

Transforming the Accounting Profession: Navigating Industry 5.0 and the Post-Digital Landscape

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Abstract: The accounting industry is going through a significant revolution as it transitions from the Industry 4.0 paradigm to the new Industry 5.0 paradigm. The context of the post-digital world, where digital technology has integrated intrinsically into the business ecosystem, further accelerates this shift. The purpose of the paper is to define the function of accountants in the context of Industry 5.0 and the evolving commercial and technological environment. The paper's goal is to highlight data-driven decision-making. The study's main goals are to evaluate accountants' productivity and determine whether Accounting 5.0 is more suited to deal with data security challenges, protecting the confidentiality of sensitive financial data, and lowering the possibility of human error. Kruskal-Wallis test has been used to examine the hypotheses on the effect and potential future of the accounting profession in light of technological change, Accounting 4.0, and Industry 5.0.

Keywords: Accounting 5.0, Automation, Data-driven, Decision-making, Industry 5.0, Post-digital landscape.

I. INTRODUCTION

Accountants have historically been crucial in the management of financial transactions, compliance, and reporting. However, in Industry 5.0, an accountant's responsibilities go beyond

simple bookkeeping. Accountants are becoming into data-driven strategic partners who help businesses make decisions. By extending beyond only compliance and financial reporting, this strengthens the role of accountants as vital contributors to a company's success.

The term "post-digital" captures the reality of our modern environment, where digital technology is pervasive and incorporated into daily life. We will examine the idea of post-digitalization in this article and talk about its ramifications, difficulties, and potential. We'll explore the notion that technology is no longer a novelty but rather an integral, frequently unnoticed component of our lives.

The transition from Industry 4.0 to the new paradigm known as Industry 5.0 is causing a major revolution in the business sector. This change involves a fundamental rethinking of how firms function and goes beyond just technological developments. Furthermore, it takes place in a world that is no longer dominated by digital technology and is instead firmly integrated into our everyday lives.

A fundamental change in how businesses and technology interact is represented by Industry 5.0. Industry 5.0 goes beyond Industry 4.0 by emphasising human-machine collaboration while Industry 4.0 concentrated on automation and data interchange.

Technology is no longer a distinct entity in the post-digital era; rather, it is a seamless component of our daily life. Businesses

must now change in order to survive; being ‘digital’ is no longer sufficient. They must change to fit in a world where digital technology is so pervasive that it is hardly noticeable. Businesses must take into account how both their staff and customers utilise and interact with technology in this environment.

Industry 5.0 has the potential to completely transform the way firms run by encouraging machine and human collaboration, stimulating innovation, and increasing productivity. These advantages could have a favourable effect on both specific enterprises and the overall economy.

The post-digital landscape and Industry 5.0 have an impact on many different business sectors. It alludes to more flexible industrial production systems that can adjust to different consumer demands. It implies modern diagnostic technology and patient-centered treatment in the medical field. The entire economy, including the financial, retail, and transportation sectors, must adapt.

If companies want to thrive in Industry 5.0 and the post-digital era, they must adopt new strategies. Flexibility and resilience are crucial as they must manage the uncertainties brought on by this change. In order to succeed in the modern collaborative workplace, it is essential to invest in talent development and workforce growth. Innovation, sustainability, and ethical considerations are all crucial for long-term success.

II. REVIEW OF LITERATURE

Review of Research on Tourism Sector for the purpose of understanding the facts about the accounting 5.0 and industry 5.0. Research papers related to transforming the accounting profession have been reviewed.

