

# **IMPACT OF ACCOUNTING AUTOMATION ON WORK EFFICIENCY IN CAPSTONE FINANCIAL**

### **Abstract**

Automated accounting system is beneficial for financial business companies through which business companies can manage their financial aspects in easy way. The study focuses on the impact of accounting automating process on the efficiency of work of Capstone financial organization. The first chapter has stated the objectives and research questions and the problem statements has also been given in relation to subject area.

The second section of the study is related to the review of literature. Several literatures in relation to the variables are reviewed in this chapter for gaining knowledge. Furthermore, the technology acceptance model has been focused in this section. Along with this, the theoretical framework has been given and literature gap has been stated which ensure the significance of the study.

The third section has mentioned all the chosen method. Descriptive method has been chosen in this study and quantitative data analysis process has been applied. This helps to gain numerical outcome and the data was collected from 100 employees of Capstone Company.

Fourth section has done different statistical test to get result of this study with the help of SPSS software. Demographic analysis has done for showing the demographic level of respondents Furthermore, the data screening has done with normality, reliability and validity test. Hypotheses testing has done with the help of the result from Pearson Correlation and multiple regression.

The last section is focused on providing overall conclusion from the key findings of the study. In this context, the alternative hypotheses has been accepted for showing the positive relationship between factors. Further recommendations has been given for financial companies by which they can develop their efficiency of work in reliable way.

### **Acknowledgement**

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## **Chapter 1: Introduction**

The current chapter provides the background of the research along with the research aims and objectives. The research is based on the impact that accounting automation can have on work efficiency. The study seeks to understand whether, and to what extent, adopting accounting automation can increase work efficiency, especially in Capstone Financial and similar types of businesses.

### **1.1 Purpose and background of the study**

The purpose of the study is to explore the extent to which accounting automation increases work efficiency. Today, a growing number of organizations are automating their tasks and operations. Task automation has been made easy by technologies such as computing, AI, cloud storage, data processors and more (Sokolova, Agapitov & Mikhaylovskiy, 2019). As a result, work productivity has increased with little space for human error. In other words, automation has improved or increased data accuracy, data organization, data storage security and more. It has reduced time required for performing tasks, eliminated task redundancy as well as reduced manual work. This increases productivity, efficiency and allows staff the time to focus on critical tasks (Zadorozhnyi *et al.*, 2020).

Accounting software has made performing accounting tasks easier and faster. Real-time integrations have allowed taking accounting data into other spaces. Use of AI in accounting has been helping firms make more accurate forecasts and mimic human decision making to an extent (Muravskiy, 2019). In addition to this, the perceived benefits and perceived ease of use of accounting software means that technology acceptance should not be a significant barrier in its wide adoption. Through accounting automation



## **1.2 Problem statement**

In the blink of increasing customer and market demand, growing internal expectations and rising regulatory complexities, there has been a pressure on finance and accounting towards exploring new strategies. Firms are trying to find new strategies for improving efficiency and reduce costs related to back-office (Törnqvist & Forss, 2018). The volumes of transactions are exponentially increasing. Putting more resources into an issue is no longer a sustainable or effective solution. In addition to this, staff members are often mired in low-value and mundane tasks, leading to declining engagement at this moment when it is important to increase productivity and focus on analysis. Therefore, the study seeks to address this problem by exploring the extent to which accounting automation can work as an effective solution. The study further aims at understanding this from the viewpoint of Technology Acceptance Model, by exploring the perceived usefulness and perceived ease of use of accounting automation solutions. Accounting automation presents numerous opportunities in the finance and accounting space, and it has already established its popularity among the firms in the financial sector (Jedlickova, 2020).

## **1.3 Research objectives and questions**

### **1.3.1 Research objectives**

RO1: To identify the relationship between accounting software and work efficiency

RO2: To identify the relationship between real-time integrations and work efficiency

RO3: To identify the relationship between AI-generated forecasts and work efficiency

RO4: To identify the relationship between technology acceptance and work efficiency

### **1.3.2 Research questions**

RQ1: What is the relationship between accounting software and work efficiency?

RQ2: What is the relationship between real-time integrations and work efficiency?

RQ3: What is the relationship between AI-generated forecasts and work efficiency?

RQ4: What is the relationship between technology acceptance and work efficiency?

## **1.4 Significance of the study**

### **1.4.1 Significance to organizations**

The study will be significant for the businesses in the financial sector. The findings of the study will help them understand the benefits of accounting automation. The findings will allow such firms to determine whether it is a viable and feasible solution for them to adopt accounting automation, in terms of ROI.

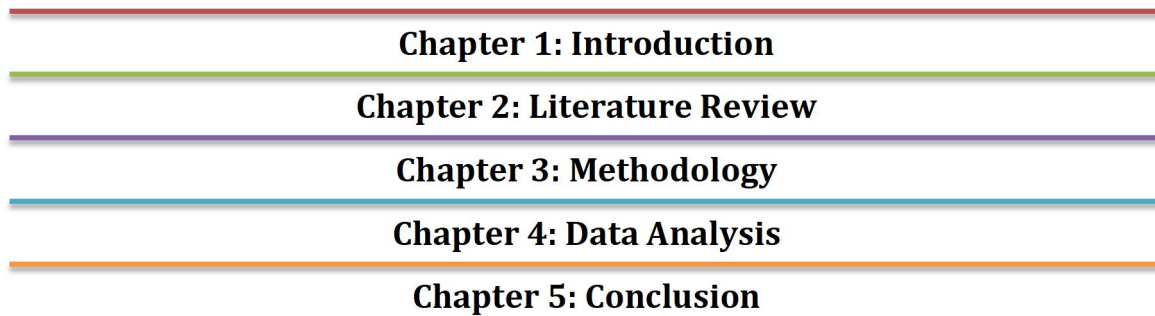
### **1.4.2 Significant to researchers**

The study will be significant for other researchers working in the field. The study has been done using primary data, which can serve as a useful research paper for them. The findings will further help other researchers dig deeper into the subject matter.

### **1.4.3 Significant to employees**

The study will help the accountants and bookkeepers of today understand the potential of accounting automation in improving their productivity and letting them focus on tasks that matter. Moreover, the findings will help the employees understand the barriers and challenges they are likely to face during the early stages of its adoption.

