A STUDY ON IMPACT OF ARTIFICIAL INTELLIGENCE IN ACCOUNTANCY: A CASESTUDY OF SMALL SCALE INDUSTRIES OF ODISHA

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ABSTRACT

Introduction: Paperless accounting presenting the aspects of accounting with artificial intelligence or technology. The accounting industry is one of the industries that has been seen to have a growth in digitalization and is expected to grow even more. The technology brought up changes in recent times through traditional book-keeping method was once characterized manually sitting over hour-long to up gradation without any visual presentation. All most all typesof business organisation now find easy and hassle-free uses of digital accounting for recording and interpretation of results of business transactions.

Research Gap: A good no. of researches have been conducted in the area of digital accounting and accounting industry in India as well as the whole world, but no remarkable study has been made as regards to impact of artificial intelligence on accountancy and accountant for small scale industries of Odisha.

Objectives: This paper attempts to understand the impact of digitalization or Artificial Intelligence of accounting profession on Small Scale Industries of Odisha. This paper also study the relationship between the status quo (present state of affairs) and developmental trends of digitalisation or Artificial Intelligence in accounting.

Research Methodology:

a. **Nature and Sources of Data:** The study is based on primary and Secondary Data. The primary data have been collected through well design questionnaire and indirect interviews. The secondary data have been collected from various secondary sources like journals, magazines, and from various reputed websites. The collected data have been classified and tabulated according to the requirements of the study.

b. **Tools of Analysis:** There are various tools like percentage calculations; chi-square test, t-Test have been used for analysis and interpretation of results.

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provide outputs that can be extremely accurate, replacing and, in some cases, far superseding human efforts. However, they do not replicate human intelligence. We need to recognise the strengths and limits of this different form of intelligence, and build understanding of the best ways for humans and computers to work together.

Keywords: Artificial intelligence, Digitalisation of Accounting, Technology, traditional book-keeping, accountancy and accountant.

INTRODUCTION

Artificial intelligence (AI) is one of the most important technologies for the future; alongside with Internet of Things, cloud computing, block-chain. It is considered the ability of a machine to imitate human actions like communication, decision taken. Some benefits of implanting Artificial Intelligence solutions, such as the possibility of obtaining more accurate results and time saving while processing a large amount of data are already known in different fields of activity. Artificial Intelligence solutions does not represent a new subject for researchers or a common practice for advanced companies in technology but is an interesting topic for study cases, mainly their impact on the accounting filed.

Accountants are already using the technology in their daily activities to improve the results and reduce the time spend. In this case AI systems implementation will not be an unknown step in their career. But this comes with considerable benefits as achieving objectives using data-driven decision making, can find insights on the results of the business using data analytics and can save significant amount of time, that would normally be spend on repetitive activities.

It is also the first step in developing a guide for accounting professionals of the best common practices needed to survive on the new work environment. The recent academic interest on the impact of AI in accounting profession is represented by a limited number of studies. On the last years researchers observed the increasingly trend of integrating new AI solutions in the business but in the accounting profession there is still a need for more in depth researchers in this area. The target audience of this research is represented by the companies willing to implement AI in their accounting activities and by the accounting specialists which will be forced to adapt to the new working conditions.

In order to offer help in this scope the objective of this research is to conduct an in-depth analysis of the existing papers about AI in the accounting profession This paper is organized on the following way: it begins with an overview of the current literature on the impact of AI solutions in the accounting professions. Next section is presenting the implications of AI solutions on accounting profession and the necessary steps to be followed by companies and employees in order to get the best results. In the final part this paper we are disclosing conclusions, study limitations and some directions for a future investigation on the topic.

REVIEW OF LITERATURE

The extensive literature review provides the platform for the fundamentals and the researches have been undertaken by the various researchers in the particular and related area.

Toshniwal, R. (2016), in the paper "E- Accounting: The Necessity of Modern Business" studied E-accounting practices adopted by the modern businesses and concluded that E- accounting is new development in the field of accounting. In this system, every document and records exist in digital form instead of on paper. All major institutions and organizations at national and international level are in the favour of e-accounting.

Mancini and et. el. (2017) in the paper "Trends of Digital Innovation Applied to Accounting Information and Management Control Systems" studied about the trends of digital innovation applied to accounting information and management control system and concluded that the digitalisation of data, information and flows requires an additional effort of research, especially in the field of accounting information and management control systems.