A study that examines the present and future applications of blockchain technology in business, particularly in cybersecurity and accounting, reveals that blockchain has a variety of effects on auditing that will fundamentally alter the field. Additionally, it concludes that blockchain technology ought to be successfully integrated into several accounting and cybersecurity domains, including auditing and standard accounting processes (Sebahattin Demirkan, Irem Demirkan and Andrew McKee, 2020) [1]. The primary obstacles to digital transformation in accounting appear to be resistance to change, organizational culture, and cost. In the context of the digital age, this study advances knowledge on the function of accounting and accountants in organizations and society. For accounting professionals, it offers useful insights into the possible relationship between technical development—more especially, digital development—and labour market dynamics (Maria José Angélico Gonçalves, Amélia Cristina Ferreira da Silva and Carina Gonçalves Ferreira, 2022) [2]. It is generally acknowledged that the New Public Management reforms, which increased the focus on accounting innovations, performance assessment, and management techniques, were responsible for the most recent dramatic transformation of

the public sector. This study makes the case that the public sector is undergoing a major digital transition that intends to drastically alter organizational structures and procedures in order to address huge public health issues. Therefore, it is essential to investigate the relationship between datafication, digital transformation, and accounting in public enterprises further (Christos Begkos, Katerina Antonopoulou and Matteo Ronzani, 2023) [3]. The study’s findings demonstrated that the quality of financial reporting, the use of accounting information, and the efficacy of strategic decision-making are all significantly impacted by digital accounting. The links between digital accounting and strategic decision effectiveness are mediated by both financial reporting quality and the utility of accounting information. Furthermore, whereas digital transformation does not modify other links, it does moderate the ones between digital accounting and the utility of accounting information and the quality of financial reporting. However, by using a grounded theory, future study must develop new aspects of digital accounting (Kornchai Phornlaphatrachakorn, Khajit Na Kalasindhu, 2021) [4]. It is believed that it is crucial to make sure accounting students have access to the newest technologies available. In order to assist students’ learning progress, new technologies that are being introduced into accounting education are necessary. Consequently, it is important to promote the use of digital technology tools in accounting education procedures. Digital technologies need to be supportive of students’ growth as they study in accounting education (Bilal Zafer Berikol and Mustafa Killi, 2021) [5]. Slovakia must establish the framework necessary for all economic sectors to gradually transition to digital technology. Accounting is likewise going to be digitalized. This explains how the Act on Accounting’s approved revision, which takes effect on January 1, 2022, makes room for processing and storing accounting records more efficiently. Thus, the most recent revision to the Act on Accounting creates entirely new possibilities for collaborating with corporate accounting about internal business procedures as well as financial management or tax authorities (Iveta Košovská, Marcela Hallová, Ivana Váryová, Edita Šilerová, Klára Hennyeyová and Petr Cihelka, 2022) [6]. According to the report, the most talked-about topics in academic publications and industry sources are smart contract applications, blockchain-enabled continuous audits, transparency and trust concerns in the blockchain ecosystem, and the paradigm shift in the roles of accountants and auditors. These four themes provide practical guidance on how accountants and auditors should address the emergence of blockchain technology (Jana Schmitz and Giulia Leoni) [7]. With the “use as you need and pay as you go” paradigm, cloud computing enables businesses to employ IT applications and infrastructures efficiently and affordably. Organizations must consider the effects of this choice on the financial reporting process before implementing the data and apps in the virtual environment. In this regard, the purpose of the article is to examine how cloud computing technology affects the primary operational modules that provide accounting data for financial reporting (Cristina Prichici and Bogdan Ș. Ionescu, 2015) [8].