### 1.5 Structure of the dissertation



**Figure 1.5: Structure of the dissertation**

(Source: Created by author)

The first chapter of the dissertation is 'Introduction'. The chapter provides a background to the research, problem statements and research objectives. The second chapter of the dissertation is 'Literature review'. The chapter involves review of literature and secondary sources of information related to the variables of the study. The chapter further presents the theoretical framework of the study. The third chapter of the dissertation is 'Methodology'.

The fourth chapter of the dissertation is 'Data analysis'. The chapter contains results of the analysis of the data, along with its interpretations. The fifth and the final chapter of the dissertation is 'Conclusions'. This chapter discusses the key findings and important highlights.

## **Chapter 2: Literature review**

### **2.0 Introduction**

The study focuses on the accounting automation process and the impact of the automation process for improving work efficiency. This section has reviewed the literature regarding the study of getting knowledge. There are several variables and factors which are related to the automation process of the accounting system and which can have both positive and negative impacts on high productivity and work efficiency. The technology acceptance model has been selected in this context to relate the study with the workplace of the financing companies in a relevant manner. The hypotheses development has been done in this chapter which needs to be accepted or rejected for getting the relationship between the financing process and business performance.

### **2.1 Review of literature for variables**

#### **2.1.1 Accounting Software (IV1)**

Reliable software application for the accounting purpose in financial companies has great benefits for the employees to do the work in a faster way. As stated by Yusup, Padeli & Ilamsyah (2017), previously the accounting department of any business as well as the financial business used the manual process for managing their accounting calculation and financial records. This system involves several disputes and different kinds of mistakes arise which have a negative effect on business. On the contrary, the automated software for accounting helps employees to reduce the errors from accounting adjustments and calculation processes. In this case, there are several benefits along with some disadvantages which the accounting department faces by using

the software. In accordance with Bishop (2018), this provides the simple data entry process to employees, and fast processing is being done by the workers as well. The financial report analysis to gain the profit and loss statement is also done in an easy way by applying an automated system for the accounting process.

On the other hand, the disadvantages are related to the implementation process of the software and the handling of the software. As opined by Wickramasinghe, Cooray & Dissanayake (2017), this is cost-effective for several companies and skilled workers are needed for maintaining the system as well.

### **2.1.2 Real-time integration (IV2)**

Automated accounting software has the ability to integrate with another technological process. Accounting software is easily integrated with the e-filling process and online banking process. Moreover, in accordance with Blount *et al.* (2016), real-time integration means when a system gets connected with another database and changes in one data in one system helps in auto up-gradation of all the databases. This is related to the synchronization process in which data gets automatically updated when any input has been made in any one system. As suggested by Jirava & Toseafa (2017), this facilitates the companies to make their accounting process easy to manage the changes in data of the financial aspects. This reduces the error in data input and data output systems, as well as all the connected systems, are synchronized with one another.

### **2.1.3 AI-generated forecast (IV3)**

Artificial intelligence is one of the most advanced technologies in the market through which business companies can improve their business management process in an error-free way.

Companies need to implement the AI technologies and skilled labours required for managing the

services. As stated by Wang, Sun & Du (2019), the AI-generated forecasting process reduces several work pressures from an accountant as the technology used to do them in a faster way. With the help of AI applications in the accounting process, the analysis of large volume data can be done in an easy way. This helps in the interpretation of deeds and contracts and extracts the terms for solving them to provide better services to the business management process (Mihet & Philippon, 2019).

#### **2.1.4 Technology acceptance (IV4)**

Technology acceptance is required by every company and they need to provide technological training to their employees for developing their IT skills. In accordance with Navimipour & Soltani (2016), the efficiency level of staff and employees of the accounting department and financial companies is dependable on their acceptance of technology as well. Skilled IT workers are able to manage their technological updated and automated accounting processes in the right way. For this, as suggested by Homaïd (2019), financial companies need to increase the acceptance of technological approaches. This has seen that automated accounting software is not used by different companies as they do not have the skilled IT workers who can run the automated system by using all features. In this context, the automated system is not helpful for the organization to develop its efficiency in the work process.

#### **2.1.5 High Productivity (MV)**

The high productivity of employees is depending on the factors of the accounting process. Manual accounting processes are used to slow down the work of employees and there are several chances of making errors. In accordance with Obeng & Boachie (2018), factors like the installation of automated accounting applications, and the high acceptance of technologies in

business increase the work productivity of the finance executive. Moreover, technological applications make the work process faster than manual work processes, for that the productivity of employees is getting high. As opined by Shin & Konrad (2017), the high productivity of employees with a low number of errors helps in increasing the work efficiency of finance companies simultaneously. This has seen that employees are able to do a large amount of work in less time and this increases the time efficiency as well.

### **2.1.6 Work efficiency (DV)**

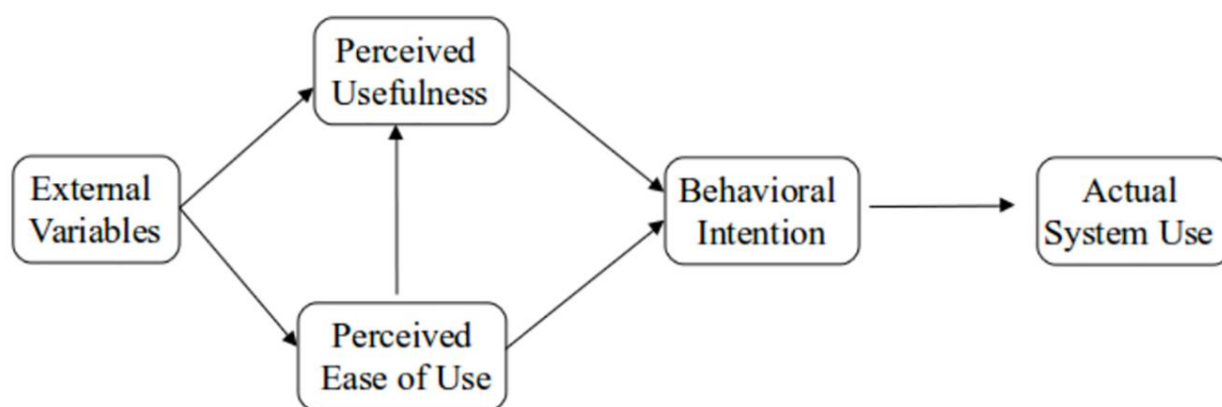
The work efficiency of workers and companies which provide financial services is dependent on several factors. In accordance with Puig-Ribera *et al.* (2017), nowadays most businesses are focusing on the technological applications which are helping them to integrate their work with the systems. This is providing opportunities to the companies by which they are developing their employee's performance. Moreover, the high productivity of finance employees improves the work efficiency of the organizations for their customers. These are related to each other and an automated accounting process can speed up the work process. On the other hand, there are several negative effects that can also be seen. As stated by Storm (2018), a lack of skilled IT employees reduces the efficiency of work if they do not have knowledge of managing the system.

