks are completed by an intern and then reviewed by a junior, senior and manager has helped companies (D) to reduce the errors made (Participant F). Participant G stated that their company has increased accuracy in most of their business operations, since they are developing a software whereby all the business operations can be found in that software, and that eases the work process for the management. When errors in such cases do happen, Participant G claimed that they are usually corrected effective immediately, and they discuss those errors in their weekly staff meetings, so that they are not repeated twice.

Ultimately, incorporating digital tools has brought about many advantages for accounting and audit companies operating in Kosovo. Some of these advantages are accuracy, service quality and reduced time spent on manual tasks. However, a concern of this is that wrong inputs could lead to errors. To refute the disadvantage, as Participant G noted: "the more automated the tasks are and the more digitalized the work process is, the more trails will the error leave behind whenever it occurs", thus the advantages outweigh the disadvantages.

5.4 Cost Effectiveness

Although implementing digital tools may have high initial costs, results show that financial services companies operating in Kosovo believe that investing in digital tools is cost-

effective and in the long-term, it may even decrease costs. For this section, only those with access to the company's financial statements were interviewed.

Participant A claims that the investment was highly cost-effective. This is the case whenever you implement something which gives you one of the most important assets – time (Participant A). There were high initial costs, but in some companies (A) the hardware needed to support the software costed more than the software itself (Participant A). Reduced staff costs arise not because employees are fired, but because staff turnover is becoming easier when software which requires less knowledge is implemented (Participant B). Participant B claims that Company A do face unexpected costs when implementing digital tools, especially when the software malfunctions and IT costs are required. Additionally, Participant C claims that Company C's investment has been cost-effective, since these investments reduce the number of staff members required for certain tasks, the access to information is way faster and easier and remote work allows for a lot of costs to be reduced. Developing new teams and taking new employees was an initial cost for some companies (C) (Participant D). However, these companies still believe that digital transformation is cost-effective, since the hours of engagement in tasks reduces and that is translated to effectiveness in the company performance (Participant D).

Even though local companies face much more uncertainty when investing in digital tools, since they have not been tested globally for them, the owners are still very optimistic when it comes to the cost-effectiveness which it brings about. Since the service industries do not require a large capital investment as compared to production industries, investments such as these are very profitable (Participant F). Participant F states that the investments in digital tools that they incurred have had a quick return on their investment. Company E developed most of their digital software in-house, and Participant G claims that the investment has been very cost-effective. The initial cost to implement these tools was approximately €10,000, which was bearable for the local company according to Participant G. Unexpected costs arise when they spent on training employees, and even if they did not see the results that they wanted from the trained employees, they invested too much in them to let them go (Participant G). Digital transformation however, reaches two effects which make it cost effective because it increases operations efficiency while also increasing the service quality (Participant G).

Cost-effectiveness and return on investment are things that all the management professionals were on the same page about. One downfall to this may be that there may be high initial costs, which mainly local companies may have an issue covering. Another disadvantage may be that there may be unexpected costs related to initial investment, which will place an even larger burden on local companies. However, Participant F during the interview held that: "although unexpected costs may arise, they are not really unexpected whenever you are willing to invest a lot of money into digitalization, and investing in it is worth every cent".

5.5 Increased Productivity

A byproduct of all of the above-mentioned themes is the increase in productivity from workers in the accounting and audit industries. The interviewees were asked a straightforward question, "Did digital transformation increase productivity or have the opposite effect?". All of the participants claimed that productivity increased. Participant A stated that productivity saw a significant increase as a result of digital tools, arguing that digitalization made the work more "fun" by enabling auditors to focus on higher-value tasks. Participant D supported productivity increase, by claiming that now the focus of both employers and employees is their professional development, and this in turn motivates workers to be way more productive.

Local accounting companies also have witnessed significant increases in productivity as a result of digital transformation. Traditionally, most of the accountants – especially junior accountants were like "robots", and digital transformation changes that, a change which is for the better (Participant F). This change enables accountants to develop their professional judgment skills, which traditionally was only done by managers, but now it is being done even by accounting technicians (Participant F). Furthermore, productivity increases as documentation is way more reliable and accurate (Participant G), and lastly the extra time created from implementing digital tools and automating tasks allows companies to largen their portfolio and attain new clients (Participant G).

