A Study on the Impact of Artificial Intelligence on the Accounting Profession: A Study of Small-Scale Industries of Rajasthan

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Abstract

The rise of paperless accounting has brought about a new era in the field of accounting, incorporating artificial intelligence and technology. The accounting sector has witnessed a significant shift towards digitalization, with further growth anticipated in the future. Recent advancements in technology have transformed the traditional manual bookkeeping process, eliminating the need for laborious hours of manual data entry and upgrades without any visual aids. Businesses of all sizes now have access to user-friendly digital accounting solutions for efficient recording and analysis of business transactions.

Numerous research studies have been carried out in the field of digital accounting and the accounting industry, both in India and worldwide. However, there has been a noticeable absence of significant investigations regarding the influence of artificial intelligence on accountancy and accountants specifically for small-scale industries in Rajasthan. "This paper examines the influence of artificial intelligence (AI) on the accounting career in moderate trades in Rajasthan. Additionally, it examines the relationship between the current state of affairs (status quo) and the developmental trends of AI in accounting."

The study relies on both primary and secondary data. Primary data were collected through well-designed questionnaires and indirect interviews. Secondary data were sourced from various

reputable journals, magazines, and websites. Various tools, including percentage calculations, chi-square tests, and t-tests, were used for analyzing and interpreting the results. While these tools can provide extremely accurate outputs, surpassing human efforts in some cases, it's important to note that they do not replicate human intelligence. Recognizing the strengths and limitations of this distinct form of intelligence is crucial, and we should strive to understand the most effective ways for humans and computers to collaborate.

Keywords: Paperless accounting, Artificial intelligence, the Accounting profession, technology.

Introduction

Artificial intelligence (AI) is a crucial technology for the future, along with block chain, the Internet of Things and cloud computing. It is considered the capability of machines to mimic human actions, including decision-making and communication. The advantages of implementing AI solutions, such as enhanced accuracy in results and time-saving during data processing, are already recognized across various industries. While AI solutions are not new to researchers or a routine practice for advanced technology companies, they remain a captivating subject for study cases, particularly regarding their impact on the accounting field.

Accountants are already leveraging technology in their daily activities to improve results and reduce time spent. Implementing AI systems is not an unfamiliar step in their careers. However, this transition offers considerable benefits, including achieving objectives through data-driven decision-making, gaining insights into business results using data analytics, and saving significant time that would otherwise be spent on repetitive tasks. It also serves as the initial step in developing a guide for accounting professionals, outlining best practices necessary to thrive in the evolving work environment. While recent academic interest in the impact of AI on the accounting profession is represented by a limited number of studies, researchers have

observed a growing trend of integrating new AI solutions into businesses. Nevertheless, there remains a need for more in-depth research specifically focused on the accounting profession. The target audience for this research includes companies willing to implement AI in their accounting activities and accounting specialists who must adapt to these new working conditions.

To assist in this area, this study aims to carry out a thorough examination of the available literature on AI in the accounting field. The structure of this paper is as follows: it commences with a review of the existing literature regarding the influence of AI technologies in accounting. The subsequent section discusses the effects of AI technologies on the accounting profession and outlines the essential measures that companies and professionals should take to achieve optimal outcomes.

Review of Literature

In the paper titled "Artificial Intelligence (AI) in Accounting & Auditing: A Literature Review," **Hasam, A. R.** (2022) conducted a comprehensive review of the application of Artificial Intelligence (AI) in the field of Accounting and Auditing. The author concluded that the development and implementation of AI in the accounting and auditing profession can be seen as both beneficial and challenging.

In their study on "Digital Reporting in Accounting: XBRL and Integration to Accounting Department Curriculum," **Isbil, N. et al.** (2021) analyzed the importance of integrating XBRL (eXtensible Business Reporting Language) into the accounting curriculum in Turkey. The researchers provided practical suggestions on how XBRL can be incorporated into the existing curriculum, as they found that the current courses do not cover information about XBRL adequately.

Syrtseva, S. et al. (2021) explored the utilization of digital technologies in the organization of accounting and control for tax liabilities of budgetary institutions. Their paper, titled "Digital Technologies in The Organization of Accounting and Control of Calculations for Tax Liabilities of Budgetary Institutions," highlighted the effectiveness of digital tools at all stages of tax administration. The researchers concluded that digitalization in accounting and control processes can enhance the level of tax culture and optimize activities for all participants in tax relations.

Trisnadewi et.al. (2021) explored the use of Digital-Based Accounting Information Systems in Micro, Small, and Medium Enterprises in Denpasar City. They concluded that overcoming computer anxiety requires developing self-control from within the individual. MSME managers should have confidence in their abilities to use information systems effectively by enhancing their internal locus of control.