## **2.2 Theory**

### **2.2.1 Technology acceptance model**

The technology Acceptance model is a theory for using information systems and the acceptance of the users for using the technology. As opined by Wu & Chen (2017), in the case of using the technology behaviour of people is a factor which leads them to use different advanced

technology for their betterment. Moreover, they need to acquire different knowledge and practice of using advanced technology to run the system and use the technology for getting maximum benefits. Most of the time this model has been used for scrutinizing people's behaviour in case of using the technologies. This TAM model can be used for financial companies for seeing their adaptability and behaviour for applying technologies in their business. In accordance with Scherer, Siddiq & Tondeur (2019), there are two factors which impact the behavioural intention of users for applying technologies. These factors include the ease of using techniques and perceived usefulness. These two factors impact the behaviour of customers which helps them to use the actual system for their development.



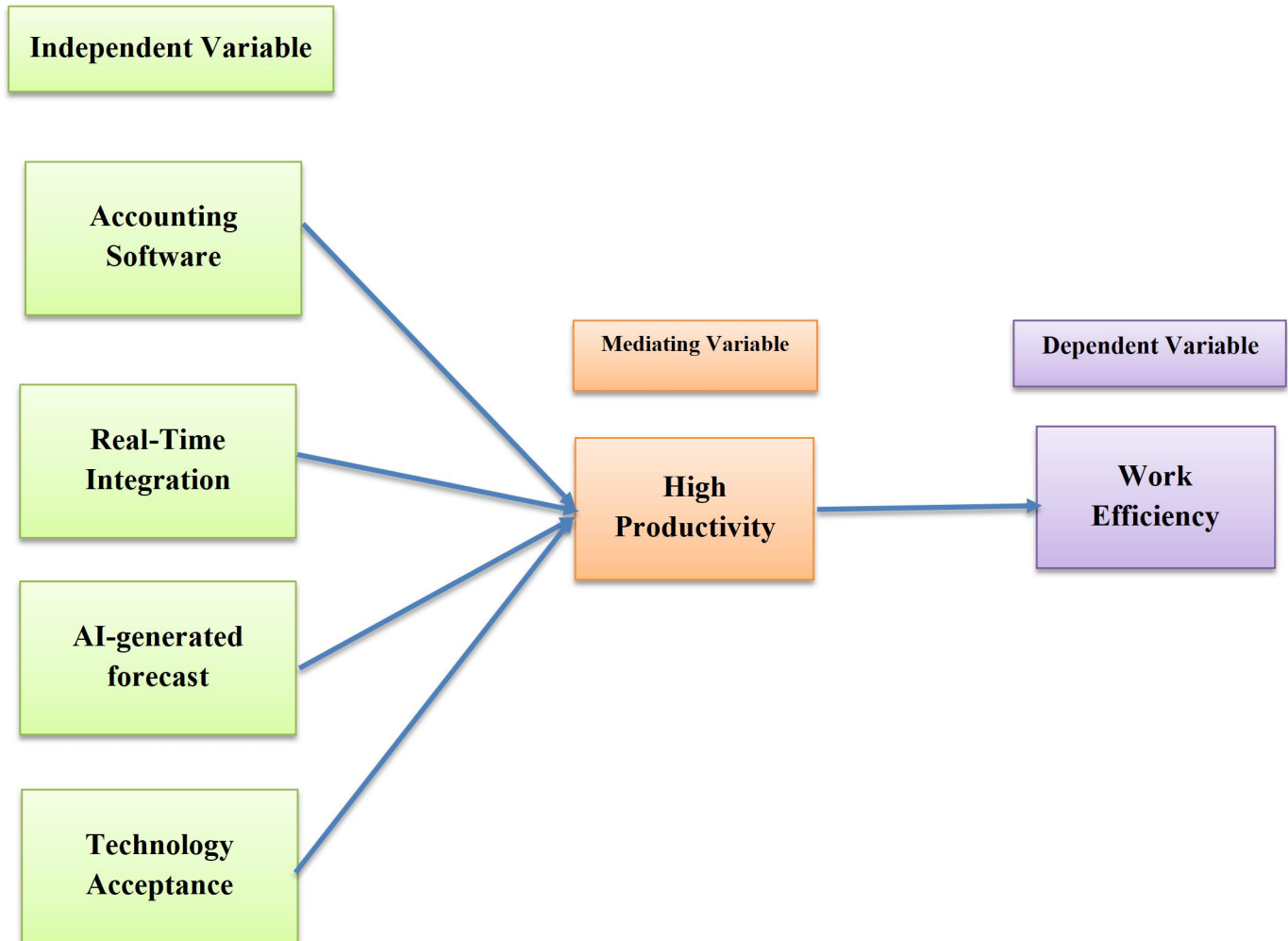
**Figure 2.1 TAM**

(Source:

<https://journals.plos.org/plosone/article/figure/image?download&size=large&id=info:doi/10.1371/journal.pone.0216007.g001>)



### 2.3 Theoretical framework



**Figure 2.2: Theoretical Framework**

(Source: Created by author)

## 2.4 Hypotheses development

H1: There is a positive relationship between accounting software and working efficiency with the impact of higher productivity.

H01: There is no positive relationship between accounting software and working efficiency with the impact of higher productivity.

H2: There is a presence of positive relationships among real-time integration and work efficiency which can be mediated by the productivity of employees.

H02: There is no presence of positive relationships among real-time integration and work efficiency which can be mediated by the productivity of employees.

H3: There is a strong relationship between AI-generated forecast and work efficiency along with higher productivity.

H03: There is no strong relationship between AI-generated forecast and work efficiency along with higher productivity.

H4: Technology acceptance and working efficiency have a relationship between them and this can be affected by the level of productivity.

H04: Technology acceptance and working efficiency have no relationship between them and this can be affected by the level of productivity.

The hypotheses are developed for getting the relationship between the variables for getting the outcome of this research study. The null hypothesis and alternative hypotheses have been created for showing the presence of a relationship between them.