Gulin and et. el. (2019), in the paper "Digitalization and the Challenges for the Accounting Profession", analysed and systematized the key challenges that digitalization brings for the accounting profession and concluded that Digitalization and the development of information technologies represent a great opportunity for companies.

Begum, D. (2019), in the paper **"Digital Transformation of Accounting in India"** studied how digital accounting businesses could set up a general business model, in order to be a successfully digitalized business and concluded that the development of technology is required for the development of digital accounting and finance across the country and helped to transform the country into knowledge of digitalization heaven.

Khanom, T. (2020), in the paper "The Accountancy Profession in the age of Digital Transformation: Challenges and Opportunities" studied the theoretical basis for them who are somehow connected or will be attached to the world of accounting in future and concluded that Accounting professionals who are knowledgeable in international standards, regulations, and processes will thri

Kruskopf, S. and et. el. (2020), in the paper "Digital accounting and the human factor: Theory and Practice" studied the technological disruptions shaping these fields and also look at how they might influence future jobs and required skills and concluded that a promising and innovative future, where human-machine cooperation will be key and the individuals with the right skillsets will be set to prosper in this future.

Bhlmanl, A. (2020), in the paper "Digital Data and Management Accounting: Why We Need to Rethink Research methods" explored the continued applicability of conventional methodological thinking when carrying out investigations within digital data environments to inform management accounting studies and by highlighting the necessity, where digitalisation exists, to question modes of posing questions and to reconsider the applicability of methodological precepts deployed by management accounting researchers to date.

Syrtseva, S. and et. el. (2021) in the paper "Digital Technologies in The Organization of Accounting and Control of Calculations for Tax Liabilities of Budgetary Institutions", examined the main tools of digital technologies in the organization of accounting and control, which can be effectively applied at all stages of tax administration and optimize activities all participants in tax relation and concluded that the digitalization in the organization of accounting and control of settlements for tax liabilities and the process of servicing taxpayers will increase the level of tax culture.

Trisnadewi and et. el. (2021), in the paper "Determinants of the use of Digital-Based Accounting Information Systems Micro, Small and Medium Enterprises in Denpasar City", studied about the Digital-Based Accounting Information Systems Micro, Small and Medium Enterprises in Denpasar City and concluded that that computer anxiety can be overcome by developing self-control from within the individual, in this case the student MSME managers must feel confident in their personal abilities that the use of information systems can be achieved if MSME managers are increasingly developing internal locus of control.

Isbil, N. and et. el. (2021), in the "Digital Reporting in Accounting: XBRL and Integration to Accounting Department Curriculum", analysed the necessity of integrating XBRL into the accounting curriculum in Turkey and makes some practicable suggestions on how XBRL can be integrated into accounting curriculum and concluded that the courses in the curriculum do not incorporate information about XBRL. Thus, the study suggests how XBRL can be integrated into theexisting curriculum at the compulsory courses.

Hasam, A. R. (2022), in the paper entitled "Artificial Intelligence (AI) in Accounting & Auditing: A Literature Review", reviewed the application of Artificial Intelligence (AI) in Accounting and Auditing and concluded that AI development and implementation in the accounting and auditing profession can be viewed as a double-edged sword

RESEARCH GAP

The above review of literature shows that a good no. of researches have been conducted in the area of artificial intelligence and accounting, but no remarkable study has been made as regards to the opportunities and challenges brought by AI solutions to the accounting profession for the Small Scale Industries in Odisha.

OBJECTIVES

The objectives of the study are as follow:

➢ To understand the impact of digitalization or Artificial Intelligence of accounting profession on Small Scale Industries of Odisha.

➢ To Study the relationship between the status quo (present state of affairs) and developmental trends ofdigitalisation or Artificial Intelligence in accounting.

RESEARCH METHODOLOGY

i) **Nature and Sources of Data:** The study is based on primary data and Secondary Data.

ii) **Sources of Data:** The primary data have been collected through well design questionnaire and indirect interviews. The secondary data have been collected from various secondary sources like journals, magazines, and from various reputed websites. The collected data have been classified and tabulated according to the requirements of the study.

iii) **Sample Size:** The sample data consists of 200 respondents comprises Businessman, accounting professional, accounting educator, accounting students and Chartered Accountant.

iv) **Time of Study:** Data have been collected during July-December, 2022.

v) **Tools of Analysis:** There are various tools like percentage calculations; chi-square test, t-Test have been used for analysis and interpretation of results.

