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DEPARTMENT OF COMMERCE

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Preface

The National Conference on Recent Trends in commerce was held in Mysuru, Karnataka on 13^{th} September 2019 at Christ College, Srirampura Mysuru.

Over 60 distinguished researchers professors and policy makers gathered for this conference and 23 selected papers were presented. The conference focused on 3 tracks: E-Commerce, Accounting and Taxation. The event was enthralled with two-guest of honor and 2 panelists for the track for the conference, parallel sessions were held where it was allow to interchange of ideas among the specialists and deepen the knowledge of ongoing research it was the panelist's suggestion to the authors that they need to carry out an accurate analysis for their research papers.

The success of the conference was due to collective efforts of a large number of individuals grateful acknowledgements are extended to staffs, students and non-teaching staffs of Christ College Mysuru for their devoted assistance. Special thanks to the management for their invaluable and continuous support.

BRIEF CONTENTS

IMPACT OF DEMONETIZATION ON E-PAYMENTS IN INDIA

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Abstract:

The new capabilities in information and communication technology have changed the outlook of all sectors. Electronic payments are dominating the global commerce with rapid change in economic policies. In India, formerly due to the existence of unique business models and varying literacy levels, payments towards the purchase of goods and services were mainly settled through cash. The recent act of demonetization in India relentlessly affected almost all sectors either directly or indirectly posing hindrance to business that involved cash transactions. This condition encouraged financial transactions using electronic means thus intensifying the e-payment business. Accordingly, E-wallet firms anticipated to realize huge growth opportunity by attracting massive investments. The paper is an attempt to analyze e-payment trends of various institutions under the following four categories; Public sector, Private, Multinational, co-operative and payment banks. The study also compares the e-payment trends before and after demonetization in India. Secondary data is collected from the RBI bulletin for a period of four years for the financial year 2015-16 to 2018-19. The paper finds that during the study period, transactions using RTGS and payment cards have increased by two-fold, NEFT transactions has increased by four-fold. The colossal increase in mobile transactions to the extent of 29 times attributed penetration of smartphones coupled with digital India initiatives. With this flashing augmentation, policies to adopt technologies such as Artificial Intelligence, Machine learning and pattern matching for real-time fraud prevention should be framed and implemented as early as possible.

Keywords: *Demonetization, E-payments, Economic policies*

INTRODUCTION

Post liberalization, significant economic reforms in India assisted the growth in banking service. The automation of banking services by migrating to core banking paved the way for fast and low-cost transactions for customers. This technology-based solution for enhancing the payment and settlement system infrastructure, coupled with the introduction of new payment systems bestowed platform for new avenues. India, which was predominantly a cash economy slowly adapted to digital banking. In the recent years, the introduction of mobile payments has further enhanced the digital payments in India. According to Euro monitor report, the number of vendors accepting card payments has more than doubled in the last two years to cross 3 million. Overall, the proportion of cash transactions in the total consumer spending in the country has decreased to 68% when compared to 78% in 2015.

The announcement of demonetization of high-value notes on November 8, 2016, caught attention from all over the world. Attributed to demonetization, economists, business leaders, professionals, bankers, and common man expected considerable digital reforms in the economy. The Government of India reported the key achievement of demonetization as moving towards digital payments leading to lower cash-to-GDP ratio. The cash to GDP ratio is the ratio between the public debts incurred by the government to its gross domestic product. The ratio reduced from 12% to 8% during that financial year due to the reduction of currency circulation to the extent of Rs 3.89 lakh crore as claimed by the Government of India.

Table 1: Top ten countries based on percentage of Smartphone users making mobile payment

Rank	Country	Percentage
1	China	81
2	Denmark	41
3	South Korea	37
4	Sweden	36
5	India	33
6	United States	27
7	Canada	26
8	Norway	26
9	Japan	25
10	Switzerland	22

Source: www.emarketer.com

India has seen exponential rise in smartphone user base changing the e-payment scenario. From table 1 above, China tops the list with the highest number of Smartphone users making payment through mobile phones. India has seized fifth position by overtaking the United States in mobile payments. This reaffirms that the smartphone users in India are choosing e-payments, especially mobile payments. By 2023, it is expected that non-cash transactions will exceed cash transactions. In this transition stage, the threat of raise in fraudulent activities is very high. According to the report of Experian India, India stands at the first position in the Asia-Pacific region based on the number of e-frauds in 2019.

The aim of the research is to appraise the market share of institutions in terms of transaction value of digital payments. The paper is organized as follows: Section II presents a literature review, research objectives, methodology, and data collection. Section III explains the classification of e-payments, Section IV analyses the e-Payment in India, followed by Summary and conclusion presented in Section V.

LITERATURE REVIEW

Previous studies have been conducted on various aspects of digital payments at different periods and different countries. Many studies have focused on forecasting the effects of demonetization in India.

Salunkhe et. al. (2019) supervised a survey to analyze people's opinion regarding e-payment. Out of the many e-payment options available, respondents preferred debit/credit card followed by e-wallet. It is also found that people are extremely satisfied using mobile banking and the prime factor influencing e-payments is online shopping followed by money transfer.

Yulandari and Wibowo (2018) conduct a review of e-payment system in e-commerce. They argue that the e-payment system was not introduced to replace cash but as a better alternative to cash.

Sharma and Chopra (2018) adopt a conceptual framework to determine factors influencing the affinity towards e-payment in India. The findings of the research indicate that perceived security, convenience followed by social influences are the strong reasons for selecting e-payments over cash payments.

Yusuf and Agbi (2018) compared the economic activities in Nigeria before and after the introduction of cash-less policies by the government. The study concluded that a larger portion of the shadow economic activities in Nigeria relates to the committed shadow economic activities, thus, increased use of electronic payments may not lead to a significant reduction in shadow economic activities.

Masihuddin et. al. (2017) investigated awareness level towards e-payment systems in Malaysia by evaluating merits, challenges and security issues. They found that the payment gateways face security issues regardless of their growing acceptance and large-scale use.

Hataiseree (2010) analyzed the effects of e-payment on cash usage in Thailand. It is established that despite the presence of a certain degree of cash-card substitution, cash usage tends to remain significant as a major means of payment, especially with those related to small payment transactions.

RESEARCH OBJECTIVES

1. To analyse the market share of institutions involved in e-payments based on transaction value in India.
2. To compare the e-payment trends before and after demonetization in India.

METHODOLOGY

The study is descriptive in nature. The e-payments systems are classified into four categories such as Real Time Gross Settlement (RTGS) System, National Electronic Funds Transfer (NEFT) System, Card payments and Mobile payments for the purpose of study.

DATA COLLECTION

The research is conducted on secondary data collected from the RBI bulletin for a period of four years (2015-16 to 2018-19). The data is segregated into RTGS, NEFT, Payment card (used at ATM and POS) and mobile transactions. The institutions involved in e-payments are classified into the following four categories; Public sector, Private, Multinational, co-operative and payment banks.

CLASSIFICATION OF E-PAYMENT

E- Payment is a financial exchange that takes place online between buyers and sellers. The content of exchange is usually in the form of digital financial instruments such as encrypted card numbers, electronic cheques or digital cash that is backed by institutions, or by a legal tender. The different types of e-payment classification considered for the study are:

REAL-TIME GROSS SETTLEMENT (RTGS) SYSTEM

This was introduced in India during the year 2004 and settles all inter-bank payments and customer transactions above 2 lakhs. RTGS is a funds transfer systems where transfer of money takes place from one bank to another on a "real-time" and on "gross" basis. Settlement in "real-time" means payment transaction is not subjected to any waiting period. "Gross settlement" means the transaction is settled on one to one basis without bunching or netting with any other transaction. Once processed, payments are final and irrevocable.

NATIONAL ELECTRONIC FUNDS TRANSFER (NEFT) SYSTEM

This e-payment system was introduced during the year 2005 in India facilitating one-to-one funds transfer requirements of individuals/corporates. The NEFT system provides for batch settlements at hourly intervals, thus enabling near real-time transfer of funds. The other features are accepting cash for originating transactions, initiating transfer requests without any minimum or maximum amount limitations.

PAYMENT CARDS SYSTEM

Payment cards, usually plastic cards, are components of a payment system issued by financial institutions. It can be used to make payments by electronic funds transfer and access cash through automated teller machines (ATMs) and point-of-sale (POS). In this study, only debit and credit cards are considered. Also, the amount transacted at ATM and POS is considered.

MOBILE PAYMENT SYSTEM

Mobile payments are defined as the use of mobile phones to pay for the purchase of goods and services at a retail point-of-sale (POS) terminal or on the Internet. Payment may be initiated via SMS text message, mobile browser, downloadable app, contactless near field communication (NFC), or quick response (QR) code. In the study, the data includes only individual payments and corporate payments initiated, processed, and authorized using the mobile device.

RESULTS AND INTERPRETATION

Table 2: Top 10 institutions with RTGS debit transactions in India.

Rank	Name of Institution	Transaction Amount (Rs. In Trillions)	Percentage Share
1	HDFC Bank Ltd.	292.47	21.48
2	State Bank Of India	134.98	9.92
3	ICICI Bank Ltd.	110.55	8.12
4	Axis Bank	108.18	7.95
5	CITI Bank N.A.	90.20	6.63
6	Deutsche Bank Ag	70.98	5.21
7	Standard Chartered Bank	42.43	3.12
8	Reserve Bank Of India	49.12	3.61
9	IDBI Bank Ltd.	37.42	2.75
10	National Securities Clearing Corporation Ltd.	34.82	2.56
Total (top 10)		**971.14**	**71.34**
Total(all institutions)		**1361.29**	**100**

Source: Authors' computation

The above table 2 exhibits the ranking of institutions based on the RTGS debit transactions in India during the financial year 2018-19. The total RTGS debit transaction amount consolidated to Rs. 1361.29 Trillion. These include the Public sector, Private, Multinational, co-operative and payment banks. Out of 230 institutions, the top ten institutions account for Rs. 971.14 Trillion which is more than two-thirds of total transactions (71.34%). The HDFC Bank Ltd. which is the private sector bank has the largest transactions accounting for around 21.48% of total RTGS debit transaction, followed by State Bank of India which is the public sector bank with 9.92%. The CITI Bank N.A., belonging to a foreign multinational bank segment, occupies fifth position with 6.63% transaction value. National securities clearing corporation ltd. which is responsible for clearing and settlement of all trades executed on NSE is included in the top 10 institutions indicating that an enormous amount is transacted in the capital market. Airtel payments bank ltd. and Saraswat Co-operative bank Limited tops in their segments.

Table 3: Top 10 institutions with RTGS Credit transactions in India.

Rank	Name of Institution	Transaction Amount (Rs. In Trillions)	Percentage Share
1	HDFC Bank Ltd.	301.30	22.13
2	State Bank Of India	143.98	10.58
3	ICICI Bank Ltd.	111.51	8.19
4	Axis Bank	109.84	8.07
5	CITI Bank N.A.	87.65	6.44
6	Deutsche Bank Ag	71.09	5.22
7	Standard Chartered Bank	49.19	3.61
8	IDBI Bank Ltd.	36.24	2.66
9	National Securities Clearing Corporation Ltd.	34.41	2.53
10	Yes Bank Ltd	28.03	2.06
Total (top 10)		**973.23**	**71.49**
Total(all banks)		**1361.29**	**100**

Source: Authors' computation

The above table 3 exhibits the ranking of institutions based on the RTGS credit transactions in India during the financial year 2018-19. The total RTGS credit transaction amount consolidated to Rs. 1361.29 Trillion. These include the Public sector, Private, Multinational, co-operative and payment banks. Out of 230 institutions, the top ten institutions account for Rs. 973.23 Trillion which is more than two-thirds of total transactions (71.49%). The HDFC Bank Ltd. which is the private sector bank has the largest transactions accounting for around 22.13% of total RTGS credit transaction, followed by State Bank of India which is the public sector bank with 10.58%. The CITI Bank N.A., belonging to a foreign multinational bank segment, occupies fifth position with 6.44% transaction value. National securities clearing corporation ltd. which is responsible for clearing and settlement of all trades executed on NSE is included in the top 10 institutions indicating that an enormous amount is transacted in the capital market. Paytm payment Bank ltd. and Saraswat Co-operative bank Limited tops in their segments.

Table 4: Top 10 institutions with NEFT debit transactions in India.

Rank	Name of Institution	Transaction Amount (Rs. In Trillions)	Percentage Share
1	State Bank of India	33.56	14.72
2	HDFC Bank	33.20	14.56
3	RBI (Public Administration	16.75	7.35
4	ICICI Bank ltd	15.62	6.85
5	Axis Bank	15.34	6.73
6	Yes Bank	7.62	3.34
7	Kotak Mahindra Bank ltd	7.22	3.17
8	Standard Chartered Bank	7.04	3.09
9	HSBC Bank	5.80	2.54
10	Deutsche Bank	4.81	2.11
Total (top 10)		**146.95**	**64.47**
Total(all institutions)		**227.93**	**100**

Source: Authors' computation

The above table 4 exhibits the ranking of institutions based on the NEFT debit transactions in India during the financial year 2018-19. The total NEFT debit transaction amount consolidated to Rs. 227.93 Trillion. These include the Public sector, Private, Multinational, co-operative and payment banks. Out of 209 institutions, the top ten institutions account for Rs. 146.95 Trillion which is around two-thirds of total transactions (64.47%). The State Bank of India which is the public sector bank has the largest market share accounting for around 14.72% of total NEFT debit transaction, followed by HDFC Bank Ltd. which is the private sector bank with 14.56%. The Standard Chartered Bank, belonging to a foreign multinational bank segment, occupies eight positions with 7.04% transaction value. Paytm payment card Bank and Saraswat Co-operative Bank Limited tops in their segments.

Table 5: Top 10 institutions with NEFT Credit transactions in India.

Rank	Name of Institution	Transaction Amount (Rs. In Trillions)	Percentage Share
1	State Bank Of India	36.74	16.12
2	HDFC Bank	31.25	13.71
3	ICICI Bank Ltd	18.76	8.23
4	Axis Bank	13.68	6.00
5	CITI Bank	10.16	4.46

6	Punjab National Bank	8.26	3.62
7	Kotak Mahindra Bank Ltd	7.34	3.22
8	Yes Bank	6.49	2.85
9	Bank Of Baroda	5.65	2.48
10	Canara Bank	5.54	2.43
Total (top 10)		**143.86**	**63.11**
Total(all institutions)		**227.93**	**100**

Source: Authors' computation

The above table 5 depicts the ranking of institutions based on the NEFT credit transactions in India during the financial year 2018-19. The total NEFT credit transaction amount consolidated to Rs. 227.93 Trillion which is equal to NEFT debit transaction value. Out of 209 institutions, the top ten institutions account for Rs. 143.86 Trillion which is around two-thirds of total transactions (63.11%). The State Bank of India tops with Rs.36.74 Trillion accounting to around 16.12% of total NEFT credit transactions, followed by HDFC Bank Ltd. with Rs.31.25 Trillion with accounting to 13.71% of total transaction value. The CITI Bank, belonging to a foreign multinational bank segment, occupies fifth position with 10.16% transaction value. The Paytm Payment Bank and West Bengal State Cooperative Bank Limited tops in their segments.