## **2.5 Literature Gap**

There are several pieces of literature which have mostly focused on the accounting software and the advantages of the software on the financial management process of business. In this context, the gap is still there in identifying if the work efficiency gets improved with the automated accounting software or not. This study has researched different factors which are related to accounting software. Moreover, the impact on work productivity has been focused on this research to get the ultimate positive as well as the negative effect on the work efficiency of financial companies.

## **2.6 Summary**

The above section of this study has reviewed several past pieces of research for collecting knowledge on the financial management and accounting process for the financial business company. The technology acceptance model has been stated in the case of study the behaviour of people for using technological applications in their work process. Furthermore, the hypotheses have been developed for clarifying the relation between the variables of this research.

## **Chapter 3: Methodology**

### **3.1 Introduction**

In the current chapter, the different methods and techniques used by the research for conducting the study has been discussed. This includes the overall approach of the research and collection of data. Moreover, selection of samples and data collection instruments has been discussed as well. In addition to this, the chapter highlights the ethical considerations related to the study.

### **3.2 Response rate**

Response rate can be referred to the actual number of individuals who have participated in the study as samples. For the current study, the response rate is 100%. Each and every individual invited as sample members have participated in the study during the process of data collection. This indicates that the participants were highly motivated towards participating in the study. In addition to this, in order to ensure a response rate of over 80%, the researcher took informal assurance from the participants after they were selected as samples.

### **3.3 Research philosophy**

Research philosophy can be referred to as the belief surrounding the proper means of collecting and analyzing data about a phenomenon. The current study follows a pragmatist philosophy. Here, the researcher's choice regarding the philosophy of the research has been based on the nature of the research problem (Park & Park, 2016). The most important aspect of the philosophy in current study has been the practical outcomes. The research has freely selected the procedures, methods and techniques for meeting the scientific needs and objective of the study.

### **3.4 Research approach**

The current study is a primary quantitative research. This means that the researcher involved collection of primary numeric data for the purpose of statistical analysis using a suitable tool. The data collected by the research is first hand, collected from the original source. The research followed a deductive reasoning or approach. Hence, the researcher formulated hypotheses concerning the relationship between the dependent and the independent quantitative factors of the study (Goertzen, 2017). In order to conclude the findings of the study, the hypotheses were either rejected or accepted, based on statistical values derived from data analysis.

### **3.5 Research design**

A descriptive design was used for conducting the study. The purpose of this design was to describe the situation or phenomenon to be studied as accurately and systematically as possible (Zyphur & Pierides, 2017). Hence, more than one method of research has been applied for the investigation of multiple quantitative factors. In addition to this, not a single variable has been controlled or manipulated by the researcher, instead, the researcher only observed and measured them.

### **3.6 Population and sample size**

Sample size refers to the number of individuals forming the sample population. The current study involves a sample size of 100. These are the Capstone Financial employees involved in tasks related to accounting and financial. This involves employees from the finance, accounting, operations and IT department of the firm. Therefore, the unit of analysis is a group of employees.

### **3.7 Sampling technique**

Sampling method refers to the technique used by the researcher for selection of sample members from the general population. In the current study, simple random sampling has been applied by the researcher for selection of Capstone Financial employees as samples. This is a probability sampling method, which means that all the eligible employees had an equal chance of being included in the sample population (Alvi, 2016). This ensured that the group of individuals are represented in a manner that is unbiased. The process of sorting samples involved assigning numbers to the eligible employees, and selecting them as samples based on a random number generator table.

### **3.8 Data collection and instrument**

The current study has been done on the basis of primary or first-hand data. The data has been collected through a survey process. A survey questionnaire has been used. The questionnaire has been distributed online to the participants, which contains close-ended questions and statements. In terms of instrument, responses to the questionnaire have been marked in a 5-point Likert scale format, which has captured the level of agreement or disagreement of the participants against each question. The questionnaire includes 3 questions related to the demographics of the participants, followed by 20 questions related to the research variables.

### **3.9 Data analysis**

The quantitative data has been subjected to statistical analysis using SPSS software. The researcher conducted data screening that involves validity, reliability and normality analysis. Values of KMO, Cronbach's  $\alpha$  and K-S respectively have been considered for the analyses (Queirós, Faria & Almeida, 2017). The researcher performed an analysis of the demographic

data of the respondents as well. On the other hand, exploratory analysis of data has been done by the researcher. Correlation analysis was done in relation to Pearson correlation coefficient. Similarly, analysis of multiple regressions has been performed as well. The researcher has formulated 4 alternative hypotheses. The alternative hypotheses have been rejected or accepted on the basis of value obtained for  $p$ .

### 3.10 Ethical considerations

The researcher has ensured that the survey respondents have full knowledge and awareness of the type of data they are providing. The use of their data has been clearly explained to them prior to the data collection process. The data obtained from the respondents has only been used for the purpose of this research, and has been deleted after the completion of the study. The confidentiality of the information and anonymity of the respondents have been maintained by the researcher. Furthermore, the researcher obtained written consent form the respondents signed electronically.

### 3.11 Timeline

	W1	W2	W3	W4	W5	W6	W7
Planning research topic							
Exploring problem statement							
Research design							
Selection of methodology							

Questionnaire design							
Sample selection							
Data collection							
Data analysis							
Interpreting findings							

**Table 1.5: Research timeline**

(Source: Created by author)

**3.10 Chapter summary**

The current chapter has described the methodology applied for the research. This has been a primary quantitative study based on 4 independent factors and a dependent factor. The collection of primary data has been done through an online survey process involving a total of 100 participants, who are employees of Capstone Financial. Simple random sampling has been applied for the recruitment of the sample members. Furthermore, the researcher has used the SPSS software to analyze the data.



## **Chapter 4: Data analysis**

### **4.0 Introduction**

The data analysis part has significance to provide outcomes from overall research to have proper conclusions regarding the research area. The section has calculated the response rate for validating the collected data from respondents. SPSS data analysis tool has been used in this context to get statistical output from the research. Moreover, demographic analysis has been done with a descriptive statistical analysis process. The correlation and regression tests are done for testing the hypotheses of the study.

### **4.1 Response rate**

There is a total of 100 respondents in this study who have provided their opinion in the survey session. In this context, the researcher has approached 200 people for a survey in which 100 people have participated in a survey session. As opined by Guo *et al.* (2016), an average response rate for any research is 30% which is acceptable for any study to get valuable results. The response rate of this study is  $100/200 \times 100 = 50\%$ . This rate is more than the average rate and this is acceptable for the study as well.