RESEARCH HYPOTHESIS

➢ There is a significant relationship between accounting industry and impact of digital accounting on the small scale business of Odisha.

➢ There is no significant relationship between the status quo (present state of affairs) and developmental trends of digitalisation in accounting.

DATA ANALYSIS AND INTERPRETATION

The sample data consists of 200 respondents comprises Businessman, accounting professional, accounting educator, accounting students and Chartered Accountant of Odisha.

The table no. 1 shows that out of 200 respondents 35% are from rural/semi-rural area and 65% belongs to city/town area. The test statistics χ^2 show that null hypothesis there is no difference between rural/semi-rural and town/city respondents has rejected as calculated value is greater than

the table value /P value. So, there is a significant difference between rural/semi-rural and town/city respondents. Out of 200 respondents 58% are male and 42% female. Out of 200 respondents 25% are below 25 age groups, 35 % are 26-40 age groups and 40% belongs to above 40 age groups. Out of 200 respondents 09% have educational qualification up Graduation, 06 % have UG-PG qualification and 85% have above Post-Graduation. 55 % respondents have capital contribution up to ₹ 5 lacs contribution and 45% respondents have above ₹ 5 lacs capital contribution.

Table No 1: Profile of Sample

Profile	No. of Respondents	% to Total	Test Statistics	Profile	No. of Respondents	% to Total	Test Statistics
Location			$\chi^2=18$	**Gender**			$\chi^2=5.12$
Rural/Semi-Rural	70	35	P= 3.814	Male	116	58	P= 3.814
Town/city	130	65	df=1	Female	84	42	df=1
Age				**Education**			
Up to 25	50	25	$\chi^2= 7$	Up to Graduation	18	9	$\chi^2=240.52$
26-40	70	35	P= 5.991	UG- PG	12	6	P= 5.991
Above 40	80	40	df=2	Above PG	170	85	df=2
Amount of Capital Invested				**No. of Years' Experience**			
Up to ₹ 2 Lac	22	11	$\chi^2=44.92$	Up to 20 Years	66	33	$\chi^2=13.24$
₹ 2 Lac- ₹ 5 Lac	88	44	P= 5.991	20-30 years	88	44	P= 5.991
₹ 5 Lac above	90	45	df=2	Above 30	46	23	df=2
Sample Size	**200**	**100**		**Sample Size**	**200**	**100**	

(Source: Collected and compiled from Field Study)

Results and discussions

Due to the implementation of Artificial Intelligence solutions is a myth, the business of losing the human control, for the accounting profession. AI represents a complement to human intelligence, and this will bring benefits to the accounting profession, enabling the accounting domain to interact better and support more the management functions of the business.

In order to be prepared to integrate the solutions provided by artificial intelligence into the regular activity's accountants need to focus on developing new skills and abilities. The first set of skills to be impacted professional skills, every accountant needs to constantly improve his/her professional capabilities throughout their career. Secondly the focus should be on enhancing the

management skills. Even if an accountant will not become manager, if these skills, are available, it will increase the chances to reach a management position when available and wanted.

Decision making skills will help an accountant to correctly evaluate a project's quality and the necessary resources. The finance team should be able to understand the impact of a project for the company, the way competitors are performing similar activities and to be able to support with evidence the decisions making process on a long run or short run.

Nowadays companies started to hire accountants which know how to work with information technology, on the top of a good professional education. Being able to use and implement AI in one's work/activity is a competitive advantage that matters.

Accountants and accounting companies need to focus on developing and strengthening their knowledge on AI and be able to integrate the positive impact of these technologies, into their activities and strategies. AI will improve accountants' activities if they will be able to work closely with researchers and developers of AI solutions, to design the best product and processes. While implementing AI solutions companies needs to focus on strengthening cyber-defence systems to be able to protect the systems

TESTING OF HYPOTHESIS

Hypothesis 1:

H_0: There is a significant relationship between accounting industry and impact of digital accounting on the small scale business of Odisha.

H_1: There is no significant relationship between accounting industry and impact of digital accounting on the small scale business of Odisha.

Table No 2: Data for Hypothesis 1

Situations	Small Scale Industry	Medium Scale Industry	Total
Traditional Accounting	37	12	**49**
Artificial Accounting	63	88	**151**
Total	**100**	**100**	**200**

(Source: Collected and compiled from field study)

The table no. 3 shows the t-Test: Paired Two Sample for Means.