Table 6: Top 10 institutions with mobile payments in India

Rank	Name of Institution	Transaction Amount (Rs. In Trillions)	Percentage Share
1	State Bank Of India	5.14	17.39
2	HDFC Bank Ltd.	4.22	14.26
3	ICICI Bank Ltd	3.86	13.04
4	Axis Bank Ltd	3.77	12.73
5	Kotak Mahindra Bank Ltd	1.96	6.63
6	Paytm Payments Bank Limited	1.27	4.31
7	IndusInd Bank Ltd	0.71	2.40
8	Bank Of India	0.65	2.21
9	Bank Of Baroda	0.51	1.71
10	Canara Bank	0.47	1.58
Total (top 10)		**22.56**	**76.25**
Total(all banks)		**29.58**	**100**

Source: Authors' computation

The above table 6 exhibits the ranking of institutions based on the mobile payments in India during the financial year 2018-19. The total mobile payment value consolidated to Rs. 29.58

Trillion. These include the Public sector, Private, Multinational, co-operative and payment banks. Out of 280 institutions, the top ten institutions account for Rs. 22.56 Trillion which is more than two-thirds of total transactions (76.25%). The State Bank of India which is the public sector bank has the largest transactions accounting for around 17.39% of total mobile transaction, followed by HDFC Bank Ltd which is the private sector bank with 14.26%. The Paytm Payments Bank Limited belonging to the payment bank segment occupies sixth position with 1.27% transaction value. CITI bank limited and Saraswat Co-operative bank Limited tops in their segments.

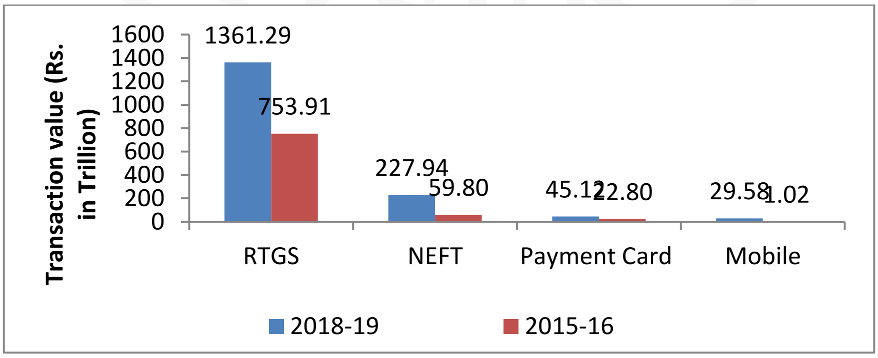
Table 7: Comparison of Institutions involved in E-payment transactions

	Number of Institutions	
Year	**2018-19**	**2015-16**
RTGS	230	177
NEFT	209	161
Mobile	280	66
Payment Card	66	55

Source: Composed from RBI bulletin

From the above table 7, it is evident that the number of institutions involved in e-payment transactions has increased by 30 percent for RTGS and NEFT and 20 percent for payment cards in the past three years. During the same period, a surge in the number of institutions involved in the mobile payments segment has increased by 325 percent. The above data indicates that customers are rapidly shifting to electronic payments, specifically mobile payments. This has stimulated institutions to enter as new participants in the mobile payment category. The platform provides simple, quick and convenient ways to transfer money across bank account.

Graph 1: E-payment behavior before and after demonetization



Source: Authors' computation

The graph 1 above exhibits the E-payment behavior before and after demonetization in India. The total e payment transactions under four the category RTGS, NEFT, payment card and mobile transactions for each month during financial year 2018-19 are aggregated and compared with financial year 2015-16. The data indicates that within four years, transactions using RTGS and payment cards have increased by two-fold, NEFT transactions has increased by four-fold. The disproportionate increase of 29 times has been observed in mobile transactions attributed to the digitization of payments in India. The momentum for consumers to shift to e- payment methods was largely driven by demonetization during the financial year 2016-17.

A paired sample t-test was conducted to compare the impact of demonetization on e-payments. A p-value of 0.23 was found with t value 3.18 at 5% significance level. Thus the null hypothesis could not be rejected indicating no significant difference between e-payments before and after demonetization. This can be further confirmed since high transaction intensity seen immediately post demonetization did not sustain but a new standard has been found.

SUMMARY AND CONCLUSION

The study is aimed to analyze the trends of e-payment in India. The monthly data was collected from the RBI bulletin for a period of four years for the financial year 2015-16 to 2018-19. The e-payments are classified under the following four categories: RTGS, NEFT, Card and mobile payments. All the institutions existing in India which are involved in e-payment transactions are considered for the study. These institutions are classified into the Public sector, Private, Multinational, co-operative and payment banks.

The total RTGS transaction amount consolidated to Rs. 1361.29 Trillion during the financial year 2018-19. The top ten institutions account for around two-thirds of total transactions. The top position is held by HDFC Bank Ltd followed by State Bank of India. It is noted that National securities clearing corporation ltd. belongs in the top 10 institutions list of RTGS transactions indicating that enormous amount is transacted in the capital market, specifically National stock exchange. The total NEFT transaction amount consolidated to Rs. 227.93 Trillion in India during the financial year 2018-19. The top ten institutions accounts to around two thirds of total transactions (both credit and debit). The Lion's share is taken by State Bank of India and HDFC Bank Ltd. The recent entrant Paytm payment card Bank outshines with its inclusive strategy of small vendors.

In the card payment category, the total transaction amount in debit cards in 2018-19 is consolidated to Rs. 39.04 Trillion and credit cards are consolidated to Rs. 6.07 Trillion with State Bank of India and HDFC in the top list. The total mobile payment value consolidated to Rs. 29.58 Trillion during the financial year 2018-19. The top ten institutions account for Rs. 22.56 Trillion which is more than two-thirds of total transactions with State Bank of India leading. Of late, digital payments space is largely dominated by non-banks such as PayTM and Airtel payments bank ltd. which are leading mobile wallets in India.

The e-payment systems have evolved with digitalization, coupled with an increase in accepting card payments. In the past four years, institutions involved in e-payment transactions has increased by 20 percent in payment cards, 30 percent for RTGS and NEFT and whooping 325 percent in the mobile payment category. The process of demonetization is considered one of the major factors influencing the trend. As a consequence, mobile transactions have increased by 29 fold and marginal increase in other e-payment categories. Still, it accounts for only 7.6% of India's population in October 2018 according to E-Marketer.

The RBI's decision to decrease the number of ATMs to reduce the cost of operations will provide a plethora of opportunities to e-wallet firms in India. Nevertheless, problems such as restrictions on the number of transactions and amount per day and necessary of internet access needs to be tackled. The risk of being hacked poses a serious threat to the expansion of e-payments. In this transition state, it becomes essential for digital payment players to adopt new technologies such as Artificial Intelligence, Machine learning, and pattern matching for real-time fraud prevention for digital payment transactions. The knowledge for operating smartphones, with security considerations, demands for literate customers which is a challenge faced by many developing countries. Motivating citizens towards e-payments by focusing above stated issues paves way to curb instances of money laundering, black money and funding for illegal activities.

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A STUDY ON ADVANCEMENT IN E-PAYMENT SECURITY SYSTEM AND DIGITAL PAYMENTS IN INDIA WITH PERSPECTIVE OF CONSUMERS

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Abstract:

Payment is the transfer of one form of goods, services, or financial assets in exchange for another form of goods, services, or financial assets in acceptable proportions that have been previously agreed by all the parties involved. Over a course of history, the payment system has evolved significantly, from the oldest form of payment to the present simplest E-money and the Electronic payment system. Typically, we prefer electronic payments as online transactions on the internet and it has many ways of payments/transactions.

As technology develops, the range of devices and process to transact the payment electronically continues to increase and the ratio compared to offline (cash) is increasing day by day. Due to drastic growth in the online transaction, hundreds of electronic payment systems have been developed to provide internet transaction. Ironically, the growth of internet/cyber fraud has also been increased and thus it is very much necessary to provide secure transactions on e-payments. Nowadays the security issues that threaten electronic payment systems are changing constantly, and often extremely quickly. The most common threats include viruses, worms, and Trojan horses.

The objective of this paper is to propose the advancement to the current method of online transactions (e-payment). For this paper, we are considering both the primary and secondary data to analyse the current system and to evolve the advancement. Hence, the conclusion will be drawn based on the data collated.

Keyword: *Advancement, E-payment, Security system*

INTRODUCTION

The "Digital India" is the Indian Governments flagship program with a vision to convert India into a digitally empowered country. "Faceless, Paperless, Cashless" is one of the supposed function of Digital India. As part of government reforms, Prime Minister Mr. Narendra Modi demonetized the high-value currency of Rs. 500 and 1000 in November 2016 and also launched the "Digital India‟ initiative in 2015. These initiatives have provided an extensive boost up to the digital payment system in the country. Governments other initiatives like BHIM and UPI are supporting transition and faster adoption of digital payments. Electronic Consumer transactions made at point of sale (POS) for services and products either through internet banking or mobile banking using smartphone or card payment are called as Digital payment. The digital payment system has the following phases,

1. Registration

2. Invoicing

3. Payment selection

4. Payment confirmation.

The payment system generally includes 3 electronic payment instruments namely, cash, cheque, and card. Post demonetization the payment mode affected the e-commerce sector that Cash on Delivery is gradually decreased and other modes of payment is replaced like Net Banking, Debit Card, Credit Card, etc

LITERATURE REVIEW

Sangita Roy and Dr. Indrajit Sinha (2014) stated that E- payment system in India, has shown tremendous growth, but still there has a lot to be done to increase its usage. Still, 90% of the transactions are cash-based. Technology Acceptance Model used for the purpose of study and its basic model like Innovation, incentive, customer convenience, and legal framework are the four factors that contribute to strengthen the E- payment system.

E-payment systems are very important mechanisms used by individuals and organizations as a secure and convenient way of making payments over the internet and at the same time, a gateway to technological advancement in the field of world economy is needed.

Rakesh HM & Ramya TJ (2014) in their research paper titled "A Study on Factors Influencing Consumer Adoption of Internet Banking in India" tried to examine the factors that influence internet banking adoption. It is found that internet banking is influenced by its perceived reliability, perceived ease of use and perceived usefulness. In the process of internet banking services, expert should emphasize the benefits its adoption and awareness can also be improved to attract consumer's attention towards internet banking services.

OBJECTIVES

1. To know how the technologies and connectivity will come together to make payment easier.
2. To find out the top e-payment apps and their customer with practical solutions and innovative ideas to accomplish the vision of a security system

DATA COLLECTION AND METHODOLOGY

The primary data were collected by distributing questionnaires with a selected number of respondents and that as drawn randomly, and the secondary data has been collected referring to various magazines, websites, and journals as it is a conceptual paper. Thus, the focus is to know more about the concept i.e., e-payment and security as a parameter. Therefore, qualitative and quantitative data have been used. A descriptive study was carried out to find out the effectiveness of e-payments and its security.

Existing System: The current system involves below technologies to secure online transactions.

- Authentication: A method to verify the buyer's identity before payment is authorized.
- Encryption: A process of making messages unreadable except by those who have an authorized decryption key.
- Integrity: Ensuring that information will not be intentionally or unintentionally altered or destroyed during transmission.
- No repudiation: Protection against customers' denying the orders placed and against merchants' denying the payments made.

Pros:

- Reaching more clients from all over the world, which results in more sales.

- Lesser time-consuming - It's because transactions are made in seconds (with one-click), without wasting customer's time. It comes with speed and simplicity.
- Convenience - Customers can pay for items on an e-commerce website at anytime and anywhere. They just need an internet-connected device. As simple as that!
- Lower transaction cost and decreased technology costs.
- Expenses control for customers, as they can always check their virtual account where they can find the transaction history.
- It's easy to add payments to a website, so even a non-technical person may implement it in minutes and start processing online payments.
- Payment gateways and payment providers offer highly effective security and anti-fraud tools to make transactions reliable.

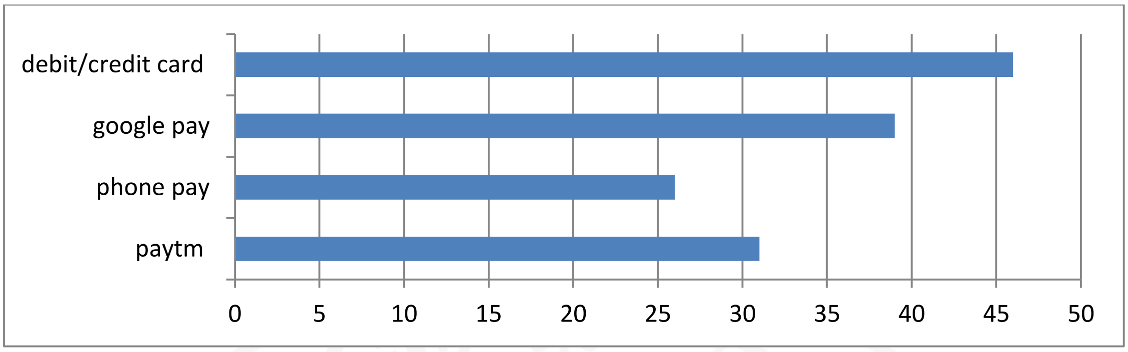
Cons:

- E-commerce fraud is growing at 30% per year. If we follow the security rules, there shouldn't be such problems, but when a merchant chooses a payment system that is not highly secure, there is a risk of sensitive data breach which may cause identity theft.
- The lack of anonymity - For most, it's not a problem at all, but we need to remember that some of the personal data (customer/merchant) is stored in the database of the payment system.

ANALYSIS OF DATA

The study is conducted with the estimated number of status, potential and importance advancement of e-payment security and digital payment in India with a prospective customer in the country. The study focuses on extensive study based on secondary data. The data has been drawn with the help of e-books magazines, newspapers, research articles, research journals, e-journals. The research will be conducted with the objective to find out the extent to the present security system and further needs in digital payment. This study is based on primary data that have been collected through means of well-structured questionnaire distributed among selected number of respondent.

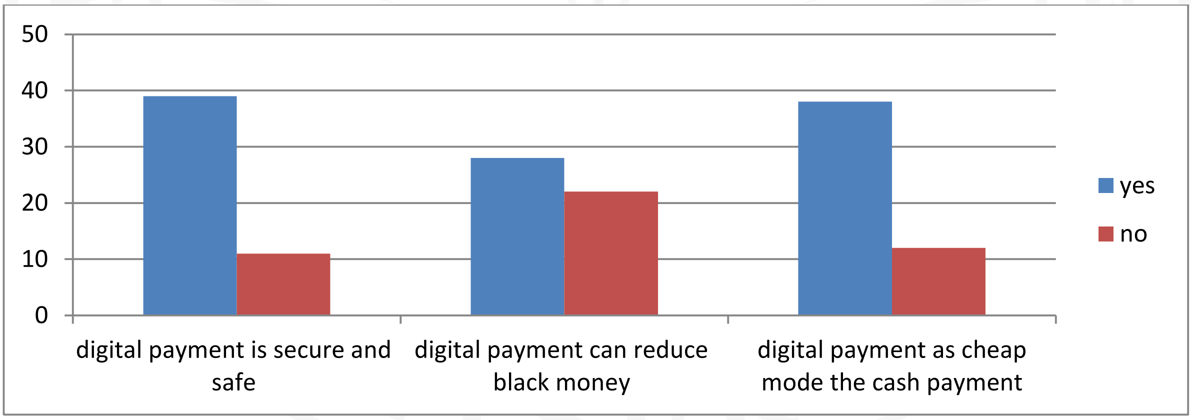
MODE OF DIGITAL PAYMENT



Source: Primary data

This image states that the majority of respondents are using the two or more types of digital payment mode to pay the amount. Digital payment methods are often easy to make, more convenient and provide customers the flexibility to make payments from anywhere and at any time. These are a good alternative to traditional methods of payment and to speeding up the transaction cycle. Post demonetization, people slowly started embracing digital payments and even small-time merchants and shop owners started accepting payments through the digital mode.