## 4.2 Demographic data analysis

### 4.2.1 Gender

Statistics		
Gender		
N	Valid	100
	Missing	0
Mean		1.34
Median		1.00
Mode		1
Std. Deviation		.476
Variance		.227
Skewness		.686
Std. Error of Skewness		.241
Kurtosis		-1.561
Std. Error of Kurtosis		.478
Minimum		1
Maximum		2

**Table 4.1: Gender statistics**

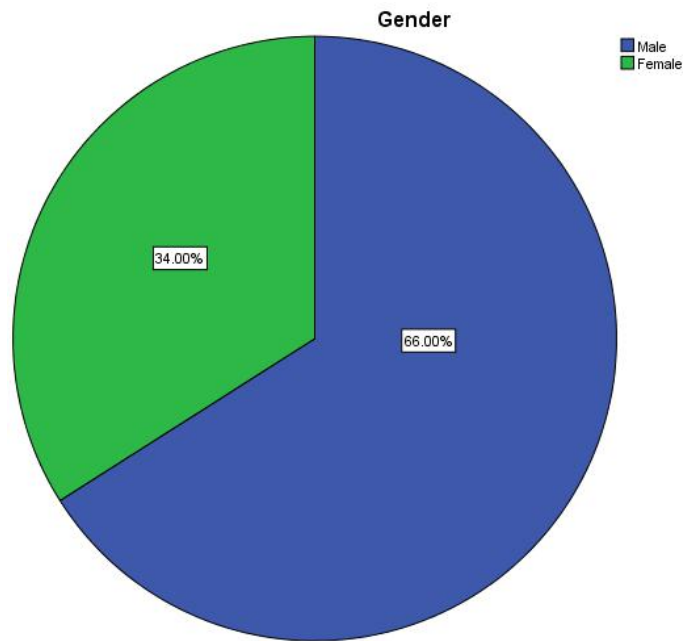
(Source: Created by author)

The statistical output is showing the descriptive value for the gender of participants. The value of the mean is 1.34 and the mode is 1. For this, the value of skewness is in the positive form with 0.686. This is indicating that the demographic curve is stretched in the right direction. As stated by Luo *et al.* (2018), the median value is considered as the central tendency for any data. The central tendency in this context is 1.

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	66	66.0	66.0	66.0
	Female	34	34.0	34.0	100.0
	Total	100	100.0	100.0	

**Table 4.2: Gender Frequency**

(Source: Created by author)

**Figure 4.1: Gender**

(Source: Created by author)

Most of the participants are male among 100 respondents. There are 66% male participants and the rest are female. The dominance of male finance workers is showing in this aspect for the Capstone financial company.

### 4.2.2 Age group

Statistics		
Age		
N	Valid	100
	Missing	0
Mean		2.05
Median		2.00
Mode		2
Std. Deviation		.869
Variance		.755
Skewness		.845
Std. Error of Skewness		.241
Kurtosis		.354
Std. Error of Kurtosis		.478
Minimum		1
Maximum		4

**Table 4.3: Age group statistics**

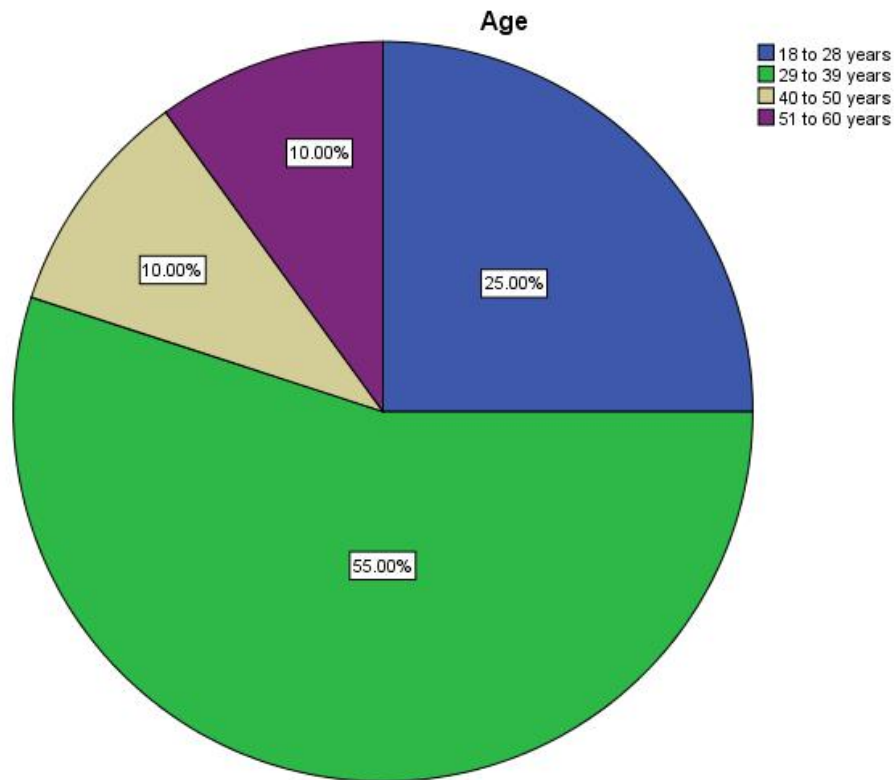
(Source: Created by author)

The kurtosis and skewness values help in defining the curve position for demographic factors (Bazavov *et al.* 2017). The positive skewness value which is 0.845 and the positive kurtosis value which is .354 is indicating that the demographic curve of the age group is stronger in the right direction and has high peak than the normal one.

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 to 28 years	25	25.0	25.0	25.0
	29 to 39 years	55	55.0	55.0	80.0
	40 to 50 years	10	10.0	10.0	90.0
	51 to 60 years	10	10.0	10.0	100.0
Total		100	100.0	100.0	

**Table 4.4: Age group frequency**

(Source: Created by author)



**Figure 4.2: Age group**

(Source: Created by author)

Most of the participants belonged to the age group 29 to 39 years. This means the Capstone financial company has more employees from this age group than others. The new employees and employees who used to join the company with lower age have more technical acceptance ability.