In the paper "Digital Data and Management Accounting: Why We Need to Rethink Research Methods," **Bhlmanl, A.** (2020) examined the relevance of conventional methodological approaches in conducting research within digital data environments for management accounting studies. The author emphasized the need to question traditional modes of inquiry and reconsider the applicability of existing research methods in the context of digitalization.

In their research paper titled "Digital Accounting and the Human Factor: Theory and Practice," **Kruskopf, S. et. al.** (2020) examined the impact of technological disruptions on the accounting field and explored how these disruptions may influence future job roles and required skills. They concluded that a promising and innovative future lies ahead, where collaboration between humans and machines will be crucial, and individuals possessing the appropriate skill sets will thrive in the future.

In another study conducted by **Khanom, T.** (2020) titled "The Accountancy Profession in the Age of Digital Transformation: Challenges and Opportunities," the author focused on the theoretical foundations for individuals who are currently or will be involved in the accounting industry. The study concluded that accounting professionals who possess knowledge of international standards, regulations, and processes will be well-positioned to navigate the challenges and seize the opportunities presented by digital transformation.

Begum, D. (2019) explored the establishment of a general business model for digital accounting businesses in their paper titled "Digital Transformation of Accounting in India." The study emphasized the importance of technological development in driving the growth of digital accounting and finance across the country. It also highlighted how this transformation can contribute to India becoming a hub of digitalization knowledge.

Gulin and et. al. (2019) conducted a comprehensive analysis of the challenges that digitalization poses to the accounting profession in their paper titled "Digitalization and the Challenges for the Accounting Profession." The study concluded that digitalization and the advancement of information technologies present significant opportunities for companies.

Lastly, **Mancini and et. al.** (2017) delved into the trends of digital innovation applied to accounting information and management control systems in their paper titled "Trends of Digital Innovation Applied to Accounting Information and Administration Control Frameworks." The ponder emphasized the requirement for advanced inquiry in the field of bookkeeping data and administration control frameworks to viably grasp the digitalization of information, data, and workflow.

Toshniwal, R. (2016) conducted a study on E-accounting practices in modern businesses and found that it is a new development in the accounting field. In this system, all documents and

records are in digital form rather than on paper. Various national and international institutions and organizations support the adoption of e-accounting.

Research Gap

The literature review conducted reveals that numerous studies have been carried out on the intersection of artificial intelligence and accounting. However, there is a noticeable research gap when it comes to exploring the specific opportunities and challenges that AI solutions present for the accounting profession in the context of Small Scale Industries in Rajasthan.

Objectives

The study aims to achieve the following objectives:

❖ To explore the effects of Artificial Intelligence (AI) on the accounting profession in Small Scale Industries in Rajasthan.

❖ To investigate the correlation between the current situation and the future trends of Artificial Intelligence in accounting.

Research Methodology

The study relies on both primary and secondary data. Primary data were collected through well-designed questionnaires and indirect interviews. Secondary data were sourced from various reputable journals, magazines, and websites. Various tools, including percentage calculations, chi-square tests, and t-tests, were used for analyzing and interpreting the results. While these tools can provide extremely accurate outputs. The sample data includes 200 participants, Research scholars of the ABST Department, businessmen, College Commerce lecturers, accounting educators, accounting students, tax consultants, Chartered Accountants and coat management accountants of Rajasthan.

Research Hypothesis

H01: There is no significant relationship between Artificial Intelligence (AI) and the impact of digital accounting on the small-scale business of Rajasthan.

H02: There is no significant relationship between the current situation (present state of affairs) and future trends of Artificial Intelligence in accounting.

Data Analysis and Interpretation

The sample data consists of participants, a Research Scholar of the ABST Department, businessmen, College Commerce lecturers, accounting educators, accounting students, tax consultants Chartered Accountants and coat management accountants of Rajasthan.

Demographic Profile of the Respondents

The following table describes the demographic picture of the 200 respondents. In the present study, the social and economic profile of the respondent includes gender, age, and education qualification.

Table 1.1: Demographic profile of the respondents

Social Factors	Classification	Frequency	Per. (%)	Chi-Square	P Value	d.f
Gender	Female	116	58			
	Male	84	42	5.1234	3.418	1
Age	Below 30 years	80	40			
	30-50 years	50	25	7	5.199	2
	50 and above	70	35			

Educational Qualification	Graduate	60	30			
	Post-Graduate	100	50	240.58		
	Research Scholar	40	20		5.199	2
Have you heard about the term " Artificial Intelligence "	Yes	116	58	5.1234	3.418	1
	No	84	42			

(**Source:** Questionnaires.) (Calculated value is greater than the table value /P value

***Significant at 5% significance level*)**

Table 1.1 indicates 58% of female respondents and 42% of female respondents. Finally, the majority of respondents are female. 40% of respondents are highly in the age group of below 30 years. Therefore, the young generations are aware of Artificial Intelligence. 50% of respondents are the majority in postgraduate. Out of 200 respondents 30% of graduates, 50% of Postgraduates, and 20% of Research Scholar. The most important thing in this questionnaire out of 200 respondents is that 58% of them know about the term "Artificial Intelligence" and the remaining respondents do not know about the term "Artificial Intelligence".

