International Journal of Humanities Social Science and Management (IJHSSM)
Volume 4, Issue 2, Mar.-Apr., 2024, pp: 1233-1239 www.ijhssm.org

The Impact of Modern Technology on Accounting Line of Work

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Date of Submission: 03-04-2024 Date of Acceptance: 14-04-2024

ABSTRACT: Modern technology is rapidly changing in the global environment and this has changed the needs and skills of the accounting profession. Accounting has evolved into more than just recording, classifying, summarizing, and analysing data thanks to modern technology. The purpose of this research is to determine the impact of modern technology on the accounting profession. The IT sector is expanding in the accounting sector with new and innovative technologies and auditing softwares. The research aims to determine how modern technologies affect accounting work performance. Snowball sampling methodology has been adopted and questionnaires were circulated among 68 accounting professionals. Regression analysis was employed to analyse the effects of advantages gained through changed technologies on the accounting practices of these professionals. The findings revealed that modern technologies have a significant impact on the accounting line of work with speed and simplification having a significant impact. Further, the study also throws light upon the skills that are important to be possessed by an accountant to work in this rapidly changing technological era.

KEYWORDS: Modern Technology, Accounting Practices, Problems, Required Skills, Hierarchical Regression

I. INTRODUCTION

The objective function and basis of accounting, namely "providing information on the economic performance of a business unit," have not changed; however, as technology has advanced, accounting has become more than just recording, summarizing, and reporting transactions. Accounting routines and practical functions are now being extended throughout the organization, including delegated functions, processing methodologies, controls, and expected outputs. Accounting has evolved significantly over the last few decades as new technologies have been introduced. Accounting has shifted from manual to computer-based systems due to these advancements in technology.

Modern technology and accounting are interconnected. The development of IT in the accounting field has reduced the workload and increased the efficiency of accountants and various tech assistants'. Digitalization and technology enhancements in the accounting field have become a necessity to increase the efficiency of the work. With the technology change, accounting education has also changed. The new technologies and their impacts are taught at the university level to add to the skills and knowledge of future accountants. Technology is transforming the lives of millions of people in the IT and Accounting sectors by saving their time and efforts with the help of software. Some of the technologies employed by accounting professionals for their everyday work are;

a) Cloud Computing – Since cloud computing is internet-based computing, It makes data and resources from the communal technology dispensation system available to computers and other devices, breaking the virtual barriers of the company. Accountants may do their work from any location, and this technology allows them to compile and supply any information or reports. Rather than being preoccupied with a large number of financial transactions, an accountant can spend their free time dealing with clients and developing business plans.

b) Enterprise Resource Planning Systems (ERP system) – The word ERP originally referred to systems that were used to plan the use of company-wide resources. To achieve incorporation, a traditional ERP system will employ several computer software and hardware devices. An ERP software package, for example, may theoretically include software that performs both accounting and payroll functions. Human Resources, CRM, Supply Chain, Manufacturing, Warehouse Management, and Financials are just a few of the ERP modules that used to be separate applications.

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c) Forensic Accounting – An accounting and finance expert, combined with the evaluation of procedures and rules, created the ideal combination for investigating illegal financial transactions. Forensic accountants can assist in determining whether transactions are legitimate in industries such as embezzlement, financial statement fraud, bankruptcies, money laundering, Securities fraud, contract disputes, and insurance claims. A corporate fraud involving a company like Enron brought public awareness to a new level in the early 2000s. There were new rules made. The investigation into corporate fraud was extensive. These crimes provide new opportunities for accountants in fields such as forensic accounting.

d) Mobile Accounting – Accountants are becoming heavily dependent on mobile devices for data access. Mobile connectivity bridges the gap between accountants and clients. Accounting firms benefit from mobile applications that allow them to keep track of their transactions while on the go. Smartphones can be used to reconcile records, create financial documents, send invoices, and add receipts.

e) Technological Innovations in Tax Software - Today's tax software has aided businesses in improving accuracy while reducing margins of error, which is something they want to do to reduce tax liabilities and avoid conflicts with stakeholders.