Table No 3: t-Test: Paired Two Sample for Means

	Traditional Accounting	Digital Accounting
Mean	24.5	75.5
Variance	312.5	312.5
Observations	2	2
Pearson Correlation	-1	
Hypothesized Mean Difference	0	
df	1	

		t Stat	**-2.04**
		P(T<=t) one-tail	0.1450773
		t Critical one-tail	6.3137515
		P(T<=t) two-tail	0.2901546
		t Critical two-tail	12.706205

(Source: Author's Calculation on the basis of field study)

The above table no 3 shows that the calculated value of t test. = - 2.04 and the degree of freedom is 1. With reference to the 1 degree of freedom at 5% level of significance, the critical value of the t test is obtained as P(T<=t) one-tail is 0.145 less than the t Critical one-tail 6.313752 and P(T<=t) two-tail is 0.290 less than the t Critical two-tail is 12.70.

Decision: Hence decision is that **Accept H_0** i.e. There is a significant relationship between accounting industry and impact of digital accounting on the small scale business of Odisha and **Reject H_1** i.e. There is no significant relationship between accounting industry and impact of digital accounting on the small scale business of Odisha.

Hypothesis 2:

H0: There is a significant relationship between the status quo (present state of affairs) and developmentaltrends of digitalisation in accounting.

H1: There is no significant relationship between the status quo (present state of affairs) and developmental trends of digitalisation in accounting.

Table No 4: Data for Hypothesis 2

Sl. No.	Statement		Present Status			Future Aspiration		
			Low	Medium	High	Low	Medium	High
1	Paperless Accounting	No.	30	170	--	--	---	200
		%	15%	85%	---	--	---	100%
2	Uniformity of Systems and creation of Transparency	No.	30	140	30	---	---	200
		%	15%	70%	15%	----	---	100%
3	Process Automation	No.	---	100	100	----	10	190
		%	---	50%	50%	----	5%	95%
4	Integrated Consolidation System	No.	70	30	100	----	10	190
		%	35%	15%	50%	----	5%	95%
5	Big data Analysis	No.	30	170	---	----	---	200
		%	15%	85%	---	----	---	100%
6	Real-time Reporting	No.	---	170	30	---	10	190
		%	---	85%	15%	---	5%	95%
7	Tools For Visualization	No.	70	130	---	---	---	200
		%	35%	65%	---	---	---	100%
8	Cloud Accounting	No.	200	----	---	---	10	190

No.	Sl	Name	Type	C1	C2	C3	C4	C5	C6
			%	100%	----	----	---	5%	95%
9	Block Chain		No.	170	30		----	30	130
			%	85%	15%	---	----	35%	65%
10	Artificial Intelligence		No.	190	10	---	----	10	190
			%	95%	5%	---	---	5%	95%
11	Fibre Connectivity		No.	100	100	---	---	---	200
			%	50%	50%	----	---	----	100%
12	Making Tax Digital		No.	---	190	10	---	----	200
			%	---	95%	5%	---	---	100%

(Source: Author's Calculation on the basis of field study)

Decision: The decision is that **Accept H$_0$** i.e. there is a significant relationship between the status quo (present state of affairs) and developmental trends of digitalisation in accounting and **Reject H$_1$** i.e. there is no significant relationship between the status quo (present state of affairs) and developmental trends of digitalisation in accounting

The second hypothesis concluded that the business house should be very careful regarding more dependent on artificial intelligence, but one day will come where the value of human accountant will be required by discarding all the uses of artificial intelligence in business. So, one should understand the benefits of artificial intelligence as well as the value of human talent and goodwill.

KEY FINDINGS:

➢ Due to the impact of Artificial Intelligence on the accounting profession it started to appear a real need for a dedicated education in this field.

➢ There is need of change on the curricula in order to assure that the graduates will be better prepared for their future jobs.

➢ AI will not replace the jobs of accountants, but it will improve their work, by reducing the time spend on repetitive tasks.

➢ There is a significant relationship between accounting industry and impact of digital accounting on the small scale business of Odisha.

➢ There is a significant relationship between the status quo (present state of affairs) and developmental trends of digitalisation in accounting.

CONCLUSIONS:

Computer skills are becoming more and more important in the era of Big Data. An accountant should be able to work not only with regular software, but he/she needs to be highly

software literate, in order to easily adapt to the on-going changing business environment. An accountant which can understand the logic behind the IT system provides value-added for the IT team working on the development of these solutions. Analytical skills are important, due to the need to analyse financial information and to correctly evaluate the risks of some actions and decisions, based upon available information.

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