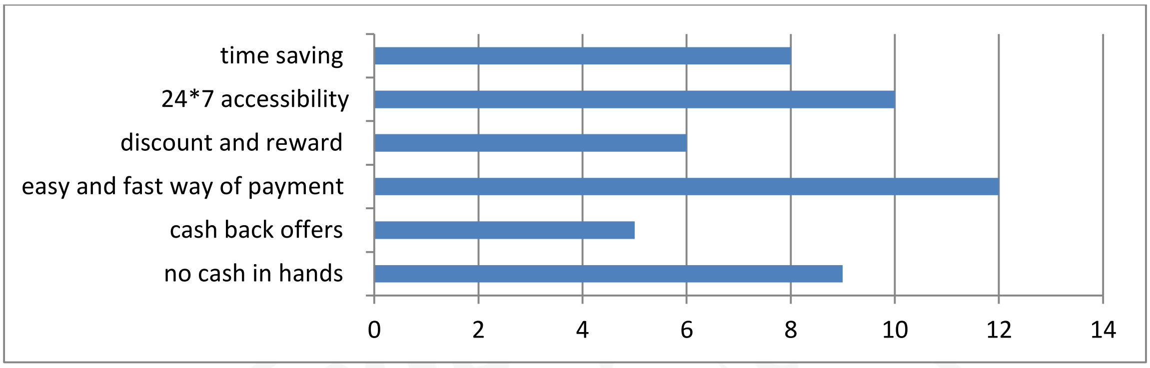
THE MODE OF PAYMENT USED BY THE RESPONDENT



Source: Primary data

Due to many reasons like security and safety, one of the technological innovations in banking, finance, and commerce is the Electronic Payments. Electronic Payments enables us to perform financial transactions electronically fast and easily. Although it provides a number of benefits

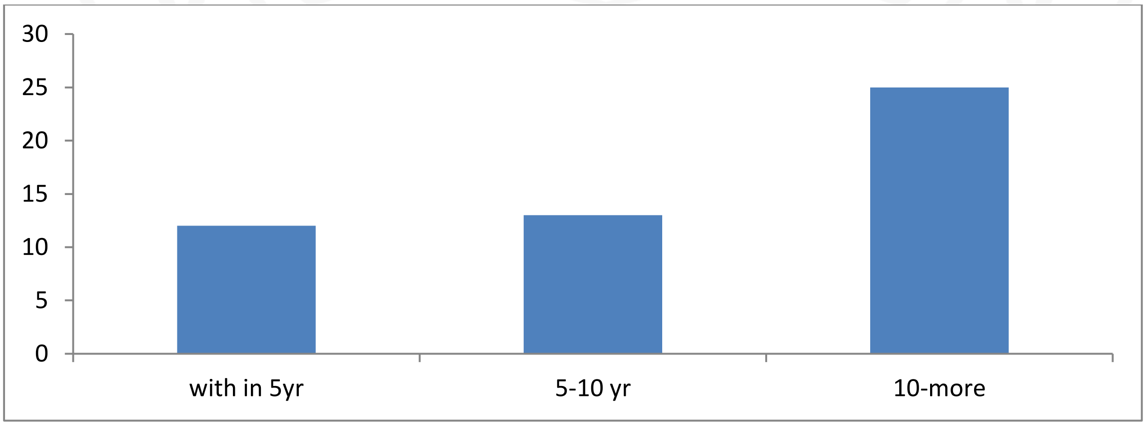
Reason for digital payment



Source: Primary data

Digital payment methods are often easy to make, more convenient and provide customers the flexibility to make payments from anywhere and at any time. These are a good alternative to traditional methods of payment and to speeding up the transaction cycle. Post demonetization, people slowly started embracing digital payments and even small-time merchants and shop owners started accepting payments through the digital mode. Usually, every service is designed to reach the widest possible audience, so it has the intuitively understandable user interface. In addition, there is always the opportunity to submit a question to a support team, which often works 24/7. Anyway, one can always get an answer using the forums on the subject and the transfers can be performed at anytime and anywhere. It's enough if a person has access to the Internet.

Cashless economy



Source: Primary data

In a cashless economy, unlike the traditional system, no coin or banknote is used to conduct the transaction. Electronic representations of money replace traditional currency where the transaction can be done through the transfer of digital information. It includes e-banking (Mobile banking or banking through computers), debit and credit cards, card-swipe or point of sales (POS) machines and digital wallets. In Sweden, 99% of payments are conducted without cash which is a perfect model of cashless economy. The procedure of transaction is very swift and free from any hazard of traditional transactions from a technological point of view.

The cost and risk of cash payments are moving the societies to a cashless economy. Cashless economy prevents many crimes associated with cash such as fake currencies, terror financing, and black money circulation, etc. Hence, many countries even developing countries like India, Bangladesh and Kenya are trying to move towards a cashless society.

PROPOSED SYSTEM (ADVANCEMENT OF DIGITAL PAYMENT)

An effective program should be implemented in the system to ensure that controls and authentication tools are appropriate for all e-payment.

E-payments systems should have reliable and secure methods to authenticate their customers thus reducing the inherent risks and should be appropriate to the risk associated with them.

No single control or security device can adequately protect a system connect to a public network. Hence, the method and system should be augmented by requesting different security credentials such as cryptographic key, digital signature, biometrics, etc., to establish multiple layers of authentication which currently single layer (in most of the cases).

The e-payment system with a higher number of authentications will have a higher security level. This means the system with higher authentication factors will have a stronger security level which lowers or reduces the fraud vulnerability, and this eventually boosts the user's confidence.

CRYPTOGRAPHIC KEY

A cryptographic key is a string of bits used by a cryptographic algorithm to transform plain text into cipher text or vice versa. This key remains private and ensures secure communication.

A cryptographic key is the core part of cryptographic operations. Many cryptographic systems include pairs of operations, such as encryption and decryption. A key is a part of the variable data that is provided as input to a cryptographic algorithm to execute this sort of operation. In a properly designed cryptographic scheme, the security of the scheme is dependent on the security of the keys used.

DIGITAL SIGNATURE

A digital signature is basically a way to ensure that an electronic document (e-mail, spreadsheet, text file, etc.) is authentic. Authentic means that you know who created the document and you know that it has not been altered in any way since that person created it.

Digital signatures rely on certain types of encryption to ensure authentication. Encryption is the process of taking all the data that one computer is sending to another and encoding it into a form that only the other computer will be able to decode. Authentication is the process of verifying that information is coming from a trusted source. These two processes work hand in hand for digital signatures.

BIOMETRIC

Biometrics is biological measurements — or physical characteristics — that can be used to identify individuals. Fingerprint mapping, facial recognition, and retina scans are all forms of biometric technology, but these are just the most recognized options.

Biometric authentication is the process of comparing data for the person's characteristics to that person's biometric "template" in order to determine resemblance. The reference model is the first store in a database or a secure portable element like a smart card. The data stored is then compared to the person's biometric data to be authenticated. Here it is the person's identity which is being verified.

Biometric identification consists of determining the identity of a person. The aim is to capture an item of biometric data from a person. It can be a photo of their face, a record of their voice, or an image of their fingerprint. This data is then compared to the biometric data of several other persons kept in a database.

TOPMOST E-PAYMENT

Paytm:

Paytm is one of the most popular payment methods in India. It supports multiple forms of payment methods and is optimized for mobile.

Payment's security – Payment gateway is highly secured and encrypted in order to provide the most reliable services.

Gadget friendly – The payment gateway doesn't only function well on the desktop but is very friendly with all the gadgets like mobile, tablet, etc that the current generation uses.

Quick transaction processes– All the transaction made get processed in no time via Paytm's payment gateway saving from all the hassle of waiting long in queues.

Around the clock service– With the robust payment gateway the transactions can be made 24/7 from anywhere.

Various modes of transaction– The payment gateway supports all the payments made via debit card, credit card, and net banking.

Google pay:

Google Pay (also known as Google Tez) is a digital wallet platform and online payment application developed by Google to power in-app and tap-to-pay purchases on mobile devices, enabling users to make payments with Android phones, tablets or watches.

Amazon pay:

Amazon Payments is a payment gateway specially designed for both Amazon merchants and shoppers. This fast, easy, and reliable payment solution caters to millions of people who buy and sell through Amazon. Previously Amazon Pay was only used to make payments when a customer has purchased something from Amazon. But now Amazon lets the customers to make payments while transacting with selected merchants. It also offers various benefits like discounts and cashback.

PhonePe:

PhonePe is an all-in-one UPI-based digital payment app and a most popular digital wallet in India. One can do almost everything through this app as it is integrated with most of the online services we have in today's world PhonePe is not just like any other digital wallets in India, it has many features in the app that make customers lives easier. One can get great deals and cashback on bill payments, food outlets, shopping, and much more through PhonePe is a multi-lingual app and it helps a country like India which has several languages involved.

BHIM:

BHIM (Bharat Interface for Money) app was launched by PM Narendra Modi on 30th December 2016. Its main was to push cashless payments post demonetization and create an increasingly digital economy. It has partnered with multiple banks and been downloaded by million users. We can say that BHIM has played a vital role in pushing the digital payments where the digital payment usage graph has an increased mark currently.

ALL THE ABOVE APPLICATIONS HAVE FOLLOWING ADVANTAGES

MERCHANT BENEFITS

Easy integration: Integrating the applications is less time consuming and system requirement is very basic.

Increased sales: Faster, easier checkouts in stores can lead to more store visits, more time spent shopping, and customers spending more money and thus increasing in sales

No transaction fees: Merchants don't pay extra fees when customers use the above applications to make payment.

Enhanced security: All the above application has given a topmost priority for security module and as a result has efficient firewalls around.

CUSTOMER BENEFITS

Fast and easy purchases wherever they buy: Checkout will faster as the above applications have one-tap payment modes which increase the processing time.

No cost: Above applications can be used without any transactions or extra fees.

Peace of mind: Applications doesn’t send their actual credit or debit card number to make the payment. Instead, it uses a virtual account number to represent the account information and hence no need to worry about security threats.

CONCLUSION

Although we have good security measures in line while using the payment via E-payment system, it is always commendable that we should need a still higher capability system to avoid threats insecurity due to the increased cybercrimes. Hence, it is suggestive that a technical innovation in banking, finance, and commerce in the electronic payment module enables us to perform financial transactions electronically fast, easy, secure and most importantly builds user confidence and trust.

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ARTIFICIAL INTELLIGENCE AND ACCOUNTANCY

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Abstract:

With the speedy changes in the field of information technology, the requirements and expectations of the modern economic society is increasing at a rapid pace. To cope with these changes Artificial Intelligence is emerging as a solution to all the modern problems. Artificial Intelligence is the ability of a computer program or a machine to think and learn. In simple, it is the ability of a computer to act like a 'Human'. Nowadays, it has been widely used in agriculture, commerce, education and service industries.

The adoption of Artificial Intelligence techniques in Accountancy is taking new shape day by day. The basic form of Artificial Intelligence that we accountants use is 'Calculator'. Then arrived 'The Spreadsheets' followed by ERP, CRM, and others. At present, Artificial Intelligence can automate nearly 86% of the activities performed by bookkeepers, accountants, and auditing clerks. With such available simplicity, many predicted that business could manage their accounting work without requiring any intervention of accounting experts. Artificial Intelligence can do a lot, but it cannot do everything. We cannot rely on it to deliver skepticism and judgment. Though Artificial Intelligence has brought tremendous changes in the Accounting Industry, it cannot replace the accounting professionals. Because technological solutions provide solutions to already existing problems only. Only humanoid intelligence can find out further problems and develop solutions to resolve them.

This paper takes the application of Artificial Intelligence in the accounting industry as the research object, ascertains the impact of Artificial Intelligence on the development of the accounting field, analyses the problems of application of Artificial Intelligence and provides suggestions to those problems.

Keywords: *Artificial Intelligence Accountancy*

INTRODUCTION

Artificial intelligence is not something new. The concept of creating some artificial men doing all the tasks that a man can do has started even before you can imagine. But the official birth of the word 'Artificial Intelligence' took place in 1956 in a workshop and the word was attributed to McCarthy. In the initial years of development of AI, programming of a computer playing chess was considered a great leap in the evolution of AI. Innovation in the field of AI has grown rapidly during the 1960s. The creation of new programming languages, robots, research studies in creating a replica of the human brain increased in popularity. This field saw a rapid growth seeping their way into our lives, affecting how we live, work and entertain ourselves. Today if we hear the word artificial intelligence the things that come to our mind are Siri, Alexa, Google Assistant, Suggestive searches, autonomously-powered self-driving vehicles and so on. However, the technology is still in its infancy. What we call AI is not necessarily so. We cannot call a piece of software that responds based on predefined user behaviour as AI. True artificial intelligence is something that can learn on its own just like we all do.

Companies like Apple, Facebook and Tesla are giving updates and revolutionary changes to how we interact with machine-learning technology. But many of us still do not know how actually they are used in businesses, both big and small. It has become one solution to all the problems under the same roof. Smacc, a German company uses AI in the best way to help freelancers; small and medium-sized enterprises automate their accounting systems and financial reporting. It provides you with facilities like easy document entry, AI- enabled data capturing, automated invoice validation, flexible approval workflows, smart payment lists, powerful document management, supplier data management, banking functions, etc. This is just a small example of how artificial intelligence is changing the way accounting was carried on.

AI extends the capabilities of computing to a whole new level. According to a recent survey conducted by MIT- Boston Consulting Group, more than 80% of people believe that AI leads to competitive advantage and 79% believe that technology increases the productivity of the company. It helps not only in computing but also in analyzing the large volume of data with high speed and ease the work of humans. Along with easing of tasks, it also helps the accountants to innovate and bring a business process transformation that would make functions run smoother than before.

RESEARCH OBJECTIVES

- To study the impact of the emergence of artificial intelligence in the field of accounting.
- To find out the problems in the application of artificial intelligence in the accounting field.
- To give suggestions on improving the effectiveness of the application of artificial intelligence.

SIGNIFICANCE OF THE RESEARCH

In the era of machine learning, various researchers are of the view that the accounting jobs are under threat due to increasing automation. But this paper focuses on how artificial and human intelligence can work together to enable better decision making and increase efficiency in the accounting process. It makes it clear that AI will transform the jobs of an accountant and not replace them. Because there will always be a need for human element- human intelligence to analyze and interpret the AI data.