These modern techniques enable accounting trainees and professionals in terms of Improved accuracy, Increased functionality, and Better processing enabling them to keep systematic records and enable them to handle multiple currencies at one end. The present study attempts to analyse the impact of these modern technology advantages on the accounting line of work. Further, the study also throws light upon the skills required for accounting students to pursue their career in accounting line.

II. LITERATURE REVIEW

Jordan, (1999) states the impact technology has on the accounting profession has undergone significant transformations due to technological advancements.

Alves (2010) states that the business world is changing at a faster rate in today's era. Globalization, high information technology (IT) investments, and the rapid pace of technological change have been the reasons behind this. Organizations are responding to the wide range of IT-based opportunities and pressures in different ways and at different rates. The research attempted to analyse how IT affects the ability to solve accounting problems. Using a case study approach the effect of IT and accounting processes, was measured on accountants' tasks. The findings suggested a tendency for change and the decentralization of accounting tasks.

Ghasemi, (2011) states the impact of informational technology on modern accounting systems. Listing the benefits and drawbacks of technology, they reported that the companies have been able to perform accounting functions more effectively and efficiently as a result of the use of computerized accounting information systems, resulting in time and cost savings.

Lim (2013) examined the introduction of information technology into accounting. Accounting Information Systems now assist most businesses in managing their operations, from large corporations to small businesses. The paper concluded by stating that the use of information technology in accounting is not without flaws as it can improve the accounting process but can‘t replace the role of man in the accounting system.

Damasiotis et. al. (2015) examined the impact of IT on accountants' work and accounting in general. Following that they determined the IT skills required by accountants based on a brief historical review to track all major changes over the last few decades. Further, they discussed the IT competency guides prepared by international organisations for a variety of accounting professions.

Amiri & Amiri (2014) focussed on the effects of organizational IT changes on management accounting performance and determined the extent to which the spread of IT can influence accounting practice and function empowerment. The effects of IT on accounting practice and functions were measured along with the qualitative relationships between IT and accounting practices. They found that the decentralization function has been the focus of the accounting department.

Brands (2016) stressed that accounting automation can relieve accountants of a variety of repetitive, insignificant, and manual activities that they execute daily and focus on how it would boost efficiency, cost savings, and overall accuracy.

OECD Digital Economy Policy Papers, (2016) presents new evidence on how ICTs (ICT software, its web pages, e-commerce, cloud, big data, etc.) impact jobs. They revealed that changes in tasks linked with increased use of ICTs were bigger for those in low-skill occupations than for those in moderate and high-skill occupations. On average, tasks that demand more interaction with coworkers

and clients, more problem-solving, and less physical work were related to the intense use of ICT at work.

Kokina et. al. (2017) provided an outline of how AI technology has been used in the accountancy profession. They examined the modern capabilities of cognitive technologies, as well as the impact these technologies have on human auditors and the audit process. Further, they also focussed on the implications of potential biases with the development and usage of artificial intelligence.

Mohammad Al-Zoubi, (2017) investigated the impact of Cloud Computing on the accounting information system. The research observed a significant reduction in the structure of the firm in terms of the premises and offices with cloud computing thereby enhancing organizational efficiency in terms of creating operations easier to accomplish.

Cockcroft et al. (2018) analyzed the research potential in finance and accounting for the use of "Big data." Undergoing an analysis of 47 accounting, finance, and information systems (IS) publications published between 2007 and 2016, the research identified some key areas to be explored. They revealed that risk and security, visualization of data and predictive analytics, data management, and quality management were the identified six under-researched sectors of big data in accounting and finance.

Gulin et. al. (2019) examined and summarized the significant problems that modernization brings to professional accountants. The findings indicated that in the digital age, the accounting profession faces various obstacles such as the utilization of big data in measurement and auditing, cloud computing and ongoing accounting, artificial intelligence, and blockchain technology. They highlighted that technological changes and digitalization will have a substantial impact on the accounting industry in the future years. In addition, they reported that innovations have an impact on how accountants perform their jobs.