The paper examines the kind of issues that arise in accounting and auditing as well as the necessity of integrating artificial intelligence (AI) technologies into the field. The conversation covers current accounting concerns, especially auditing and assurance, for which new AI research should be beneficial (Amelia A. Baldwin, Carol E. Brown and Brad S. Trinkle, 2006) [9]. In the framework of a university, this study explores the function and possibilities of digital transformation, with a focus on combining blockchain technology with enterprise architecture. The study's conclusions show that digital transformation is now a critical component that supports university operations' efficacy, security, and transparency. To achieve this goal, integrating blockchain technology with enterprise architecture may be a useful tactic. It concludes that incorporating blockchain technology into higher education can have a major positive impact on data security, automation of administrative procedures, and enhanced transparency. Higher education places a high priority on data security; blockchain's decentralized structure and potent encryption features give another degree of protection (Iswahyudi, Djarot Hindarto, R. Eko Indrajit, 2023) [10]. The study is anticipated to contribute to the little body of research on the variables impacting professional accountants' resilience to the digital economy, which may help explain the difficulties accountants encounter in being valuable partners for the organizations they work with. Therefore, to better understand how well Malaysian accountants embrace these enormous changes and prepare themselves to become future-fit professionals, future research may take into account more empirical study on factors influencing readiness of accounting professionals towards the implementation of digital economy in Malaysia (Siti Noor Azmawaty Abd Razak, Wan Nurul Basirah Wan Mohamad Noor and Yusri Huzaimi Mat Jusoh, 2021) [11]. Three fundamental contributions to the field of accounting are obtained by the research. Initially, we define digitization and discuss the potential applications of this pervasive concept for accounting. Secondly, we enumerate the literature that is currently developing on digitization in accounting and compare pertinent studies. Thirdly, we showcase new research avenues. It makes sense, based on the literature, both normatively and theoretically, that the accounting profession must overcome preexisting obstacles and transition from a traditional approach to a digital one (Melinda Timea Fülöp, Dan Ioan Topor, Constantin Aurelian Ionescu, Sorinel Căpușneanu, Teodora Odett Breaz and Sorina Geanina Stanescu, 2021) [12].

III. APPLICATION OF INDUSTRY 5.0 AND FUTURE OF ACCOUNTANTS

The application of Industry 5.0 to business and the economy can yield numerous benefits, driving innovation, efficiency, and economic growth. Here are some key advantages:

Human-Machine Collaboration: Industry 5.0 emphasizes the collaboration between humans and machines. The output can be

more efficient and effective workforce as humans and machines complement each other's capabilities. It can lead to improved productivity and better decision-making.

Personalization and Customization: Industry 5.0 allows for mass customization. Businesses can tailor products and services to individual customer needs and preferences, leading to higher customer satisfaction and loyalty.

Innovation and Agility: With the rapid integration of technology and data-driven insights, businesses can innovate more quickly. They can adapt to changing market conditions, introduce new products and services, and stay ahead of the competition.

Data-Driven Decision Making: The wealth of data generated in Industry 5.0 can be harnessed for better decision-making. Businesses can use data analytics and AI to gain insights into customer behavior, market trends, and operational efficiency.

Supply Chain Optimization: Industry 5.0 enables real-time supply chain monitoring and optimization. Businesses can reduce costs, minimize waste, and ensure a more efficient flow of goods and services.

Cost Reduction: Through automation and predictive maintenance, Industry 5.0 can reduce operational costs. It allows for more efficient resource allocation and reduces human errors, resulting in cost savings.

Job Creation: While there are concerns about job displacement due to automation, Industry 5.0 can also create new job opportunities. It leads to the demand for skills related to technology, data analysis, and maintenance of automated systems.

Sustainability: Industry 5.0 can promote sustainability by optimizing resource use, reducing waste, and improving energy efficiency. Businesses can adopt environmentally friendly practices and meet growing consumer demand for eco-conscious products and services.

Global Connectivity: Industry 5.0 allows for seamless global connectivity. Businesses can collaborate with partners, suppliers, and customers worldwide, expanding their reach and opportunities for growth.

Competitive Advantage: Early adopters of Industry 5.0 can gain a competitive advantage in the market. They can offer innovative solutions, respond to customer needs faster, and stay at the forefront of industry trends.

Economic Growth: The application of Industry 5.0 can contribute to overall economic growth. When businesses are more productive and innovative, it has a positive impact on the broader economy.

Improved Quality and Safety: Industry 5.0 technologies, such as IoT sensors and AI, can improve the quality of products and services while enhancing workplace safety.

Better Customer Experiences: With more personalized and efficient processes, businesses can provide superior customer experiences, which can lead to increased customer retention and loyalty.