APPLICATIONS AND IMPACT OF AI ON ACCOUNTING PROFESSION AND ACCOUNTING JOBS

In 2016, Deloitte, one of the Big Four Firms, announced the introduction of AI into accounting, taxation, and auditing. In 2017, Nigel Duffy, a renowned machine-learning and AI expert, joined E&Y as the person in charge of its global innovative AI team. In recent years, the countries around the globe are competing to carry out research and roll out new updates in the field of AI and call for the use of AI is louder and louder day by day.

INFLUENCE OF MACHINE LEARNING ON ACCOUNTING SECTOR

Machine learning is the leading edge of AI. It is a subset of AI where machines can learn by using algorithms to interpret data from the world around us to predict outcomes and learn from success and failures. Rather than eliminating the human workforce these machines act as their colleagues. These machines can learn to perform more redundant and repetitive tasks and extremely time-consuming tasks. The ways in which accounting would be benefited through Machine Learning are discussed below.

ROBOTIC PROCESS AUTOMATION

What is RPA?

It is a technology adopted by various enterprises to automate business processes. It involves the use of software with artificial intelligence and machine learning capabilities to handle a large volume of data, which required a lot of time for humans to deal with.

According to the latest survey by PwC, many financial institutions have started to make available the Software 'Bots.' The study also discloses that 11% of the respondents have already adopted RPA widely across the enterprise, and another 19% are heading in that direction.

Why is RPA becoming popular?

Accounting Robot works as a tool that can reduce the human effort to move the routine data between different accounting systems and outside applications. The main reason for its popularity is, it acts as a **Bionic Arm** rather than as a human replacement.

Benefits of RPA

- RPA adoption does not require any changes in the company's IT Infrastructure. It is a Non-invasive application.
- RPA can be applied to multiple processes at one time. It is not confined to one part of the process and hence offering a customizable workflow.
- It has no working hour limitations. They can run 24/7/365 and thus increasing the productivity to levels traditional work cannot reach.
- It ensures error-free data movement with minimum variance in output.
- Installing RPA robots is easy.
- Human workers can concentrate on those works where they are truly needed.

ACCOUNTING USE CASE OF ROBOTICS IN ACCOUNTS RECEIVABLE

The following case explains the use of RPA to automatically upload invoices to a Sharepoint website for their customers to pay.

Divya works in Accounts Receivables, and she is responsible for uploading her company’s invoices to a Sharepoint website for their customers to pay. She normally processes each invoice manually which takes her 5-10 minutes per invoice.

MANUAL PROCESS

1. SAP automatically saves invoices to a specific network folder.
2. Divya opens explorer and goes to the folder created for that day’s invoices.
3. She selects all XML files and ensures that no excel file is selected.
4. She zips these files into one folder.
5. She logs into the website where it is to be uploaded.
6. She uploads the newly created zip folder.

This is the tedious work performed by multiple employees every day for the number of customers.

RPA PROCESS

1. SAP automatically saves the invoices to a specific network folder.
2. Divya starts UiPath AR Robots.
3. UiPath asks Divya to choose the folder for today’s invoices.
4. UiPath then automatically navigates to the folder chosen and selects XML files in that folder.
5. It zips all XML files to one folder on the desktop.
6. UiPath then navigates to the company’s invoice site, logs in with Divya’s username and password, chooses “upload file” and uploads the zipped folder.
7. After uploading, it deletes the zipped folder on the desktop.

The above steps took only a few clicks compared to >50 clicks required before implementing RPA. It took Divya 5-10 minutes to upload invoices but now it takes only 2minutes, saving 7 minutes per invoice on an average.

SMART ASSISTANTS

A smart assistant is built to remove the complexities from accounting software and enables entrepreneurs to manage finances through conversations.

Chaithra is an accountant who, during crunch time when seemingly every client is sending through their accounts, considers turning off her phone or email so she can get some work done. Fortunately, smart assistants might be able to give her a helping hand. They can form the first line of customer contact and might even provide clients the information they require, like details about their current tax liability.

The Smart Assistants are natural language bots which involves speech recognition and accurate human voice synthesis, so they can respond to natural language queries. These are different from those scripted bots which lookout for a key phrase and aim to provide a ready-made response. Smart Assistants learn the more we use them. **Pegg** is the world's first accounting bot, a smart assistant. It aims to make the accounting invisible, and more conversational.

OCR SOLUTIONS

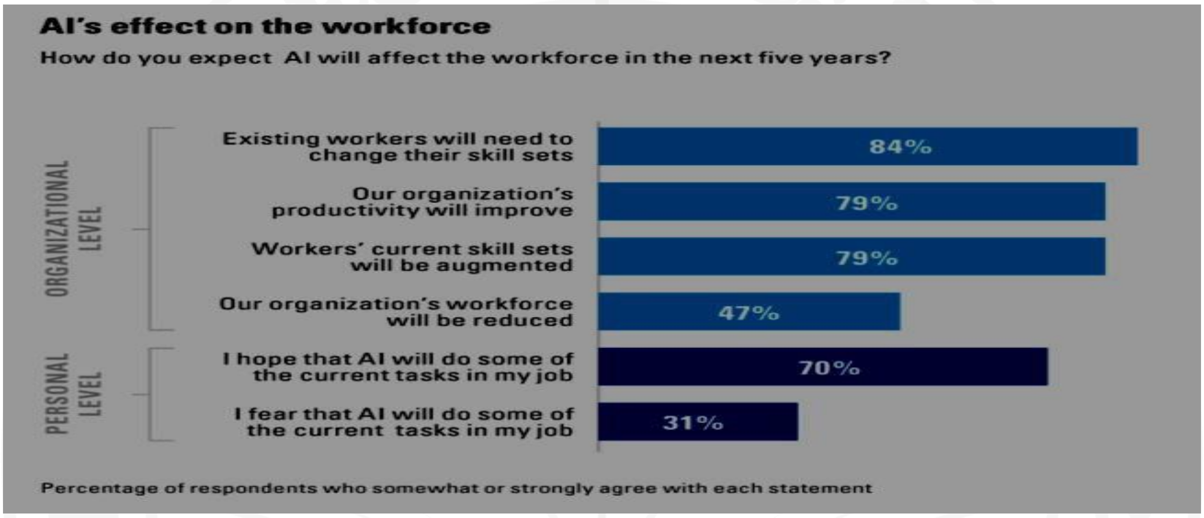
Optical Character Recognition is not something new. But, AI has made it more accurate and opened it to new usage scenarios. Even before the emergence of AI, it was possible to extract the information automatically from documents. But this required a human to point out to the OCR software where the data was located. Computers have always known what numbers are, of course. Though printed receipt for purchase is full of numbers, they are not equal. But accountants require only that information that is important to them. For example, they need the date, the total amount and perhaps the credit number used to make the purchase. A human can instantly identify all without even thinking about it but all those numbers are indistinguishable for a computer. The digits 1-5-1-2 might be the last four digits of the card number, or it might be the amount of one of the items on the receipt or it might be a date.

With the application of AI to OCR, the OCR software is now able to recognize document types and things such as receipts, invoices or other printed financial documents. This means the salient data can be extracted to allow information to be allocated and/or processed by the software rather than human action- even if the software hasn't seen a receipt of that type before. This reduces the human effort and time needed to allocate and assign information.

IMPACT OF AI ON ACCOUNTING SECTOR

Companies these days are embracing the new technologies to streamline their business operations, and one of the operations which are on top of their list is the accounting. This is because of the increased productivity, improved accuracy and reduced cost offered by AI. With so many benefits associated with AI, the implementation of AI in various administrative tasks and accounting operations has resulted in various structural changes.

A survey by Job Market Monitor



The digital transformation of accounting has led to increased funding for artificial intelligence companies. This transformation is being termed as the 4th Industrial Revolution. Accountants are becoming more tech-savvy and are embracing the AI tools that do the tedious work for them so that they spend their time on more important time analyzing reports, speculating on future outcomes, managing the machinery and intervening only if something goes wrong.

ISSUES IN THE APPLICATION OF AI IN ACCOUNTING FIELD

LACK OF EXPERIENCE IN THE INITIAL YEARS

At present, the application of artificial intelligence in accounting is still in its infancy. Though many firms have already introduced AI in their accounting operations, the scope of its application is limited. When artificial intelligence is put into accounting work it must be able to replace all the steps of traditional accounting, including the input of original documents, formation of accounting information, the generation of financial reports, appropriate decision-making suggestions, so as to improve the overall financial work. The complexity of AI and the lack of application experience have brought great difficulties in its development.

PROFESSIONALS NEED TO FOCUS ON IMPROVING THEIR SKILLS

The application of AI requires the corresponding improvement in the skills and talents of Accounting Professionals. The combination of AI and Accounting work puts higher demand on those accountants who are well versed in accounting knowledge as well as in Information technology. This is necessary because that personnel needs to be skillful in the use of accounting software and data management and be ready to adapt to the changed situation.

ACCOUNTING PERSONNEL TRAINING PROGRAM IN COLLEGES NEEDS CHANGES

College graduates are the main force of the accounting field in the future. However, the universities are failing to make necessary corresponding adjustments in their syllabus with the evolution of technology. They pay less attention to the application of AI and the innovation of accounting concepts. This creates a disconnection between theoretical knowledge and their practical application. Ultimately, the college graduates end up being less competitive in the market and regret their inability to meet the market demand of the accounting industry in the future.

HIGH INVESTMENT WITH SLOW RETURN

The introduction of new technology not only requires capital investment but also requires adjustments in the management of human resources and the daily operation mode of the enterprise. It is said that AI brings lots of cut down in costs. But the introduction of AI is followed by a series of training programs for the use of new system features and of information security. Due to the personalized features of intelligent systems, enterprises require a huge amount during their initial application. Given the high investment and slow return, many enterprises may focus on short term profits instead of making strategic adjustments.

SUGGESTIONS TO IMPROVE THE EFFECTIVENESS IN THE APPLICATION OF AI IN THE ACCOUNTING FIELD

EXPLOIT POWERFUL TECHNOLOGIES, BE ADAPTABLE AND THINK RADICALLY

To fully exploit the new technologies it is very important to be clear about their unique characteristics and how they can be helpful to solve real problems. We need to understand that there is a long time between building a working technology to getting value from it. But it is impossible to predict the extent to which computers will replace human decision making over the next 20 to 30 years. However, they cannot be a replacement for our emotional intelligence. The long term future of accountancy will ultimately reflect how we humans see and shape our relationships with those powerful systems. Where AI enables greater insight from data, it helps human experts make better decisions and provide better advice. When looking at the longer term, the professionals should look beyond the incremental improvements to existing processes. This goes beyond the technical knowledge to incorporate qualities such as professional skepticism, gaining and applying insight from numbers, and ensuring that numbers can be trusted. The technology of the future will also be very different from what we see today. As a result, a flexible approach is essential when thinking about the future of accountancy.

IMPROVE THE QUALITY OF ACCOUNTING EDUCATION IN COLLEGES

The colleges need to give more importance to enhance the practical knowledge of the students. For this, they need to strengthen the cooperation between the universities and enterprises and strive to create practical opportunities to improve students' practical ability and cultivate applied accountants. The colleges should also make the students aware of the technological developments taking around the world and give them training in technical skills as well. This ensures its market competitiveness. The teachers should always be updated about the changes and trends in the development of international financial and accounting standards. This makes classroom teaching go in line with the practical world. Only by striving to give the best accounting education, we can cultivate excellent accounting talents who can meet the market demands.

LEARNING IS A CONTINUOUS PROCESS

An accountant, whether a professional or a clerk, should pay attention to improve his skills and cultivate professional ethics and adopt the idea of life- long learning. Accounting personnel should change their concepts, actively study and creatively adopt AI and other related knowledge, and strive to become a high-level comprehensive accounting talent, in order to avoid being eliminated by the market.

FOCUS ON LONG TERM VISION

The enterprises should always focus on long term vision and hence take one step ahead in the implementation of AI in accounting operations. Initially, this may seem difficult for enterprises to adapt to new processes but, in the long term, it will surely be fruitful. The initial investment may seem large but if we consider its long term returns, it is worth it. Moreover, AI is the future of accountancy. So, it is better for enterprises to adopt it as soon as possible. Looking forward to the future, AI would enable the company to have more sustainable development capabilities.

SUPPORT FROM GOVERNMENT

To be competitive in the international stage, it is very important for a country to be technologically up to date. So, the Government should implement relevant plans and measures in various industries and actively create favorable environmental conditions for the development of AI in the accounting field. There is a necessity of relevant policies and regulations to encourage and guide applications of AI in the accounting industry.

CONCLUSION

AI will transform the way an accountant works but cannot replace them. The accounting professionals need to go in line with the changes happening in the accounting field. The accounting industry should also strengthen the main position of AI application in the process of reform and innovation. This is the responsibility of accountants. Even the enterprises should actively take part in the evolution of AI in the accounting field.

They have to make good use of emerging opportunities and upgrade themselves in the new era of information technology. So, undoubtedly, Accounting Intelligence is the future of accountancy. In the process of promoting the applications of AI, it is very important on the part of the country, enterprises, universities, individuals and other parties to work together and effectively solve the problems and issues arising in the application of artificial intelligence.

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ARTIFICIAL INTELLIGENCE AND ACCOUNTANCY

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Abstract:

Commerce has witnessed major technological developments in recent decades. There are innovative strategies and analytical methods of dealing with different challenges in the field of commerce. As a result of the rapid development of information technology and the emerging needs of economic society, artificial intelligence has ushered in the golden age.

In the coming decades, intelligent systems will take over more and more decision-making tasks from humans. While accountants have been using technology for many years to improve what they do and deliver more value to businesses, this is an opportunity to reimagine and radically improve the quality of business and investment decisions which is the ultimate purpose of this discipline. In order to realize this potential, the profession needs to focus on the fundamental business problems it aims to solve and imagine how new technologies can transform its approach to them.

Artificial Intelligence (AI) systems can be very powerful and are improving quickly. They 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 recognize the strengths and limits of this different form of intelligence and build an understanding of the best ways for humans and computers to work together.

Although AI techniques such as machine learning are not new, and the pace of change is fast, widespread adoption in business and accounting is still in the early stages. In order to build a positive vision of the future, we need to develop an understanding of how AI can solve accounting and business problems, the practical challenges and skills accountants need to work alongside intelligent systems.

This paper takes compatibility of artificial and human intelligence working together as the purpose of research, analyses the impact of artificial intelligence on the development of the accounting industry, highlights some of the limitations of machine learning and puts forward relevant suggestions for its existing problems. Humans alone simply cannot analyze and extract insight from the volumes of data being created today. It is essential to work with machine learning techniques to gain meaning from and make the best use of, big data.

The article by Jiaxin Luo, Qing Jun Meng and Yan Cai titled ***"Analysis of the Impact of Artificial Intelligence application on the development of Accounting Industry"*** *and article by Longinus C, Silas C. E, U. Boniface and N. Victoria titled* ***"Effect of Artificial Intelligence"*** *served the purpose.*

Keywords: *Artificial Intelligence, Human Intelligence, Machine Learning, Technology*

INTRODUCTION

With technology being at the forefront of all businesses, it is imperative that business people are technologically literate and equipped to work with new technologies.

In 1956, at the University of Dartmouth seminar in the United States, John McCarthy and other computer experts first proposed the concept of **"artificial intelligence",** marking the birth of artificial intelligence. Nowadays, artificial intelligence technology has been widely used in agriculture, commerce, education and service industries.