Kruskopf et al. (2020) gave insights into how ongoing and prospective technology is changing the disciplines of the accountancy profession. They compared the human and machine activities and concluded that with continuous digitalization and innovation, among the potential tools and skills, AI's involvement in the accountancy profession increased quickly.

Kroon, N., et. al. (2021) concentrated on the impact of developing technologies on the function and skills of accountants. They analysed which new technologies were the most investigated in terms of their effects on accountants' roles and capabilities. They undertook a systematic literature review of 157 articles and found that accountants must possess the skills and knowledge about the function that they are allocated to achieve efficiency. They provided a comprehensive knowledge of the significance of current technological advancements on the accountant's function and skills.

Khare, D.V. (2021) comprehended the previous convergence of financial accounting with the development of information technology, describing how this convergence affects the accounting information systems. They stated that the organization ‘s ability to build and deploy automated systems to track and record financial transactions has the greatest impact on accounting. The time taken by accountants to plan and send annual management reports was cut to half with IT networks and database systems. Further, they found that these systems helped organizations in fast and easily producing specific reports for management decision-making. The study further highlighted other advantages such as enhanced quality, more flexibility, rapid execution and improved external reporting.

The comprehensive review of the literature examining the influence of IT systems and softwares on accounting practices resulted in the following proposed hypothesis;

H1: There is a significant impact of modern technology on the performance of Accountants.

III. OBJECTIVES OF STUDY

The research aimed to determine how modern technologies affect accounting work performance and thereby following research objectives were framed.

1. To examine and understand the impact of technology on accounting practices.
2. To understand the major problem that most accounting professionals face in dealing with modern information technologies.
3. To find the basic skills required in the accounting profession in the era of emerging technologies.

IV. RESEARCH METHODOLOGY

The study is a causal study that attempts to examine the causal relationship between the speed and work simplification achieved through advanced technologies in the accounting practices of accountants. The snowball sampling method has been used for the research design. This study focuses on how modern technologies impact the

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accountant's roles and their performance. The use of a questionnaire has been made to gather the opinions and views of accounting professionals. The target population for this study comprised trainees of the accounting profession, accountants of accounting firms and experts of IT in the Accounting Department. A total of 100 experts were approached and after screening the filled responses the final usable responses came out to be 68 experts associated with the accounting field. The advantages of technology in the form of speed Work simplification and accuracy were the independent variables and Accounting practices were taken as the Dependent variable for the research.

V. RESULTS AND FINDINGS

The demographic profile of respondents in terms of their age and qualification has been presented in Figs 1 and 2 respectively. The majority of the respondents were between 26-33 years age bracket and 15.6% of the total sample were post graduate.

The hierarchical linear regression technique has been employed to analyze the data which is obtained through questionnaires by 68 respondents. First individual impacts of the two independent variables i.e. speed and work simplification & accuracy were analysed as presented in Table 1 and 2 respectively followed by the combined effect of both the independent variables which is presented in Table 3.