Results and discussions

The idea that Artificial Intelligence solutions will replace human control in the accounting profession is a misconception. AI works alongside human intelligence, providing additional support and benefits to accountants. It enables better interaction within the accounting domain and enhances the management functions of businesses. To effectively integrate AI solutions into their regular activities, accountants should prioritize the development of new skills and

abilities. Firstly, they need to continuously improve their professional capabilities throughout their careers. Secondly, they should focus on enhancing their existing skills.

Strong decision-making skills enable accountants to accurately assess project quality and allocate essential resources. Finance teams must comprehend a project's impact on the company, analyze competitor activities, and provide evidence to support decision-making over the short and long term. In today's business landscape, companies increasingly seek accountants who are proficient in information technology, in addition to having a solid professional education.

Accountants and accounting firms should prioritize enhancing their understanding of AI and incorporating its positive effects into their work and strategies. By collaborating closely with AI researchers and developers, accountants can leverage the technology to enhance their activities. It is crucial for companies to also prioritize strengthening their cyber-defence systems while implementing AI solutions to ensure the protection of their systems.

Table no. 1.2 shows the t-Test: Paired Two Sample for Means. (Data of hypothesis H01)

	Traditional Accounting	Digital Accounting
Mean	25.5	74.5
Variance	312.5	312.5
Observations	2	2
Pearson Correlation	-1	-
	--	
Hypothesized		

Mean Difference	0
Df	1
t Stat	-
P(T<=t) one-tail	2.14
t Critical one-tail	0.15
	6.32
P(T<=t) two-tail	0.30
t Critical two-tail	
	12.71

The above table no 1.2 shows the calculated value of the t-test. = - 2.14 and the degree of freedom is 1. Concerning the 1 degree of freedom at a 5% level of significance, the critical value of the t-test is obtained as P(T<=t) one-tail is 0.15 less than the t Critical one-tail 6.32 and P(T<=t) two-tail is 0.30 less than the t Critical two-tail is 12.71.

Decision: Hence decision is to **Accept H01** i.e. there is a significant relationship between the accounting industry and the impact of digital accounting on the small-scale business of Rajasthan.

TABLE NO 1.3: DATA FOR HYPOTHESIS H02 (LEVEL OF USES BY THE USER ON A TIME BASIS)

S. N	Statement	N	Present State			Future Trends		
		200	Low	Medium	High	Low	Medium	High

#	Technology							
1	Block Chain	200	190 (95%)	10 (5%)			30 (15%)	170 (85%)
2	Artificial Intelligence	200	200 (100%)				10(5%)	190 (95%)
3	Cloud Accounting	200	200 (100%)				10(5%)	190 (95%)
4	Real-time Reporting	200		180 (90%)	20 (10%)		10(5%)	190 (95%)
5	Big Data Analysis	200	40 (20%)	160 (80%)				200 (100%)
6	Paperless Accounting	200	20 (10%)	180 (90%)				200 (100%)
7	Transparency	200	20 (10%)	160 (80%)	20 (10%)			200 (100%)
8	Integrated Consolidation	200	80 (40%)	30 (15%)	90 (45%)	--	10(5%)	190 (95%)

Decision: The decision is to **Accept H02** i.e. there is a significant relationship between the

current situation (present state of affairs) and future trends of Artificial Intelligence in accounting.

The second proposition determined that business establishments must exercise caution when relying heavily on artificial intelligence. However, there will come a time when the expertise of human accountants will be indispensable, necessitating the abandonment of artificial intelligence in business operations. Therefore, it is imperative to comprehend the advantages of artificial intelligence while also recognizing the significance of human skills and reputation.

Conclusions

In the age of Big Data, proficiency in computer skills is increasingly crucial. Accountants must possess more than just basic software knowledge; they should be highly adept in software applications to effectively navigate the constantly evolving business landscape. An accountant who comprehends the underlying principles of IT systems can offer valuable insights to the IT team involved in creating these solutions. Strong analytical skills are essential for evaluating financial data accurately and assessing the risks associated with various actions and decisions based on the information at hand.

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