In recent times, significant improvement has been made in artificial intelligence especially relating to the accounting profession which has changed its focus from paper and pencil entry to computer and software entry.

LITERATURE REVIEW

This section of the research article gives the details of the literature survey of research papers and journals exploited for the study.

Jiaxin Luo, Qing Jun Meng and Yan Cai (2018), "Analysis of the Impact of Artificial Intelligence Application on the Development of Accounting Industry" This study was intended to highlight the effects of using artificial intelligence in the accounting industry, keeping in light some of its drawbacks. The outcome showed that undoubtedly artificial intelligence is the future of the accounting industry but the key to its success depends on the efficient involvement of the country and enterprises in solving the problems arising in the process of application.

Longinus C., Silas C., Boniface and N. Victoria (2018), "Effect of Artificial Intelligence" The aim of this study was to examine the effect of artificial intelligence on the performance of accounting operation among accounting firms. It was concluded that the application of artificial intelligence positively influences the performance of accounting functions. The researchers recommended that accountants and accounting firms should continually improve their knowledge regarding artificial intelligence in order to eliminate certain accounting costs.

Cindy Greenman (2017), "Exploring the Impact of Artificial Intelligence on the Accounting Profession" The objective of this study was to identify whether the machines and professionals can strike a balance in the technologically advancing accounting industry and also to predict the future of accounting profession with the growth of artificial intelligence. The result showed and concluded that artificial intelligence in accounting will not replace accountants; it will simply change the focus.

Cara Jaslove (2017), "The Rise of Artificial Intelligence: An Analysis of the Future of Accountancy" This article examined and analyzed how the accounting industry has been developed by artificial intelligence, as well as a potential threat to new hires. The findings of the study show that artificial intelligence will add value to the accounting industry, as certified public accountants can shift their focus towards making more analytic and data-driven decisions.

RESEARCH OBJECTIVES

This research is aimed to evaluate the worth of blending artificial intelligence and the accounting industry together. The main objectives of the study are as follows:

- To study the compatibility of artificial and human intelligence.
- To analyze the long-term vision of artificial intelligence and accountancy.

- To examine if a future in accounting without human intervention is possible.

RESEARCH METHODOLOGY

The research is conceptual in nature and based on secondary data. The secondary data has been collected from journals, research publications, and online information.

DISCUSSION

Artificial Intelligence

Artificial Intelligence (AI) has been an aspiration of computer scientists since the 1950s, and it has seen tremendous progress in recent years. Artificial Intelligence is the name of the academic field of study which studies how to create computers and computer software that is capable of intelligent behaviour. It is thus seen as the simulation of the human brains.

Accountancy, an inseparable part of commerce, is also revising and redesigning itself with artificial intelligence. The support of relevant policies and the issue of regulations mean that the combination of artificial intelligence and accountancy is an inevitable trend in the future and accountancy has to transform and upgrade itself.

Compatibility of Artificial Intelligence and Human Intelligence

It is visible that the artificial intelligence and human intelligence are co-existing and are working together. This research article takes the compatibility of these two bits of intelligence, whether they are going together well, as one of its study objectives.

The research in this direction will enable us to understand both wells and also understand their synergy effect on the development of the economy in general and accountancy discipline in particular. For this purpose, the following section of this paper contains the list of strengths and limits of artificial intelligence to understand it better.

Strengths of Artificial Intelligence

1. They can process huge amounts of data.
2. Computers are able to process information more quickly than humans.
3. They can take up weaker or more complex patterns in data than humans.
4. They can be far more consistent decision-makers; they do not suffer from tiredness or boredom.
5. They are able to streamline the laborious tasks that employees are faced with.
6. The computer chips of today that are used in artificial intelligence systems are designed to digest information with absolutely no hesitation.

Limits of Artificial Intelligence

1. By shifting business practices into the virtual hands of artificial intelligence systems, this could potentially create a slippery slope.
2. Business is conducted on the notion that there must be human interaction. By integrating artificial intelligence into business, this will ultimately disrupt the business world.
3. Artificial intelligence has the potential to be a major hindrance to the creativity of all visionaries.
4. Given the high investments and slow return, many enterprises may stop the introduction of artificial intelligence technology.
5. The unavailability of professional talent limits the adoption of artificial intelligence in accountancy.
6. The disconnection between theoretical knowledge and practical application of discipline is a limiting factor.

Basically, the artificial intelligence system is assuming both the ways of human thinking – intuition and reasoning, while decision making – and is complementing human intelligence. Further, after examining the strengths and limits of Artificial Intelligence, it can be said that the co-existence and compatibility of both are working well and the accounting industry is reaping good results out of it.

THE LONG-TERM VISION FOR ARTIFICIAL INTELLIGENCE AND ACCOUNTANCY

In the coming decades, intelligent systems will take over more and more decision-making tasks from humans. To radically improve the quality of business and investment decisions should be the ultimate purpose of the accounting profession. The long-term vision is as under:

- Focus on purpose
- Exploit powerful technologies
- Think radically
- Be adaptable

ACCOUNTANCY: USER OF ARTIFICIAL INTELLIGENCE TECHNOLOGY

Artificial intelligence is being used by many accounting firms where it analyses a large volume of data at high speed which would not be easy for humans. With so many benefits, artificial intelligence is used increasingly for administrative tasks and accounting, resulting in various structural changes.

Artificial intelligence will help in recognizing data, categorizing them from different sources to the right accounting head. Many other dedicated tasks that were done by accountants like processing of accounts payable and receivables are easily handled by artificial intelligence. Artificial intelligence is used in the following:

1. Monthly or quarterly close procedure
2. Procurement
3. Accounts payable/receivables
4. Audit
5. Expense management
6. Code accounting entries
7. Fraud detection
8. Forecast revenues

Major Technologies of Artificial Intelligence

1. Expert System –
    a. in Cost and Management Accounting
        i. BUCKS
        ii. ICOR Material Subsystem
        iii. ICS
        iv. INVENTORY EXPERT SYSTEM
    b. in Financial Accounting
        i. AGGREGATE
        ii. COMPTA
        iii. CONSOLIDEX
        iv. ELIOSE

    Expert Systems are becoming a reality in the accounting field, particularly in tasks where professional judgment is required.

2. Neural Networks
3. Robots
4. Fuzzy Logic
5. Genetic Algorithm
6. Natural Language Processing (NLP)
7. Intelligent Agents

ARTIFICIAL INTELLIGENCE AND AUTOMATION: FUTURE OF ACCOUNTANCY WITH ARTIFICIAL INTELLIGENCE

After understanding the technology of artificial intelligence, in the past, and its blending with accountancy, at present, the next thought is about the future of artificial intelligence and accountancy. A simple question **"if a future in the accounting profession without human intervention is possible?"** arises. Keeping in mind the details and explanation given in the previous part of the paper, the following arguments can be put forward:

1. In order for automation to replace accountants, the financial information provided by automation needs to be useful.

2. The study shows that accountants will be using automation for routine tasks, rather than being replaced by it.
3. Tasks that require critical-thinking and creativity seem to be more difficult to automate.
4. A lot of technological progress has been made in accounting, but only the automation of routine tasks has been proven efficient.
5. Due to the introduction of automation, the role of accountants changes in the company. Some will shift to an advisory role while others will shift to consultancy.
6. Although the quality of reporting improved since automation, errors still occur.
7. A faithful representation of the financial statement is not yet possible without human intervention.

Thus, it can be concluded that computers may not replace human intelligence in the near future. But since the future is unpredictable and anything is possible one fine day, our human intelligence may find a way to make this artificial intelligence as superintelligence.

FINDINGS

1. Artificial intelligence is critical to the future of the accounting and auditing profession.
2. All aspects of accounting, majorly concerned with information, have been influenced by artificial intelligence technology.
3. The well-developed area of artificial intelligence literature in the accountancy discipline involves the development and use of expert systems.
4. Artificial intelligence researchers also identified that this technology is utilized in financial accounting in terms of cash flow.
5. It would relieve many burdensome tasks of accountants and enable them to focus on higher-value work.
6. In the very near future, artificial intelligence may become completely involved in the monitoring and evaluating of compliance with regulation, organizational policy, employee evaluations and even hiring and firing.
7. The increasing complexity of the relationships between the variables that surround us makes artificial intelligence models more necessary than ever.

8. Artificial systems have their own strengths and limitations, but when every other thing blends with it, the system produces good results.
9. Artificial intelligence could be taken to any extent of automation, but it may not replace human accountants, or we can say accounting without human intervention may not be possible in the future.

Together, these findings lead to the conclusion that there is still space for new developments, either finding the unexplored application or through the creation of new models.

CONCLUSION

The adoption and subsequent use of artificial intelligence in the accounting profession date back to decades ago. However, it gained limelight in recent times as today's business environment and operation embrace digital technology through the adoption of computer devices.

With the introduction of artificial intelligence, the role of accountants is being shifted, the routine work performed by computers is relieving accountants from the burden of monotonous work and enabling them to concentrate on more important tasks of decision making.

The use of artificial intelligence in accountancy has opened up several opportunities to the business but at the same time, there are certain limitations and risks. Artificial intelligence in the accounting world will not replace accountants; it will simply change the focus.

SUGGESTIONS

1. The government vigorously should support the application of artificial intelligence in the accounting field.
2. Enterprise management attaches great importance to the application of artificial intelligence technology.
3. Improve the quality of accounting education in colleges.
4. The gap between theoretical knowledge and practical application should be eliminated.

5. Organizations should avail of the services of software providers who are developing solutions for accounting problems using artificial intelligence.
6. Accountants need to adopt new ways of thinking and acting, in order to make the most of machine learning tools.
7. Regulators should actively encourage and even push the adoption of artificial intelligence technologies to make their business more effective.

Therefore, making certain vital changes and adoptions will improve the artificial intelligence to a great extent so that it will contribute more to the commerce field and also develop accountants and accounting industry to be more efficient, accurate and ethical. All these will help achieve targets of the business and lead to economic development in general.

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A STUDY OF DERIVATIVES MARKET IN INDIA

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ABSTRACT

The Indian derivative market has become multi-trillion-dollar markets over the years. Marked with the ability to partially and fully transfer the risk by locking in assets prices, derivatives are gaining popularity among the investors. Since the economic reforms of 1991, maximum efforts have been made to boost the investors' confidence by making the trading process more users friendly and rigorous efforts have been made to reinforce investor assurance. Financial markets are very inventive in augmenting the popularity of derivatives instruments which exemplifies how resourcefully markets are capable to package and manage risk. At the present in world markets for trade and business have become further incorporated, derivatives have strengthened these significant linkages between global markets, increasing market liquidity, and effectiveness. In India, the emergence and growth of the derivatives market is relatively a recent phenomenon. Hence, the present paper is an attempt to study the evolution of the Indian derivative market and analyze the trading statistics of various derivative segments. These issues need to be resolved to enhance the investors' confidence in the Indian derivative market. The present paper is descriptive in nature and based on the secondary data.

KEYWORDS: *Derivatives, Futures, Options, Exchange (swaps).*

INTRODUCTION

The financial sector has seen significant developments especially towards the end of the twentieth century. The collapse of the Bretton Woods system of fixed exchange rates in 1971, thereafter progresses in financial liberalization paved the way for the growth of international financial transactions. This new era of financial globalization came along with numerous kinds of financial innovations and risk management strategies. The financial derivative was one of them. The developing countries like India opened up their economies and allowed prices to vary with market conditions. Price fluctuations made it almost impossible for the corporate sector to estimate future production costs and revenues. The derivatives provided an effective tool for the problem of risk and uncertainty due to fluctuations in interest rates, exchange rates, stock market prices, and the other underlying assets. The derivative markets have become an integral part of the modern financial system in less than three decades of their emergence. This paper describes the evolution of the Indian derivatives market, trading statistics in its various segments, the various unsolved issues and the future prospects of the derivatives market.

LITERATURE REVIEW

According to Greenspan (1997) "By far the most significant event in finance during the past decades has been the extraordinary development and expansion of financial derivatives…"

Sahoo (1997) opines "Derivatives products initially emerged, as hedging devices against fluctuation in commodity prices and the commodity-linked derivatives remained the sole form of such products for many years. Marlowe (2000) argues that the emergence of the derivative market products most notably forwards, futures and options can be traced back to the willingness of risk-averse economic agents to guard themselves against uncertainties arising out of

fluctuations in asset prices. It is generally stated that regulation has an important and critical role to ensure the efficient and smooth functioning of the markets. According to Sahoo (1997), the legal framework for derivatives trading is a critical part of the overall regulatory framework of derivatives markets. The purpose of regulation is to encourage efficiency and competition rather than impeding it.

Hathaway (1998) stated that, while there is a perceived similarity of regulatory objective, there is no single preferred model for regulation of derivatives markets.

Avadhani (2000) stated that a derivative, an innovative financial instrument, emerged to protect against the risks generated in the past, as the history of financial markets is repleted with crises). Events like the collapse of the fixed exchange rate system in 1971, the Black Monday of October 1987, the steep fall in the Nikkei in 1989, the US bond debacle of 1994, occurred because of a very high degree of volatility of financial markets and their unpredictability. Such disasters have become more frequent with increased global integration of markets.

OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

i) To study the evolution of the Indian derivative markets.
ii) To analyze the trading statistics of various derivative segments.
iii) To examine the various issues in the Indian derivative market and future prospects of the market.

FINANCIAL DERIVATIVES

A derivative is an instrument whose value is 'derived' from another security or economic variable. The dependence of the derivative's value on other prices or variables makes it an excellent vehicle for transferring and managing risk.

According to **John C. Hull,** "A derivative can be defined as a financial instrument whose value depends on (or derives from) the values of other, more basic underlying variables."

Also defined by **Robert L. McDonald** "A derivative is simply a financial instrument (or even more simply an agreement between two people) which has a value determined by the price of something else."

TYPES OF DERIVATIVES

The derivatives can be classified in a number of ways.

One way of classifying derivatives is as,

DERIVATIVES

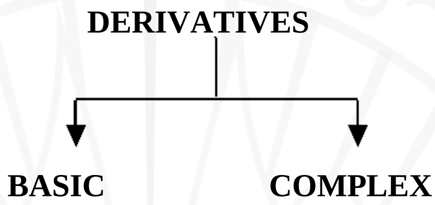
COMMODITY **FINANCIAL**

1. COMMODITY DERIVATIVES

These deals with commodities like sugar, gold, wheat, pepper, etc. thus, futures or options on gold, sugar, pepper, jute, etc. are commodity derivatives.

2. FINANCIAL DERIVATIVES

Futures or options or Swaps on currencies, gilt-edged securities, stocks, and shares, stock market indices, cost of living indices, etc. are financial derivatives. Another way of classifying Derivatives is

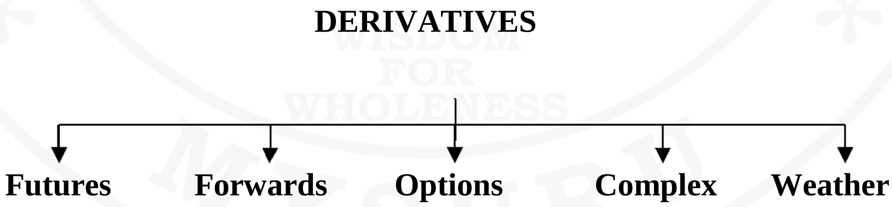


3. BASIC DERIVATIVES

They are forward / futures contracts and options contracts.