6. Conclusion and Recommendations

6.1 Recommendations

Companies should adopt a strategic approach to the implementation of digital tools, prioritizing tools that align with their specific operational needs and long-term business goals. This involves conducting thorough cost-benefit analyses to ensure the chosen technologies provide real value. Additionally, adopting a phased approach to implementation can help manage costs and facilitate smoother transitions. Implementing these digital tools may be costly, thus laying out the strategy which companies will follow is crucial so that they do not end up overpaying or underpaying for their digital tools. The results of the project showed that depending on the company size, the market share etc., the digital tools implemented vary across companies.

As the digital transformation progresses, sustained investment in training and development becomes crucial. These courses ought to concentrate on the newest techniques and technology in accounting and auditing so that experts are prepared for the shifts. This must be done in order to eliminate the skill gaps observed with the implementation of digital tools, and for that to happen firms should invest in continuous professional development programs. These programs should focus on upskilling employees in the technical aspects of the new digital tools which change the traditional ways of working in the industry. This will not only further advance accounting and audit professionals and make the job more "fun" as Participant F answered, but it would also reduce the likelihood of making errors in the software by inputting the wrong data. Collaboration with educational institutions for specialized training programs could also be beneficial. Furthermore, engaging with industry peers, especially technology providers can provide valuable insights and access to best practices. Collaborative efforts can help firms navigate common challenges overcome them, while also enabling technology providers to sell their products for profit.

With the change that digital transformation is bringing within the accounting and audit sectors, the development of soft skills emerges as one of the most critical components for success. The development of soft skills, such as critical thinking, problem-solving, and adaptability, should take precedence over technical skills. As automation and artificial

intelligence are taking over routine tasks, professionals are increasingly required to engage in activities that require human judgment, creativity, interpersonal communication and creativity.

Literature showed that one of the biggest challenges to adapting digital technologies are the human factors themselves, such as resistance to change or cultural mismatches with such technologies. Thus, encouraging a culture that embraces change and innovation within the organization is crucial. This includes fostering an environment where employees feel empowered to experiment with new technologies and contribute ideas for improving processes. Leadership should actively promote and reward innovative thinking and risk-taking. Furthermore, employees should not feel as if the digitalization process is 'replacing them', but rather advancing them and allowing them to focus on higher value tasks.

Organizing cross-functional teams and projects is crucial in order to make the most out of the digital tools implemented. Strengthening the collaboration between IT and accounting/audit departments can especially optimize this process. Cross-functional teams should be established to exchange knowledge and ensure that digital tools are effectively integrated into the work processes, thereby enhancing task accuracy and efficiency while reducing errors. Company C is a testament to the benefits reaped from cross-functional cooperation, and companies which invest in new digital tools should follow a similar path.

Making regular assessments on how are digital tools affecting the workforce is crucial for companies undergoing digitalization. Continuous monitoring and evaluation of the impact of digital tools on productivity, task accuracy, skills gap and costs are essential. This should involve making the monitoring process measurable and regularly reviewing performance against these measures. Insights gained from these evaluations should inform ongoing adjustments and refinements to the digital transformation strategy.

Creating strong data security and privacy regulations and processes is essential as the use of digital tools grows. Establishing routine monitoring and assessment procedures will help lower the likelihood of mistakes using digital tools and detect them early on if they do happen. Thus, implementing strong data protection measures, including regular security audits, employee training on cybersecurity best practices, and the adoption of advanced security technologies is crucial, in order to avoid breaches such as that of Company D.

6.2 Conclusion

The aim of this paper was to examine the digital transformation of the Kosovo audit and accounting sectors, putting an emphasis on the impact of business costs, productivity, the accuracy of tasks performed, as well as the skill gaps in the industries. The insights derived from interviews with professionals from Big10 companies and two local firms highlight a significant shift towards digitalization, driven by the adoption of various digital tools and technologies.

This digital revolution has been instrumental in connecting the skills gap in the industry. The implementation of advanced technologies calls for incremental upskilling and training for professionals to stay relevant. This transition does have a fair share of obstacles, given that it requires a paradigm shift in traditional roles, moving towards more analytical and strategic tasks.