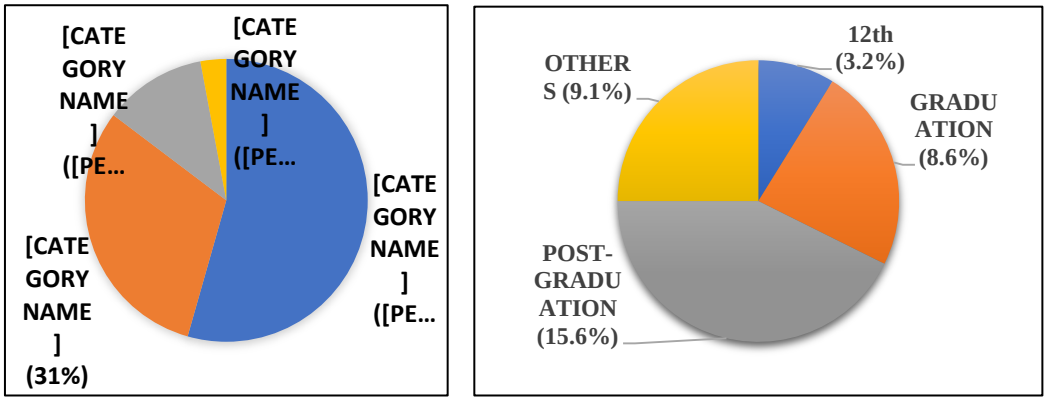

Fig: 1- Age group of respondents; 2- Qualification of respondents

Variable	Regression Coefficient	T value	P value
Speed	0.874	14.632	.000 ***
R Square	.764		
ANOVA	F(1, 66) =214.101 , P < .001		

Table 1: Impact of speed on accounting practices (* sig at 1% level)**

The increased speed with new technology and software resulted in an R square of 0.764 which means 76.4 % of the impact on accounting practices was explained by the speed. Further, the regression coefficient revealed that speed had a significant positive impact on accounting practices and thus 1% increase in speed resulted in a 0.87 % positive change in the accounting practices of firms.

Variable	Regression Coefficient	T value	P value
Work Simplification and Accuracy	.724	6.661	.000 ***
R Square	.096		
ANOVA	F(1,65) = 44.367 , P < .001		

Table 2: Impact of work simplification and accuracy on accounting practices (* sig at 1% level)**

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The increased simplification and accuracy with new technology and software resulted in an R-square of 0.096 which means 9.6 % of the impact on accounting practices was explained by work simplification and accuracy achieved through new technology. Further, the regression coefficient revealed that work simplification and accuracy had a significant positive impact on accounting practices and thus 1% improvement in work simplification and accuracy resulted in a 0.72 % positive change in the accounting practices of firms.

Variable	Regression Coefficient	T value	P value
Speed	0.220	2.022	.047**
Work Simplification and accuracy	0.724	6.661	.000***
R Square	.860		
ANOVA	F (2, 65) =199.574 , P < .005		

Table 3: Impact of speed and work simplification and accuracy on accounting practices (sig at 5% level, *** sig at 1% level)**

The increased speed and simplification with new technology and software resulted in an R-square of 0.86 which means 86 % of the impact on accounting practices was explained by increased speed and work simplification and accuracy achieved through new technology. Further, the regression coefficient revealed that speed and work simplification and accuracy both had a significant positive impact on accounting practices at 5% and 1% significance levels respectively. It was found that a 1% improvement in speed resulted in a 0.22% positive impact on accounting practices and a 1% change in work simplification and accuracy resulted in a 0.72 % positive change in the accounting practices of firms. This resulted in acceptance of the proposed hypothesis that modern technology has a significant influence on the accounting practices.

Further, the respondents were asked about the problems they encounter with the changing technologies and software and it was observed that 42.65 per cent of respondents reported lack of professional training as a major challenge followed by difficulty in coping with new tools as the second major challenge (27.94%). Further, 23.53 per cent viewed the lack of finance to acquire modern technology as a major challenge. These major problems are presented in Table 4 below.

S.No.	Major problems	Percentage (%)
1.	Lack of finance to acquire modern knowledge.	23.53 %
2.	Lack of professional training.	42.65 %
3.	Addition to traditional accounts.	05.88 %
4.	Keeping up with new technologies and tools.	27.94 %

Table 4: Problems/Challenges faced by accountants with new technologies

Finally, table 5 presents the ranking provided by the respondents for the major skills required by accounting professionals to cope with the new technologies and softwares. The respondents state that the most important technical skills required by the accountants with the rapid advancements, in order of relevance are World Wide Web (mean, 4.3088), Technology Management (mean, 4.2941), Presentation Skills (mean, 4.2794), Database packages (mean, 4.2059), Windows (mean, 4.1765), Communication software –Outlook (mean, 4.1618), Electronic Commerce (mean, 4.1324), Spreadsheet Packages (mean, 4.0882), Acc. Packages- pastel, QuickBooks (Mean, 3.9118), Word processing packages (mean, 3.8088).