4. COMPLEX DERIVATIVES

Other derivatives, such as SWAPS are complex ones because they are built up from either forward / future contracts or options contracts or both. Generally, derivatives can be classified as follows:



5. FUTURES

A futures contract is a contract to "buy or sell a standard amount of or predetermined grades of a certain commodity (i.e. commodity futures) or financial instruments or currency (that is financial futures) on a predetermined future day at an agreed price."

6. FORWARDS

It is "an agreement between two parties to buy or sell a commodity or financial instrument at a predetermined future date at a price agreed when the contract is a made". The forward contracts are normally traded outside the exchanges. Forward contracts are very useful in hedging and speculation.

7. OPTIONS

They are the second, most important group of derivative securities, first being futures. It is "a contract between two parties whereby one party acquires the right, but not the obligation to buy or sell a particular commodity or financial instrument at a specified date". Options are of two types

(a) Call option (b) Put option

(a) Call Option: Call option gives the holder the right but not the obligation to buy an asset by a certain date for a certain price.

(b) Put Option: Put option gives the holder the right but not the obligation to sell an asset by a certain date for a certain price.

8. COMPLEX DERIVATIVES

Using futures and options it is possible to build a number of complex derivatives. IT is designed to suit the particular needs and circumstances of a client. Example: SWAPS, Credit Derivatives

9. WEATHER DERIVATIVES

This is a new tool for risk management. This is a contract between 2 parties that stipulate how payment will be exchanged between parties depending on certain meteorological conditions during the contract period. They are based on data such as temperature, rainfall, snowfall, etc. The primary objective of this derivative is to initiate the volume risks, which will influence the Balance Sheet and Profit and Loss figures.

HISTORY OF DERIVATIVES MARKET IN INDIA

The origin of derivatives can be traced back to the need of farmers to protect themselves against fluctuations in the price of their crops. From the time it was sown to the time it was ready for harvest, farmers would face price uncertainty. Through the use of simple derivative products, it was possible for the farmer to partially or fully transfer price risks by locking-in asset prices. These were simple contracts developed to meet the needs of farmers and were basically a means of reducing risk.

Derivative markets in India have been in existence in one form or the other for a long time. In the area of commodities, the Bombay Cotton Trade Association started futures trading way back in 1875. This was the first organized futures market. Then Bombay Cotton Exchange Ltd. in 1893, Gujarat Vyapari Mandall in 1900, Calcutta Hesstan Exchange Ltd. in 1919 had started a future market. After the country attained independence, the derivative market came through a full circle from the prohibition of all sorts of derivative trades to their recent reintroduction. In 1952, the government of India banned cash settlement and options trading, derivatives trading shifted to informal forwards markets. In recent years' government policy has shifted in favour of an increased role at market-based pricing and less suspicious derivatives trading.

The first step towards the introduction of financial derivatives trading in India was the promulgation at the securities laws (Amendment) ordinance 1995. It provided for withdrawal at prohibition on options in securities. The last decade, beginning the year 2000, saw the lifting of the ban of futures

trading in many commodities. Around the same period, national electronic commodity exchanges were set up. Derivatives trading commenced in India in June 2000 after SEBI granted the final approval to this effect in May 2001 on the recommendation of L. C Gupta committee. Securities and Exchange Board of India (SEBI) permitted the derivative segments of two stock exchanges, NSE and BSE, and their clearinghouse/corporation to commence trading and settlement in approved derivatives contracts. Initially, SEBI approved trading in index futures contracts based on various stock market indices such as S&P CNX, Nifty, and Sensex. Subsequently, index-based trading was permitted in options as well as individual securities.

DERIVATIVES PRODUCTS TRADED IN DERIVATIVES SEGMENT OF BSE

The Bombay Stock Exchange (BSE) created history on June 9, 2000, when it launched trading in Sensex based futures contract for the first time. It was then followed by trading in index options on June 1, 2001; in stock options and single stock futures (31 stocks) on July 9, 2001, and November 9, 2002, respectively. It permitted trading in the stocks of four leading companies namely; Satyam, State Bank of India, Reliance Industries and TISCO (renamed now Tata Steel). *Chhota* (mini) SENSEX7 was launched on January 1, 2008. With a small or 'mini' market lot of 5, it allows for comparatively lower capital outlay, lower trading costs, more precise hedging, and flexible trading. Currency futures were introduced on October 1, 2008, to enable participants to hedge their currency risks through trading in the U.S. dollar rupee future platforms. In addition to the SENSEX®, five sectoral indices belonging to the 90/FF series are also available for trading in the Futures and Options Segment of BSE Limited. Table 1.1 below shows the trade details of the equity derivatives segment at BSE.

Trade Details of Equity Derivatives Segment at BSE

Year	No. of contracts traded	Turnover (Rs in million)
2013-14	285,640,217	92,194,346
2012-13	262,443,366	71,635,180
2011-12	32,222,825	8,084,770
2010-11	5623	1,540

DERIVATIVES PRODUCTS TRADED IN DERIVATIVES SEGMENT OF NSE

The National Stock Exchange of India Limited (NSE) commenced trading in derivatives with the launch of index futures on June 12, 2000. The futures contracts are based on the popular benchmark Nifty 50 Index. The Exchange introduced trading in Index Options (also based on

Nifty 50) on June 4, 2001. NSE also became the first exchange to launch trading in options on individual securities from July 2, 2001. Futures on individual securities were introduced on November 9, 2001. Futures and Options on individual securities are available on 162 securities stipulated by SEBI. Table 1.2 below shows the trade details of the equity derivatives segment at NSE.

Trade Details of Equity Derivatives Segment at NSE

Year	No. of contracts traded	Turnover (Rs in million)
2013-14	1,284,424,321	382,114,077
2012-13	1,131,467,418	315,330,040
2011-12	1,205,045,464	313,497,318
2010-11	1,034,212,062	292,482,211

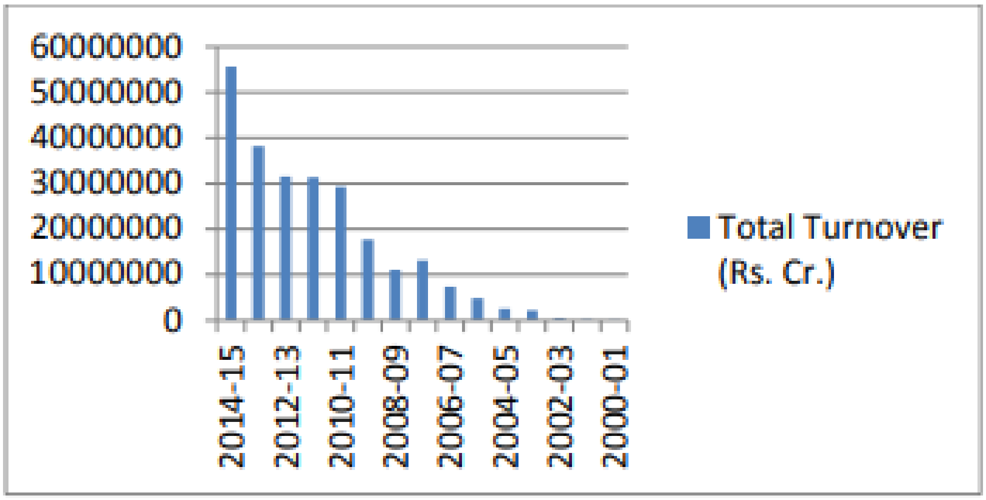
The Exchange has also introduced trading in Futures and Options contracts based on Nifty IT, Nifty Bank, and Nifty Midcap 50, Nifty Infrastructure, Nifty PSE indices. Since the launch of the Index Derivatives on the popular benchmark Nifty 50 Index in 2000, the National Stock Exchange of India Limited (NSE) today has moved ahead with a varied product offering in equity derivatives. The Exchange currently provides trading in Futures and Options contracts on 9 major indices and more than 100 securities. The various kinds of equity derivative contracts that are traded on NSE are shown in table 1.3 for the fiscal year 2013-14.

INDIAN DERIVATIVES MARKET

India's experience with the equity derivatives market has been extremely positive. The turnover of derivatives increased from 24 billion rupees in 2000-01 to 313,497 billion rupees in 2011-12 and further to 315,330 billion rupees in 2012-13. In 2013-14, the figure reached 382114.1 billion rupees. The average daily turnover in the equity derivatives segment of NSE was 1522.37 billion rupees in 2013-14 as compared to 1266.4 billion rupees in 2012-13.

The year-wise growth in the derivatives segment of NSE is shown in the table below

Year-wise Growth in the Derivative Segment of NSE Year	**Total No. of Contracts**	**Total Turnover (Rs. Cr.)**	**Average Daily Turnover** (Rs. Cr.)
2013-14	1284424321	38211408.1	152236.7
2012-13	1131467418	31533004	126638.6
2011-12	1205045464	31349731.7	125902.5
2010-11	1034212062	29248221.1	115150.5
2009-10	679293922	17663664.6	72392.07
2008-09	657390497	11010482.2	45310.63
2007-08	425013200	13090477.8	52153.3
2006-07	216883573	7356242	29543
2005-06	157619271	4824174	19220
2004-05	77017185	2546982	10107
2003-04	56886776	2130610	8388
2002-03	16768909	439862	1752
2001-02	4196873	101926	410
2000-01	90580	2365	11



The data clearly reveals that there has been a continuous and steep rise in the turnover of derivative contracts over the years except for the year 2008-09 which witnessed the Sub Prime crises. The investors' participation has increased manifold since the introduction of derivatives. India is one of the most successful developing countries in terms of a vibrant market for exchange-traded derivatives. This reiterates the strengths of the modern development in India's securities markets, which are based on nationwide market access, anonymous electronic trading, and a predominantly retail market. There is an increasing sense that the equity derivatives market plays a major role in shaping price discovery.

UNRESOLVED ISSUES AND FUTURE PROSPECTS

Even though the derivatives market has shown good progress in the last few years, the real issues facing the future of the market have not yet been resolved. The number of products allowed for derivative trading has increased and the volume and the value of the business have zoomed, but the objectives of setting up different derivative exchanges may not be achieved and the growth rates witnessed may not be sustainable unless these real issues are sorted out as soon as possible. Some of the main unresolved issues are as under.

Issues for Market Stability and Development: The enormous size and fast growth of the Over the Counter (OTC) derivatives market has attracted the attention of regulators and supervisory bodies. Some OTC derivatives have been viewed as amplifiers of the stress in the present global financial crisis. The more common criticisms relate to the fact that the OTC markets are less transparent and highly leveraged, have weaker capital requirements and contain elements of hidden systemic risk.

1) **The Warehousing and Standardization:** For the commodity derivatives market to work smoothly, it is necessary to have a sophisticated, cost-effective, reliable and convenient warehousing system in the country. The Habibullah (2003) task force admitted, "A sophisticated warehousing industry has yet to come about". Further, independent labs or quality testing centers should be set up in each region to certify the quality, grade, and quantity of commodities so that they are appropriately standardized and there are no shocks waiting for the ultimate buyer who takes the physical delivery.

2) **Cash vs. Physical Settlement:** Only about 1% to 5% of the total commodity derivatives trade in the country is settled in physical delivery. It is probably due to the inefficiencies in the present warehousing system. Therefore, the warehousing problem obviously has to be handled on a war footing, as a good delivery system is the backbone of any commodity trade. A major problem in cash settlement of commodity derivative contracts is that at present, under the Forward Contracts (Regulation) Act 1952, cash settlement of outstanding contracts at maturity is disallowed. In other words, all outstanding contracts at maturity should be settled in physical delivery. To avoid this, participants settle their positions before maturity. So, in practice, most contracts are settled in cash but before maturity. There is a need to modify the law to bring it closer to the widespread practice and save the participants from unnecessary hassles.

3) **Increased Off-Balance Sheet Exposure of Indian Banks:** The growth of derivatives as off-balance sheet (OBS) items of Indian Banks has been an area of concern for the RBI. OBS exposure/risk has increased significantly in recent years. The notional principal amount of OBS exposure increased from Rs.8,42,000 crores at the end of March 2002.

4) **The Regulator:** As the market activity pick-up and the volumes rise, the market will definitely need a strong and independent regulator; similar to the Securities and Exchange Board of India (SEBI) that regulates the securities markets. Unlike SEBI which is an independent body, the Forwards Markets Commission (FMC) is under the Department of Consumer Affairs (Ministry of Consumer Affairs, Food, and Public Distribution) and depends on it for funds. It is imperative that the Government should grant more powers to the FMC to ensure the orderly development of the commodity markets. The SEBI and FMC also need to work closely with each other due to the inter-relationship between the two markets.

5) **Tax and Legal bottlenecks:** In India, at present, there are tax restrictions on the movement of certain goods from one state to another. These need to be removed so that a truly national market could develop for commodities and derivatives. Also, regulatory changes are required to bring about uniformity in octroi and sales taxes, etc. The VAT has been introduced in the country in 2005 but has not yet been uniformly implemented by all states.

CONCLUSION

The Indian derivative market has achieved tremendous growth over the years, and also has a long history of trading in various derivatives products. The derivatives market has seen ups and downs. The new and innovative derivative products have emerged over time to meet the various needs of the different types of investors. Though the derivative market is burgeoning with its divergent products, yet there are many issues. Among the issues that need to be immediately addressed are those related to, lack of economies of scale, tax, and legal bottlenecks, increased off-balance sheet exposure of Indian banks, need for an independent regulator, etc. A solution to these issues will definitely lead to boost the investors' confidence in the Indian derivative market and bring an overall development in all the segments of this market.

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ROLE OF BEHAVIORAL FACTORS IN SHARE MARKET INVESTMENT DECISION MAKING

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Abstract

The investment behavior of individual investors in the share market highly influenced by a variety of psychological factors. All the psychological factors highly contribute to investors' decision of allocating the surplus financial resources for different instruments and stocks in the stock market. Major psychological bias broadly classified as Heuristic Bias, Prospect Bias, Market Bias, and Hardening Bias. But, in this study authors concentrated in detail to investigate the impact of Heuristic bias on the investment decision making of Indian share market investors with special focus on the representativeness, overconfidence, anchoring, gambler's fallacy and availability bias. 375 share market investors selected from different geographical areas and different share broking houses to answer structured questionnaires but the response received for 310 questionnaires. Also, share broker, financial experts, and regular investors informally interviewed to get in-depth knowledge on the issues related to the influence of psychology on investment decisions of individual investors of the share market. Different behavioral variables in this study have been justified on the basis of respondents' age, gender, geography, kind of investor, recourses for investment, the amount for investment, etc. Indian share market investment lagging behind just with the participation of not more than 6% of the total population due to several issues, one among is the failure of both investor and share service providing agencies to understand the influence of behavioral issues and its impact on investment decision. Final justification in the present empirical paper draw by applying different statistical techniques like chi-square test, factor analysis, correlation analysis and ANOVA techniques of SPPS 20. This research attempt may be highly helpful for both the investors and financial service providers to reconstruct strategies after considering behavioral issues and its impact on investment.