### 4.2.3 Department

Statistics		
Department		
N	Valid	100
	Missing	0
Mean		1.62
Median		1.00
Mode		1
Std. Deviation		.874
Variance		.763
Skewness		1.293
Std. Error of Skewness		.241
Kurtosis		.768
Std. Error of Kurtosis		.478
Minimum		1
Maximum		4

**Table 4.5: Department statistics**

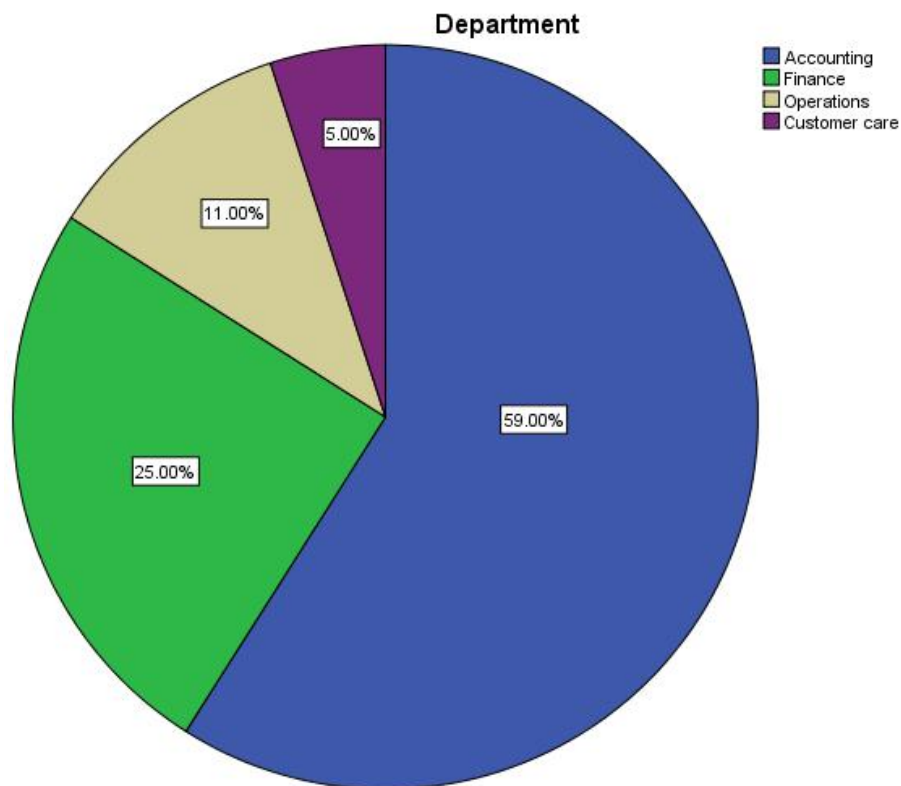
(Source: Created by author)

The statistical output for the department of working of participants is showing a 1.293 skewness value. Along with this, the value of kurtosis is 0.768 in which the curve has a higher peak than usual. The standard deviation of mean and average value is 0.874.

Department					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Accounting	59	59.0	59.0	59.0
	Finance	25	25.0	25.0	84.0
	Operations	11	11.0	11.0	95.0
	Customer care	5	5.0	5.0	100.0
	Total	100	100.0	100.0	

**Table 4.6: Department frequency**

(Source: Created by author)



**Figure 4.3: Department**

(Source: Created by author)

59% of participants of this research and survey session were from the accounting department. On the other hand, there are 25% of participants were from the other financial categories. As the research paper is focusing on the automated accounting process for that the number of participants from the accounting department is more than others.

### 4.3 Data screening

#### 4.3.1 Normality test

Tests of Normality						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Accounting_Software	.258	100	.000	.885	100	.000
Realtime_integration	.297	100	.000	.839	100	.000
Algenerated_forecast	.259	100	.000	.857	100	.000
Technology_Acceptance	.275	100	.000	.845	100	.000
Work_Efficiency	.286	100	.000	.861	100	.000

a. Lilliefors Significance Correction

**Table 4.7: Test of normality**

(Source: Created by author)

The test of normality helps to get the distribution of collected data for a project. There are two different tests through which data normality can be analysed. These tests include the Shapiro Wilk test and the other one is the Kolmogorov Smirnov test. In accordance with Abachi *et al.* (2018), the Kolmogorov Smirnov test is helpful for testing the normality of data with larger participants' number. On the contrary, the Shapiro Wilk test facilitates the researcher to get data distribution for a small sample size. The current project has used 100 samples in the survey process for which the result from the Shapiro Wilk test has been analysed here for measuring the normality of collected data regarding the accounting process and work efficiency. The df value indicates the sample size which is 100 for this research. The statistical output for the factors are 0.885, 0.839, 0.857, 0.845 and 0.861. Along with this, the value of P is 0.000 for all factors. As stated by Szucs & Ioannidis (2017), null hypotheses can be accepted when the p-value is crossed the 5% significance level. However, in this study, the values are lower than the 5% level which helps to get that all the collected data were distributed in non-normalized distribution.



### 4.3.2 Validity test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.872
Bartlett's Test of Sphericity	Approx. Chi-Square	1653.751
	df	10
	Sig.	.000

**Table 4.8: Test of validity**

(Source: Created by author)

Validity test with the help of KMO Bartlett's test is known as another method of data screening process which helps to know about data adequacy of the collected data from the survey session. As opined by Rahim, Rashid & Hamed (2016), the data can be accepted when the value of KMO Bartlett's test is more than 0.6. The value in this study for five factors is 0.872 and this lies between 0.8 and 0.9. For this, this can be stated that collected data were highly adequate for the data analysis process and these have great validity for completing the total study with other statistical tests.

### 4.3.3 Reliability test

Variables	Item numbers	Value
Accounting software	4	.964
Real-time integration	4	.990
AI-generated forecast	4	.985
Technology acceptance	4	.979

Work Efficiency	4	.981
Total	5	.997

**Table 4.9: Test of reliability**

(Source: Created by author)

The table is showing the reliability value for independent and dependent variables to measure the reliability of data which has been collected from 100 respondents of Capstone Financial Company. As each of the factors has four different statements in the questionnaire, for that the item number for the factors are 4. In accordance with Diedenhofen & Musch (2016), the value of Cronbach's Alpha is needed to be greater than 0.6. The value lies between ranges 0.6 to 0.7 can be stated to average reliability. Value in between 0.7 to 0.8 and value between 08 and 0.9 has good reliability. Cronbach's values which are more than 0.9 can be stated to have excellent reliability which will be helpful for the researcher to get accurate outcomes from the study. The Cronbach's alpha values in this study are 0.964, 0.990, 0.985, 0.979 and 0.981. Moreover, the overall value of Cronbach's alpha for all the factors is 0.997. All the values are more than 0.9 which indicates that the collected data has excellent reliability for further research.