SKILLS	Mean	Rank	Std. Deviation
Acc. Packages - pastel, QuickBooks	3.9118	9	.87648
Spreadsheet Packages	4.0882	8	.95785
Word processing packages	3.8088	10	.91842
Communication software - Outlook	4.1618	6	.95590
Electronic Commerce	4.1324	7	1.04958
Presentation Skills	4.2794	3	1.03442

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World Wide Web	4.3088	1	.99637
Windows	4.1765	5	1.07816
Technology Management	4.2941	2	.82965
Database packages	4.2059	4	.87347

Table 5: Essential skills required by accountants with introduction of new technologies

Overall the results revealed that both the independent variables are significant predictors of accounting practices which put across that the modern technology ensures timeliness, accuracy, validity and accounting workflow. Positively the advantages gained through modern technology promote process efficiency and greater accuracy in managing accounting information. It further facilitates easy and speedy storage and retrieval of relevant accounting data to enhance effective financial planning and decision-making. Despite the positive effects still, there are issues concerning potential fraud, security of data, technical issues and incorrect information. The constant updation and changes also act as a major challenge for the accountants as they need to constantly upgrade themselves with the frequent changes. To cope with these problems the firms and educational institutes have to give professional training to the accounting students and professionals. This will help accountants to use the technologies at their best as these are directly associated with the country's economic health and financial being. Other than this the major problems highlighted by the respondents were lack of coordination among IT and accounting departments, global competition and security issues.

Among the technical skills that should be possessed by the accountants, the ranking provided by the respondents revealed that the World Wide Web, Technology Management, Presentation Skills, Database packages, and Windows are the five highly rated Information Technology skills. This clearly shows that in the modern era, Accountants need these skills more than others, however there these all are the necessary skills which are needed by accountants to do their work efficiently. The analysis provides inputs to accounting instructors and institutes providing accounting education and training to incorporate the above-identified skills in their course curriculum. They need to delve beyond the advanced computer abilities of Word, Excel, and Access to overcome the IT skills inadequacies. They must provide training on advanced Excel, communications software, web services, and client/server management which will provide accounting trainees and professionals with an opportunity to develop more advanced skills so that they can grow and adapt to the changing technologies and upgradations.

VI. CONCLUSION

Modern technology in the accounting line of work shows a greater impact on the working of accountants. These technologies are designed to record accounting transactions and various business events which can help in making the accounting practices effective. Modern technology and accounting can do wonders if they will work with proper coordination. It improves efficiency and the effectiveness of the work. Accountants need to be disciplined with the changing technologies to use them efficiently, the constant upgrade in their skills, and education is needed. A lack of proper knowledge about modern technologies can make accountants outdated in the global world. The learning should be started from the university level itself and should be introduced in their curriculum to increase the level of understanding of the future accountants. This study also stated the top skills needed by the accountant in this era which will help students to possess the knowledge of same. Innovation in accounting is helpful for accountants in many ways and has impacted the accounting profession a lot. It helps in enhancing the overall performance of accountants in terms of speed, accuracy, work simplification, and transparency. Furthermore, quicker and more effective management decisions are the result of faster accounting calculations. To summarize, using a standard method has numerous advantages, including a simple working space with defined rows and columns for data and calculations performed automatically by the computer; accountants can save operation details, which are easily accessible to anyone at any time; accountants can choose appropriate inputs and receive financial reports using the simple menu of these applications; managers can receive various reports, such as investment situation, satisfactory levy, and so on; accountants can choose appropriate inputs and receive financial reports using the simple menu of these applications; managers can receive various reports. The research has only considered the accountants of various firms whereas various employees associated with the IT sector can further

increase the creditability of the research. Future studies can expand the purview of this research to a broader sample and the new technologies could be taken into consideration in more detail. Further qualitative research could be undertaken discussing in detail the digital upgradation in the accounting sector.

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