Keywords: *Share Market, Investment, Psychological Factors, Prospect Bias, Market Bias, and Hardening Bias*

INTRODUCTION

A successful investor will take investment decisions after careful analysis of the economy, industry, and company in the share market investment process. Most of the researchers in the capital market have proved that diversification will results in the reduction of risk to a greater extent in the highly volatile market conditions. Traditional economic theories assumed that investors behave rationally in the course of investment decision making, due to the fact that people are not always rational, their financial decisions may be driven behavioral preconceptions. The highly volatile market put forward a question mark on the validity of an efficient market hypothesis. Behavioral finance is the new stream of study which tries to justify issues faced by traditional investors. Individual investors found to be influenced by many behavioral factors that restrict them from acting rationally in the investment decision-making process as supported by the traditional economic theories. An individual's behavior and emotional biases show the direction for financial decisions such as the allocation of resources for different securities and other relevant investment decisions.

MAJOR BEHAVIORAL FACTORS INFLUENCING INVESTORS' DECISION-MAKING

Behavioral finance is based on psychology which suggests the human decision process is subject to several cognitive illusions. Illusions are categorized into two groups: illusions caused by heuristic decision process and illusions rooted from the adaption of mental frames grouped in the prospect theory. Apart from this herding and market factors also contributes significantly to individual decision making.

HEURISTIC THEORY

A heuristic is a mental shortcut that allows people to solve problems and make judgments quickly and efficiently. These rule-of-thumb strategies shorten decision-making time and allow people to function without constantly stopping to think about their next course of action. Nobel Prize-winning psychologist Herbert Simon suggested that while people strive to make rational choices, human judgment is subject to cognitive limitations.

Short Definitions of Major Cognitive Factors of Heuristic Theory		
S.No	**Factors**	**Short Definition**
1	Representativeness	"The degree to which (an event) (i) is similar in essential characteristics to its parent population, and (ii) reflect the salient features of the process by which it is generated"
2	Availability Bias	"The availability heuristic bias is a mental shortcut that relies on immediate examples that come to a given person's mind when evaluating a specific topic, concept, methods or decisions"
3	Anchoring Factor	"Cognitive bias where an individual depends too heavily on an initial piece of information offered when making decisions"
4	Gambler's Fallacy	"A bias against deciding the same way in successive situation"
5	Overconfidence	"A person's subjective confidence in his or her judgments is reliably greater than the objective occurrence of those judgments, especially when confidence is relatively high"

Figure 1: Source: developed for the study (2019)

PROSPECT THEORY

Prospect theory focuses on subjective decision-making influenced by the investors' value system. Prospect theory describes some states of mind-affecting an individual's decision-making processes including regret aversion, loss aversion, and mental accounting.

MARKET THEORY

The financial market can be affected by investors' behaviors in the way of behavioral finance. It is believed that the investors may have over or under reaction to price changes or news; extrapolation of past trends into the future, a lack of attention to fundamentals underplaying a stock, the focus on popular stocks and seasonal price changes cycle.

HERDING EFFECT

Herding effects in the financial market are identified as the tendency of investors' behavior to fallow the others' actions. In the perspective of behavior, herding can cause some emotional biases, including conformity, congruity and cognitive conflict, the home bias, and gossips. Investors may prefer herding if they believe that herding can help them to extract useful and reliable information.

STATEMENT OF PROBLEM

The Indian share market has covered not more than 7% of the total population. There are thousands of stories that have got huge success in the stock market investment and, on another side people who lost everything including their live even share market investment. Unawareness and fear led India to share market investment behind the dark shade. Purchasing and selling activities of the Demat account holders completely influenced by their behavioral aspects which finally results in unexpected fluctuations of the share price movements. It is an immediate requirement to evaluate**, "what extent different behavioral factors of the investors do influences purchase/selling decisions and performance in the share market investment process?"**

RESEARCH OBJECTIVES AND QUESTIONS

The present research is an attempt to achieve the following objectives:

- Applying the behavioral finance to identify the possible behavioral factors of heuristic theory influencing the investment decisions of individual investors of Indian Stock Exchanges.
- Identifying the impact levels of behavioral factors of heuristic theory on the investment decisions and performance of individual investors of Indian Stock Exchanges.
- Recommendations for individual investors and share broking houses to adjust their heuristic behavior to achieve good investment results.

Some questions are raised to get these research objectives subsequently followed by answering these following questions:

- What are the behavioral variables of heuristic theory influencing individual investors of Indian Stock Exchanges?
- At which impact level these behavioral factors do influence the individual investors' decisions of Indian Stock Exchanges?
- At which impact level do these behavioral factors influence the investment performance of individual investors of Indian Stock Exchanges?

SIGNIFICANCE OF THE RESEARCH

To the individual investors: Investors behavior may be a very useful tool which shows direction for the individual investors to take effective investment decision by understanding the directions of the share market price movement because of behavioral factors.

To the security organizations: This research helps to understand behavioral factors affecting investment decision making and thereby to upgrade prediction and consultation work.

LIMITATIONS OF THE STUDY

Due to time constraints, this study concentrates only on behavioral factors of the individual investor of Indian stock exchanges. Out of four different theories of behavioral factors, the only heuristic theory is considered in-depth.

2. Literature Review

Foreign Studies:	
Author(s)	**Findings**
Jagongo Ambrose, (2011)	Herding, market, prospect, overconfidence, gamble's and anchoring ability are having a moderate impact on investment decisions of investors at the Ho Chi Mihn Stock Exchange, whereas market factor as a high impact. Also found three factors are found to influence the investment performance i.e., Herding (Including buying and selling; choice of trading stocks; the volume of trading stocks; the speed of herding), Prospect (including loss aversion, regret aversion and Mental accounting), and Heuristics (including overconfidence and gambles' fallacy).
Seetharam et al (2017)	45.6 % of the variance in the extent of investors' behavior can be explained by the asset familiarity, investment objectives and risk profile of the individual investors. Financial knowledge or understanding about a

	particular investment product and investment objective has a significant impact on investors' behavior but investors' risk profile proved to be not having a significant influence on investment decisions.
Le Phuoc Luong & Doan Thi Thu Ha (2011)	Research thesis on behavioral factors influencing individual investors' decision-making and performance, a survey on Chi Minh Stock Exchange of Vietnam, tried to give a detailed structure on the survey to understand the impact of behavioral variables and its impact on investment decision-making and performance. All behavioral factors played a significant positive impact on the Vietnam Stock Exchange. While performance and satisfaction on investment decisions taken shown a moderate impact on behavioral variables.
Foreign Studies:	
Author(s)	**Findings**
Dr. V. Raman Nair, Anu Antony (2015)	• Behavioral finance is not a replacement to the classical finance paradigm, but an alternative solution to explain the market inefficiency and the irrational behavior of investors. • A frequency of obvious over-reaction to information is similar to that of under-reaction in terms of EMH by considering anomalies as chance results • A considerable number of reasons as to why the efficient hypothesis was so generally acknowledged in mainstream finance, at least in academic circles. • The six anomalies are (a) Excessive volatility, (b)Risk premium puzzle (c)book to market ratio (d) closed-end fund discount (e)calendar effect (f) Stock market crash (Rubinstein, 2001). He also emphasized that several psychological assumptions and phenomena were considered in the EMH.
Sudhir Singh (2012)	• Create awareness of the various human biases of investors and the high costs they impose on their portfolios
	• The intrinsic value is far less than the market value except for a few exceptions. The study revealed that shares are overvalued to a greater extent and created a bubble in the market which is expected to be burst at any time.

Dr.Mahabaleswara Bhatta HS (2010)	• This paper proved with evidence that people will behave unpredictably and irrationally. Major issues that are unanswerable are The January Effect (Michael and William, 1976), The Winner's Curse (Robert Thaler, 1988) and the equity premium Puzzle. • Investors trade both for cognitive and emotional reasons.
Mr.K.Riyazahmed, Dr.MG.Saravanaraj (2015)	* Heuristic variables are grouped into two factors: overconfidence gambler's fallacy and Anchoring ability bias. All heuristic variables have a moderate impact on investment decision making. *In the dimensions of prospect, all its three kinds of behavior: loss aversion, regret aversion, and mental accounting have their representative variables influence the decision making of the investors stock investment. *Changes in the stock prices, market information, and past trends of stocks are variables of the market that have high influence. * Impact of Herding is high on Investment decision (Others choice - Volume - buying & selling decision of others - Immediate reaction towards other buying & selling decision)

Figure 2: Source: developed for the study (2019)

RESEARCH DESIGN AND RESEARCH METHODOLOGY

Research Approach

Figure 3: Source: developed for the study (2019)

RESEARCH DESIGN AND METHODOLOGY

Research design provides a framework for data collection and analysis. Since, the large sample size required to study at a single time, the cross-sectional design is preferred. The cross-sectional design allows collecting and analyzing data from more than one case at one single time. The patent of association is then examined by using the collected quantitative or quantifiable data. Cross-sectional design most relevant in this study due to an attempt in this study is to describe a common trend of investors' behavior rather than one specific case, and data is collected in a single time period.

Variables under the Study: (Independent and Dependent Variable)

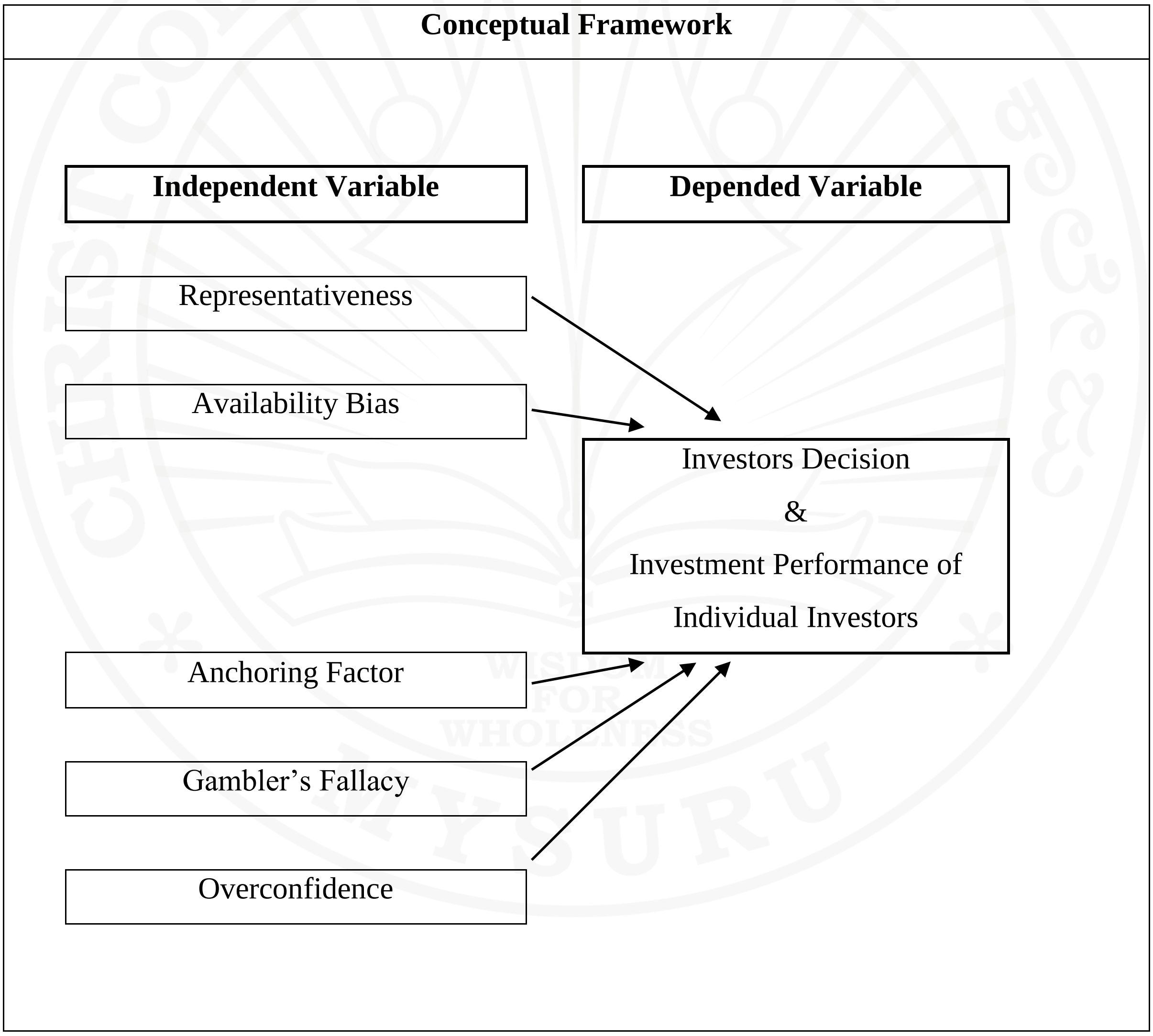


Figure 4: Source: developed for the study (2019)

DATA COLLECTION METHOD AND RESPONDENTS SELECTION

The study is based on primary data that have been collected from 375 randomly selected individual investors of the stock market from different stock broking houses of the Udupi and Dakshin Kannada districts through a structured questioner using 5 points Likert scale ranging strongly disagree to strongly in appropriate areas. In this study data collected during the period from January 2018 to March 2019. Questionnaires are sent to respondents using stratified random sampling by distributing 75 questionnaires each among the agents of the top 5 share broking houses of Udupi and Dhakshina Kannada district, who are responsible for sending to investors randomly. Finally, 310 properly filled questionnaires are chosen for a proposed empirical survey. A pre-determined set of objectives of the study analyzed used through several statistical and econometric tools such as Descriptive Statistics, Cronbach Alpha, Factor Analysis Correlation Coefficient and Regression Model using SPSS. Also, unstructured discussions placed before share brokers, senior investors to understand the reality behind the investors' behavior in picking the securities in the share market.

RESPONDENTS SELECTION AND RESPONSE RATE

	Company Name	No. Questionnaire Sent	Number of Response Received	Response %
1.	Karvy Stock Broking	75	68	**90.67**
2.	Adithya Birla Capital Ltd.	75	71	**94.67**
3.	Angel Broking Pvt. Ltd.	75	57	**76.00**
4.	Capitalvia Global Research	75	54	**72.00**
5.	Hirwani's World Org.	75	60	**80.00**
	Grand Total	**375**	**310**	**82.67**

Figure 5: Source: developed for the study (2019)

It can be observed from the above figure that out of sent 375 questionnaires, 310 samples selected after primary screening. The response rate of the survey is 82.67 % is highly acceptable for generalizing the final findings.