## 4.4 Exploratory data

### 4.4.1 Correlation analysis

		Correlations				
		Accounting_S oftware	Realtime_inte gration	Algenerated_f orecast	Technology_A cceptance	Work_Efficien cy
Accounting_Software	Pearson Correlation	1	.979**	.988**	.987**	.991**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	100	100	100	100	100
Realtime_integration	Pearson Correlation	.979**	1	.991**	.986**	.989**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	100	100	100	100	100
Algenerated_forecast	Pearson Correlation	.988**	.991**	1	.989**	.991**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	100	100	100	100	100
Technology_Acceptance	Pearson Correlation	.987**	.986**	.989**	1	.996**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	100	100	100	100	100
Work_Efficiency	Pearson Correlation	.991**	.989**	.991**	.996**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	100	100	100	100	100

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 4.10: Test of Pearson correlation**

(Source: Created by author)

Pearson Correlation test is a way of gaining information about the relationship between the factors of study to know about the positive and negative impact. Here, the study is focused to know the impact of automated accounting systems for the improvement of work efficiency in Capstone financial companies. Work efficiency can get mediated with the work productivity of workers as well. For this, the correlation analysis has been done to get the strength of the relationship between the factors. The value of correlation ranges between -1 to +1. According to Schober, Boer & Schwarte (2018), the value which is in positive form shows a positive relation among factors. On the other hand, values are in the negative form indicating negative relationships. Along with this, the measurement is done with the help of p or sigma value also.

The sigma value which is more than 0.05 indicates that there is no relationship and less than 0.05 shows the positive relation.

From the correlation table, this has seen that the p values are less than 0.05 and all the p values for the factors are 0.000. This helps in rejecting the null hypothesis to show the relationship between factors. In the case of correlation data, all the outputs are in positive form and providing knowledge of positive correlation. The values of correlation of work efficiency and the independent factors are 0.991, 0.989, 0.991, and 0.996. All the values are close to +1 and lie between 0.9 to +1. For this, the researcher can say that all the variables have a strong correlation with dependent factors.

#### 4.4.2 Regression analysis

Model Summary <sup>b</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.997 <sup>a</sup>	.995	.995	.33784	.995	4545.426	4	95	.000	.790

a. Predictors: (Constant), Technology\_Acceptance, Realtime\_integration, Accounting\_Software, Algenerated\_forecast

b. Dependent Variable: Work\_Efficiency

**Table 4.11: Model summary**

(Source: Created by author)

Multiple regression tests are used to test the hypotheses with their coefficient value. This table is showing the model summary of a regression test. The R square is 0.995 and this is the changing unit of dependent actors when any independent factors changed 1 unit. Furthermore, the Durbin Watson value is 0.790. According to Chen (2016), the value of Durbin Watson facilitates researchers to measure the autocorrelation among factors. The value is required to belong among -2 minimal range and +2 maximum range. When the value is 0, which means there is no

autocorrelation between the factors. In this context, the data is 0.790 and this is in between 0 and +2. In that case, the variables share positive autocorrelation among them.

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2075.157	4	518.789	4545.426	.000 <sup>b</sup>
	Residual	10.843	95	.114		
	Total	2086.000	99			

a. Dependent Variable: Work\_Efficiency

b. Predictors: (Constant), Technology\_Acceptance, Realtime\_integration, Accounting\_Software, Algenerated\_forecast

**Table 4.12: ANOVA test**

(Source: Created by author)

The table is related to the output of the ANOVA test and the value of regression is 2075.157. The DF is four which means there are four factors which can affect the work efficiency of financial companies for their financial management process. The value of sigma is 0.000. This has not crossed the 5% level of significance and helps to accept the alternative hypotheses of this research. This provides information about the positive relationship between the study factors.

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.262	.134		1.948	.054
	Accounting_Software	.288	.056	.280	5.171	.000
	Realtime_integration	.167	.054	.183	3.119	.002
	Algenerated_forecast	.007	.070	.007	.099	.922
	Technology_Acceptance	.522	.057	.531	9.212	.000

a. Dependent Variable: Work\_Efficiency

**Table 4.13: Regression coefficient**

(Source: Created by author)

The regression coefficient test is helpful for testing all hypotheses of study for accepting or rejecting them to gain the result of the study (Lan *et al.* 2016). The Coefficient value for this study is

$$\text{Dependent variable} = .262 + .288 + .167 + .007 + .522 \\ = 1.246.$$

This means that the independent factor has a strong bond with the dependent one. On the other hand, the value of sigma for accounting software is 0.000, for real-time integration is 0.002 and for technology, acceptance is 0.000. All these data are not crossed the 0.05 and for that, the researcher has accepted the alternative hypotheses for these factors. Alternative hypotheses of the study indicate the presence of relation among dependent as well as independent factors. On contrary, the sigma value of AI-generated forecasts is 0.922 and this has crossed the 5% significance level. In this case, research needs to accept the null hypothesis over the alternative one. The AI-generated forecast can facilitate the financial departments of business in a positive way (Dunis *et al.* 2016). However, the forecast means the probability which can get changed at any time.

#### 4.5 Hypotheses testing

Hypotheses	Value	Result
H1: There is a positive relationship between accounting software and working efficiency with the impact of higher productivity.	.000	The sigma value is considered here for testing the hypotheses between the work efficiency of Capstone financial company with the help of

H01: There is no positive relationship between accounting software and working efficiency with the impact of higher productivity.		accounting software. The value is 0.000 and lower than 0.05. For this, the alternative hypothesis has been accepted for this matter.
<p>H2: There is a presence of positive relationships among real-time integration and work efficiency which can be mediated by the productivity of employees.</p> <p>H02: There is no presence of positive relationships among real-time integration and work efficiency which can be mediated by the productivity of employees.</p>	.002	The data of coefficient analysis is 0.002 and this has not crossed the level of 0.05. This helps the researcher to accept the alternative hypothesis which has said that there is a relationship between real-time integration of the automated system with others and in case of improvement of work efficiency of the business.
<p>H3: There is a strong relationship between AI-generated forecast and work efficiency along with higher productivity.</p> <p>H03: There is no strong relationship between AI-generated forecast and work efficiency along with higher productivity.</p>	.922	In this scenario, the P data is more than 0.05, and the 5% level of significance. For this, the researcher needs to reject the alternative hypothesis over the null hypothesis.