IV. RESEARCH METHODOLOGY

A. Data Collection

Primary data has been collected from tourists via questionnaires. The tourists have been approached so as to acquire their response through questionnaire. Questionnaires from 384 tourists, tourist guides, and local artisans got filled but 250 found suitable.

B. Objective

The goal of the article is to define the function of accountants in the context of Industry 5.0 and the evolving commercial and technological environment. The paper’s goal is to highlight data-driven decision-making. How well will accounting 5.0 and industry 5.0 impact more informed choices, enhanced financial performance, and effective strategic planning? The impact of the transformation and the addition of automation tools are also the main areas of focus. The study’s main goals are to evaluate accountants’ productivity and determine whether accounting 5.0 is more suited to deal with data security challenges, protecting the confidentiality of sensitive financial data, and lowering the possibility of human error.

C. Hypothesis

H01: Industry 5.0 has no significant impact on the position of the accountant in the business world.

H02: Industry 5.0 has no significant impact on the role of 5.0 for automation in financial reporting and the effectiveness of accountants.

H03: The transformation and implications of industry have no significant impact on security issues in better suited to data.

H04: There is no significant impact of transformation and implications of Industry 5.0 on cost effectiveness and lessens the risk of human errors.

V. RESULT AND DISCUSSION

The potential of future technology has been identified using a strategic random sampling technique with a sample size of 147, and was filled by entrepreneurs adopting industry 5.0. The application of statistical tools like the Kruskal-Wallis test has been applied for testing the hypotheses to measure the impact and the future of the accounting profession with technological transformation, Accounting 4.0, and Industry 5.0.

H01: Industry 5.0 has no significant impact on the position of the accountant in the business world

The Kruskal-Wallis test’s null hypothesis is that the groups’ mean ranks are equal. Since the data in this case are not normal,

the Kruskal Wallis evaluate was employed to evaluate the hypotheses instead of one-way ANOVA.

TABLE I: EXPLAINING ROLE OF ACCOUNTANTS WITH KRUSKAL-WALLIS TEST

	Interdisciplinary Collaboration	Data-Driven Decision Making	Innovation and Agility
Chi-Square	7.739	12.474	8.444
df	2	2	2
Asymp. Sig.	.021	.002	.015

Source: SPSS output

b. Grouping Variable: Industry 5.0

The results of the Kruskal-Wallis test are shown in Table II, which shows that there is a significant discrepancy (p 0.05) at the 5% level of significance between the hypothesised test value and the computed sample statistics for determining the role of accountants in complex decision-making and strategies. The results reveal that the majority of the time, the p value is less than 0.05. It declares that the null hypothesis is rejected. It indicates that under Industry 5.0 situations, the function of the accountant in the company landscape has evolved.

H02: Industry 5.0 has no significant impact on the role of 5.0 for automation in financial reporting and the effectiveness of accountants

TABLE II: EXPLAINING EFFICIENCY OF ACCOUNTANTS WITH KRUSKAL-WALLIS TEST

	Human-Machine Collaboration	Improved Automation and Efficiency	Advisory and Strategy
Chi-Square	6.163	6.869	11.364
df	2	2	2
Asymp. Sig.	.046	.032	.003

b. Grouping Variable: Industry 5.0

Source: SPSS output

The results of the Kruskal-Wallis test are shown in table 2, and they show a significant discrepancy (p 0.05) at the 5% level of significance between the hypothesised test value and the calculated sample statistics for the acceptance that the application of industry 5.0 and accounting 5.0 of a firm has improved the efficiency of accountants and automated financial reporting. Result shows that p value in most of the cases is less than 0.05. It says that null hypothesis is rejected. It means there is significant significant impact of industry 5.0 on efficiency of Accountants and automation in financial reporting.