Digital tools have greatly increased efficiency and decreased error rates in terms of the accuracy of tasks. Large data processing is made possible by automation and artificial intelligence (AI), which guarantees accuracy and consistency in operations that were previously subjected to human error.

The study also revealed that digital transformation could lead to substantial cost savings for businesses. While initial investments in technology may be significant, the long-term benefits, including improved efficiency and reduced need for manual labor, contribute to overall cost-effectiveness.

Productivity, as a summed effect of these changes, has seen notable improvement. The automation of routine tasks frees up professionals to focus on higher-value activities, thereby enhancing the overall output and quality of work in the accounting and auditing sectors.

Lastly, this project provides recommendations to financial service companies about implementation of digital tools.

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Appendices

Appendix A – Semi-Structured Interview Questions

1. How much has your company; particularly your department incorporated digital tools in automating tasks? What are the digital tools that your company/department has implemented thus far? What kind of tasks are being automated?

Skills Gap:

2. How has digital transformation impacted the skill requirements in your department?
3. Have you observed any skills gap among your team members concerning the new digital tools and platforms? Could you provide specific examples?
4. What measures has your organization taken to bridge the skills gap brought about by digital transformation?
5. Are there new roles that have emerged in your department as a result of digital transformation? If so, what skills are crucial for these roles?

Costs:

6. Do you believe the investment in digital transformation has been cost-effective? Why or why not?
7. Have there been unexpected costs that arose from digital transformation initiatives? How were these managed?
8. Can you discuss the initial costs incurred in adopting digital transformation initiatives within your department?
9. Have there been any long-term cost savings as a result of digital transformation?

Task Accuracy:

10. How has digital transformation impacted the efficiency and accuracy of tasks within your department?

11. Can you provide specific examples where task automation has significantly improved task completion times and accuracy?
12. Are there tasks that were automated but did not meet the expectations in terms of efficiency or accuracy? Please elaborate.
13. How are errors or inaccuracies handled in an automated system, and how does this compare to the traditional manual process?

Productivity:

14. How has productivity changed in your department after the implementation of digital tools?

Appendix B – Informed Consent Form

Lis Musa

Rochester Institute of Technology

Digital Transformation of Accounting and Audit in Kosovo

This Informed Consent Form has two parts:

1. **Information Sheet (to share information about the study with you)**
2. **Certificate of Consent (agreement to participate)**

Part I: Information Sheet

My name is Lis Musa, I am a student at Rochester Institute of Technology. I am conducting research on "Digital Transformation of Accounting and Audit in Kosovo", whereby I will analyse the impact that the implementation of digital tools such as task automation will have on the sector.

This project aims to explore how the shift to digital tools is changing the world of accounting and auditing in Kosovo. The research seeks to understand how the use of digital technology is affecting the accuracy the work, the skills needed, and the business costs involved. The study goal is to get a clearer picture of the real-world impacts of digital technology in accounting and auditing in Kosovo. This study will help understand the ongoing changes to the industry, thus giving recommendations to small and large companies of the sector on whether to undergo such a change or not.

The research will be conducted via semi-structured interviews, where each interview will comprise of approximately 6-9 open ended questions. The selected participants are accounting and audit professionals of international and local companies operating in Kosovo, which have implemented digital tools in their day-to-day activities. Participants will be interviewed on the implications that digital tools have had on the sector, namely on task accuracy, skills gap and business costs. Each interview is expected to last approximately 30 minutes. There are no reimbursements for participants in this study. The research results will be made public to the RIT Scholars Work, which will be accessible through RIT Library, but there will be no identifiable information.

Participation in the study is completely voluntary. There are no considerable risks associated with participation in the study. The identity of both the interviewee and their organization shall remain anonymous in the report. To ensure that, participants will be coded with numbers, rather than their own names. Participants have the freedom to withdraw from the research at any stage.

Shall you have any further questions or concerns, contact Lis Musa at lm5182@g.rit.edu

Part II: Certificate of Consent

I have read and understand the information. I understand the following:

I have the opportunity to ask questions on the research.

Data will be used for research purposes.

Participant data will be kept confidential and unidentifiable.

☐ **Yes**

☐ **No**

I consent voluntarily to be a participant in this study.

☐ **Yes**

☐ **No**

Signature of Participant _____

Date _____