H4: Technology acceptance and working efficiency have a relationship between them and this can be affected by the level of productivity.	.000	As the value is 0.000, this is too less than 0.05. For this, the researcher has accepted the alternative one in this context to state the positive impact of technological acceptance of employees and companies for developing work efficiency and employee productivity as well.
H04: Technology acceptance and working efficiency have no relationship between them and this can be affected by the level of productivity.		

**Table 4.14: Hypotheses Test**

(Source: Created by author)

## 4.6 Summary

This can be summarized from this chapter that all the factors except the Ai generated forecast have a positive impact and strong relationship with the workplace efficiency of Capstone Company. The section has provided several statistical results from the collected data in the survey. This has been done with the help of SPSS software which has provided accurate numeric outcomes for the study.



## **Chapter 5: Conclusion**

### **5.0 Key findings**

The above study has been done about automated accounting software and the usefulness of its application to increase the productivity and work efficiency of Capstone Company. In order to gain an opinion regarding this matter, the researcher has done a survey session with 100 employees of Capstone Company. Furthermore, SPSS software has been used by the researcher to get numerical results. The study shows that using accounting software is beneficial for financial aspects as well as for the development of efficiency in the work process with the help of improving productivity. Furthermore, the real-time integration of these applications with other systems of the accounting and financial process has also a positive impact on the improvement of the financial management process. As stated by Maurer (2016), this helps in connecting several systems with one another for managing a bulk amount of data.

TAM has stated that people need to have the mentality for using technological applications in their working process. In this context, technological acceptance is considered as another factor in which the productivity of employees is also dependent. This has been seen for this factor that the sigma value 0.000 and this provides the solution that technological acceptance has a positive impact on the work efficiency of the finance employees. However, the researcher needs to accept the null hypothesis for the AI-generated forecasting process as situations can be changed at any time in business and the forecasting can be wrong for some aspects (Brammertz & Mendelowitz, 2018). For that, not all the time the AI-generated forecasting facilitates the companies.

## **5.1 Limitations**

The researcher has faced several limitations at the time of conducting the study. The first limitation is the unavailability of most of the literature and many of them required paid access. This limits the review of literature for gaining information about the area of study. Another limitation is related to the survey process. The researcher has approached 200 employees for the survey session among which only 50% have responded. In addition to this, the loyalty of answering the survey questionnaire is not also measurable. This can impact on the result of the study.

## **5.2 Recommendations**

Further recommendations can be provided to Capstone Financial organization for the improvement in their accounting process.

- The companies need to recruit skilled employees who can help others to get the best from using automated financial software.

Employees need to know about the process of use of the software for financial aspects. In this context, some relevant employees with the skill of using financial software can be recruited by the business. This will help them to develop confidence in other employees using the new system.

- Training and short term courses can be arranged for employees who do not have proper knowledge regarding automated software.

The short term courses for providing the training to the employees for improving their skills in using the automated accounting software will be beneficial for Capstone Company and for other financial businesses. This develops their skilled work process and employees can develop their productivity as well.

### **5.3 Conclusion**

This can be concluded from this study that people need to acquire a proper mindset for applying advanced technologies in their business. This facilitates the organization and their own skills which can get developed with the use of new techniques. This has seen that the study has focused on four different factors which have an impact on the high work productivity of workers in Capstone organization. Along with this, the high productivity of employees ensures an efficient work process as well. For getting the result and view on the positive as well as the negative impact a survey has been done by the researcher. 100 employees have been selected randomly from the Capstone financial business to collect their opinion about the automated accounting system and other related matters. The SPSS has been used to get a result in which three alternative hypotheses have been accepted and one is rejected.

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## Appendices

### Appendix 1: Questionnaire

#### Section I: Demographic section

##### (i) What is your gender?

1. Male 66
2. Female 44

##### (ii) What is your age group?

1. 18 to 28 years 25
2. 29 to 39 years 55
3. 40 to 50 years 10
4. 51 to 60 years 10

##### (iii) In which department of capstone Financial are you employed?

1. Accounting 59
2. Finance 25
3. Operations 11
4. Customer care 5

#### Section II: Questions related to the research topic

Questions/ Statements		Strongly disagree [1]	Disagree [2]	Neutral [3]	Agree [4]	Strongly agree [5]
<b>1. IV1: Accounting software</b>						
1.1	Use of accounting software can	10	25	5	45	15

	save time by reducing manual work.					
1.2	Accounting software allow staff the time to focus on more critical tasks.	11	20	4	55	10
1.3	Using accounting software can lead to reduced human error.	5	10	5	59	21
1.4	Do you think adapting accounting software benefit with fast retrieval of data?	5	15	5	50	25
<b>2. IV2: Real-time integrations</b>						
2.1	Integration of automated accounting with other business areas increases work efficiency.	5	25	4	44	22
2.2	Integrations supported by accounting automation eliminates the need of copying information between different spaces.	10	15	5	50	20
2.3	Accounting automation allows having accurate and updated data across different platforms.	14	10	6	45	25
2.4	Do you think integrating payroll with accounting will increase	10	15	5	46	24

	work efficiency?					
<b>3. IV3: AI-generated forecasts</b>						
3.1	AI in accounting automation allows more lucrative analysis.	10	14	6	51	19
3.2	Do you think AI in accounting automation allows addressing misinterpretations?	10	25	5	45	15
3.3	To what extent does AI make automated accounting tasks easier?	10	15	5	51	19
3.4	Accounting systems powered by AI can take over the tedious bookkeeping tasks that employees manually perform.	11	10	9	47	23
<b>4. IV4: Technology acceptance</b>						
4.1	The level of increase in work efficiency depends on the degree acceptance of accounting automation by employees.	10	10	5	50	25
4.2	Accounting automation leads to productivity increase in firms that widely adopt it.	10	19	6	45	20
4.3	Do you think accounting	10	15	5	50	20

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	automation has perceived usefulness?					
4.4	Do you think accounting automation has perceived ease of usefulness?	5	10	5	60	20
<b>5. DV: Work efficiency</b>						
5.1	Accounting automation brings cloud storage in play for increased collaboration.	5	15	6	49	25
5.2	Automated accounting combined with smart spending solutions increase work efficiency.	9	20	5	46	20
5.3	Accounting automation improves accuracy of accounting data.	10	15	10	45	15
5.4	AI in accounting automation can help mimic decision making by humans.	7	8	10	55	20