H03: The transformation and implications of industry have no significant impact on security issues in better suited to data

TABLE III: EXPLAINING SECURITY ISSUES WITH KRUSKAL-WALLIS TEST

	Data Security and Privacy	Data Analytics and Business Intelligence	Expanded Role in Risk Management
Chi-Square	9.479	12.141	5.866
df	2	2	2
Asymp. Sig.	.009	.002	.053

Source: SPSS output

a. Grouping Variable: Industry 5.0

Table III's Kruskal Wallis Test results show a significant discrepancy between the predicted test result and the estimated sample statistics ($p < 0.05$) at the 5% level of significance. Result shows that p value in most of the cases is less than 0.05. It says that null hypothesis is rejected. It means significant impact of transformation and implication of industry 5.0 on security issues in better equipped to navigate data.

H04: There is no significant impact of transformation and implications of Industry 5.0 on cost effectiveness and lessens the risk of human errors

TABLE IV: EXPLAINING COST EFFECTIVENESS WITH KRUSKAL-WALLIS TEST

	Cost Reduction	Enhanced Value Creation	Supply Chain Optimization for Sustainability
Chi-Square	18.228	2.922	8.109
df	2	2	2
Asymp. Sig.	.000	.232	.017

Source: SPSS output

b. Grouping Variable: Industry 5.0

The results of the Kruskal-Wallis test are shown in Table II. At the 5% level of significance, it is clear that there is a substantial discrepancy between the hypothesised test value and the computed sample statistics ($p < 0.05$). Result shows that p value in most of the cases is less than 0.05. It says that null hypothesis is rejected. It means transformation and implication of Industry 5.0 has affected cost effectiveness and reduces the likelihood of human errors.

Result expressed that Industry 5.0 is far better and influence in improve efficiency, reduce time, reduce fraud and reduce error and changing role of accountants in complex and strategic environment. But still risk is expressed high by the respondent.

VI. CONCLUSION

The business world is in the midst of a profound transformation as it shifts from Industry 4.0 to the emerging paradigm known as Industry 5.0. This transition is not just about technological advancements; it is a fundamental rethinking of how businesses operate. Moreover, it occurs within a post-digital landscape,

where digital technology is no longer a novel concept but deeply ingrained in our daily lives. This essay explores the implications of Industry 5.0 and the post-digital landscape on businesses, focusing on the need for reimagining traditional approaches to thrive in this new environment. Industry 5.0 represents a radical shift in the way businesses and technology interacts. While Industry 4.0 focused on automation and data exchange, Industry 5.0 transcends this by emphasizing human-machine collaboration. This collaborative approach extends far beyond the factory floor and into various sectors, promising greater productivity, innovation, and personalization.

In the post-digital era, technology is no longer a separate entity but a seamless part of our lives. It's no longer enough for businesses to be 'digital'; they must adapt to a world where digital technology is so deeply integrated that it becomes almost invisible. In this landscape, businesses need to consider how technology is used and experienced by both their employees and customers.

Various business areas are affected by Industry 5.0 and the post-digital landscape. It refers to more adaptable production systems in manufacturing that may change to meet the demands of various customers. It suggests cutting-edge diagnostic equipment and patient-centered care in healthcare. All sectors of the economy—retail, finance, transportation—must change to fit this new collaborative and technologically advanced society.

Businesses need to implement new approaches if they want to prosper in Industry 5.0 and the post-digital environment. As they must handle the uncertainties that come with this shift, flexibility and resilience are essential. Given that human skills are crucial to the new collaborative workplace, it is imperative to invest in talent and workforce development. For long-term success, innovation, sustainability, and ethical considerations are all essential.

It is not an option, but rather necessary, to reimagine company in the context of Industry 5.0 and the post-digital future. Businesses must embrace this new era due to the quick speed of technological advancement and changing consumer expectations. The path forward lies in creative adaptation, constant learning, and a commitment. The rapid pace of technological change and evolving consumer expectations make it imperative for businesses to embrace this new era. Only by embracing human-machine collaboration and understanding the post-digital reality can companies thrive, innovate, and remain competitive.

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