PERCENTAGE OF SAMPLES FROM DIFFERENT STOCK BROKING HOUSES

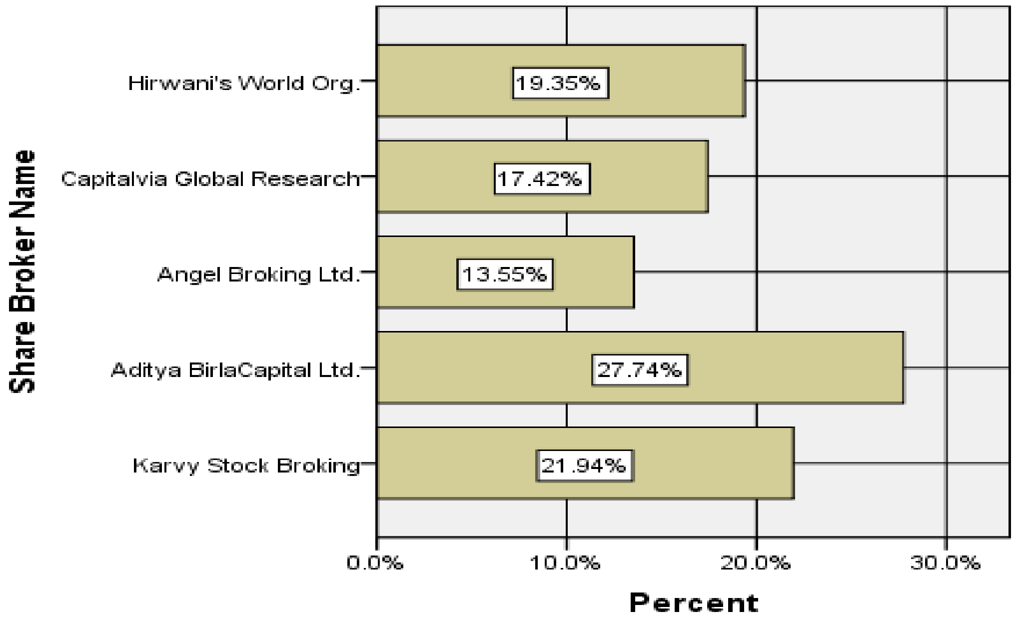


Figure 6: Source: developed for the study (2019)

As mentioned in the methodology 75 questionnaires each were sent to five well-known stock broking houses and on the basis of final response distribution of samples spread between lowest 13.55% to highest 27.74%.

DESIGN AND MEASUREMENT OF QUESTIONNAIRE

Personal Information and Other Related Details:

Personal Information	Questions	Types of Measurement
Classifying: Gender, Area, professional background and Stock Broking Agency	Questions 1,4,5 &10	Nominal
Classifying and Raking Order of Age, Qualification, Average Annual Income, Amount reserved for all kinds of investment, the average amount in share market Investment, Type of Investor & Experience in Share Market	Questions 2,3,6,7,8,9 & 11	Ordinal

Figure 7: Source: developed for the study (2019)

VERIFICATION ON BEHAVIORAL AND PERFORMANCE FACTORS

Groups	Dimensions Questions	Question	Measurement
Heuristic Behavioral Factor	1. Representativeness 2.Over Confidence 3.Achoring 4.Gambler Fallacy 5.Ability Bias	Question 12 - 13, Question 14, Question 15 -16, Question 17, Question 18-19	6 - Point Likert Scale
Investment Performance	1. Meeting Return Rate Expectation, 2. Beating Market return 3. Satisfaction in investment decision	Question 20, Question 21, Question 23	6 - Point Likert Scale

Figure 8: Source: developed for the study (2019)

HYPOTHESIS OF THE STUDY

Hypothesis 1:

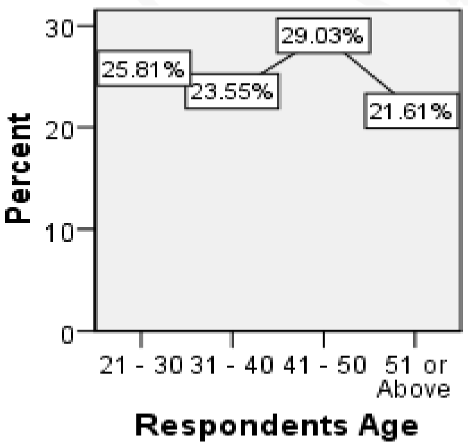
H_0 = There are no latent underlying structures and that all variables of heuristic load equally for investors' investment decisions.

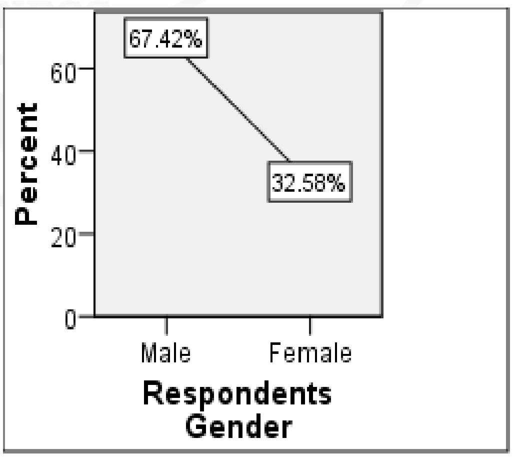
Hypothesis 2:

H_0 = There is no significant impact of heuristic behavioral variables on investment performance.

EMPIRICAL FINDINGS

Sample distribution of gender, age and combined of age & gender





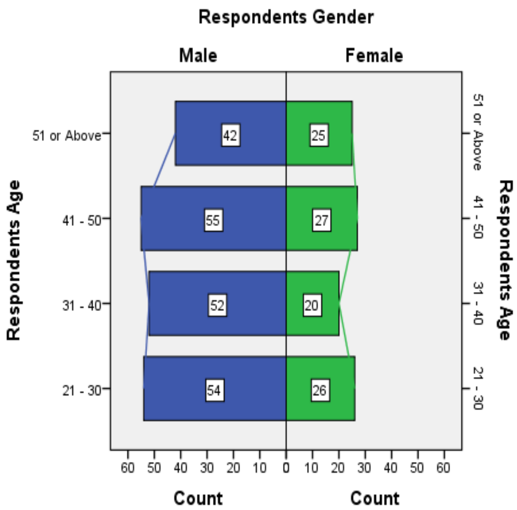


Figure 9: Source: developed for the study (2019)

In the above three charts respondent's classification is done on the basis of age, gender and combined classification of both gender and age. Approximately respondents are equally distributed in all age groups, but the gender-wise big gap was found between males and females to the extent of 67% and 33% respectively.

Table showing respondents educational status and professional background:

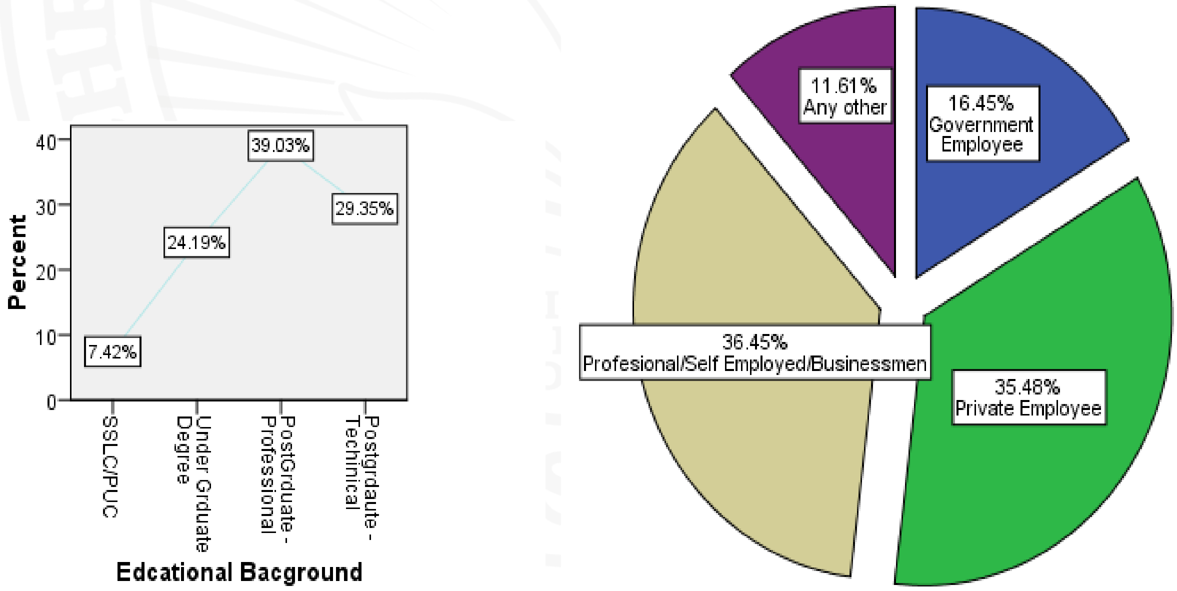


Figure 10: Source: developed for the study (2019)

In the above graphical representation, it can be depicted that 40% of the respondents are having the qualification of post-graduation in professional subjects, whereas 30% of the respondents are from technical higher degree qualification. Private employees and professional self-employed/businessman covered to the extent of 70% of the overall Demat account holding. Only 17% of government employees actively involved in share investment activities.

Table showing residential status and type of job/profession held by the respondents:

The above charts showed more than 75% of the Demat account holders either from semi-urban or urban residency, whereas only 23% of the Demat account holders from a rural area.

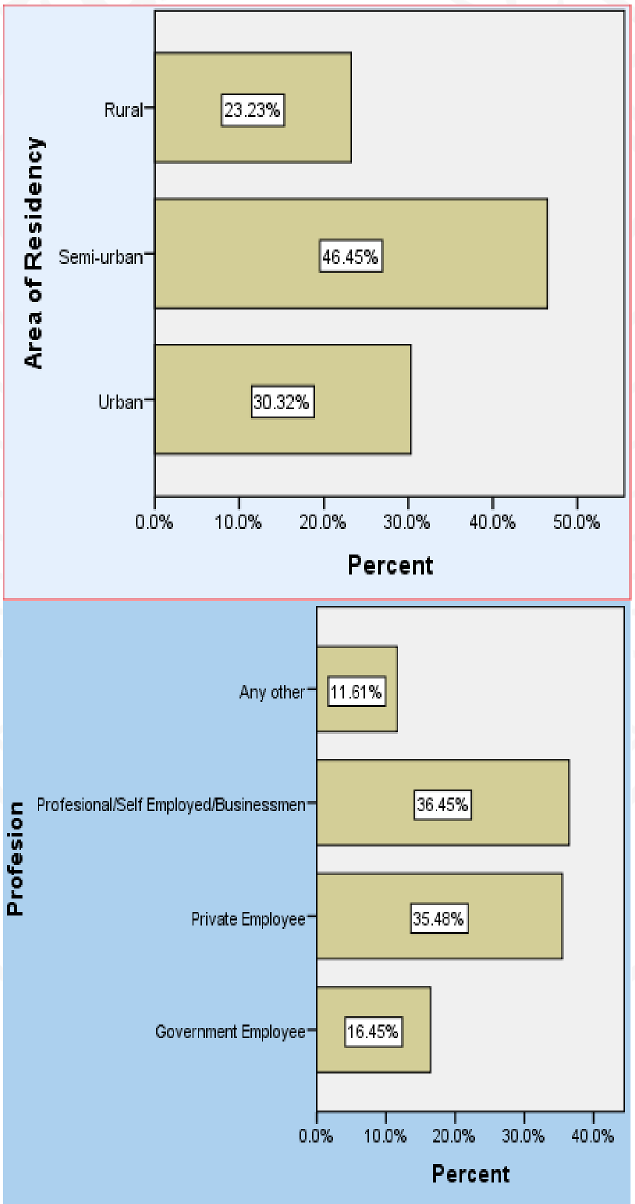
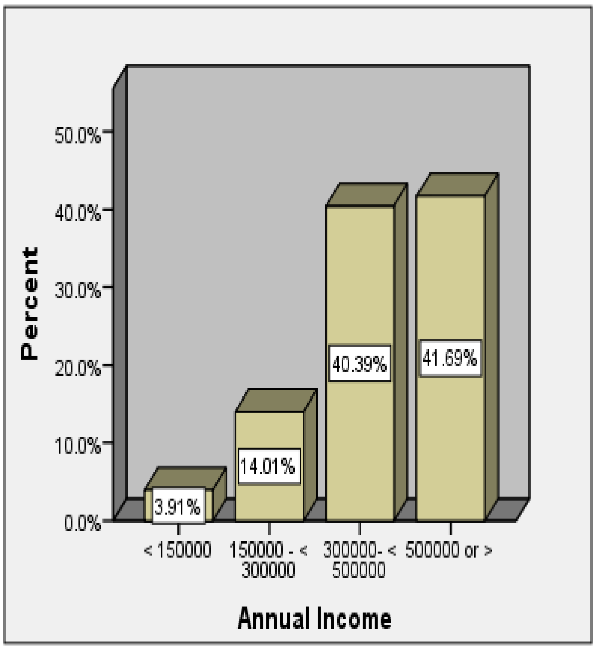
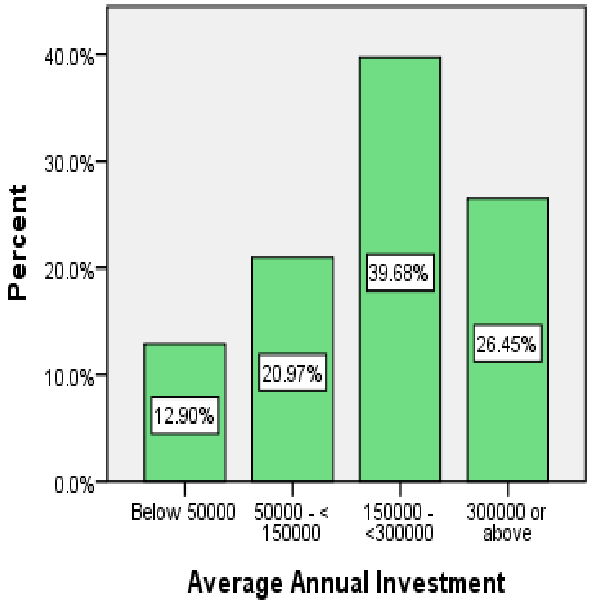
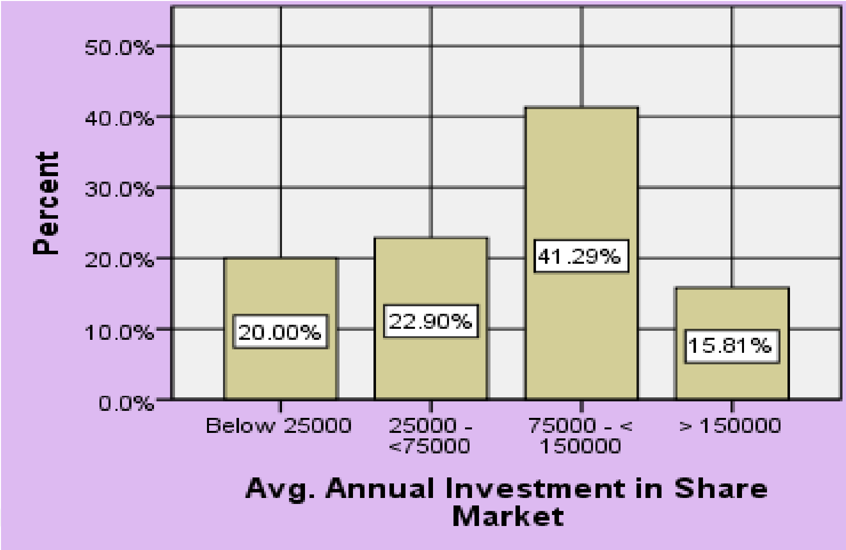


Figure 11: Source: developed for the study (2019)

Table showing average annual income, total investment and amount reserved for share market investment:







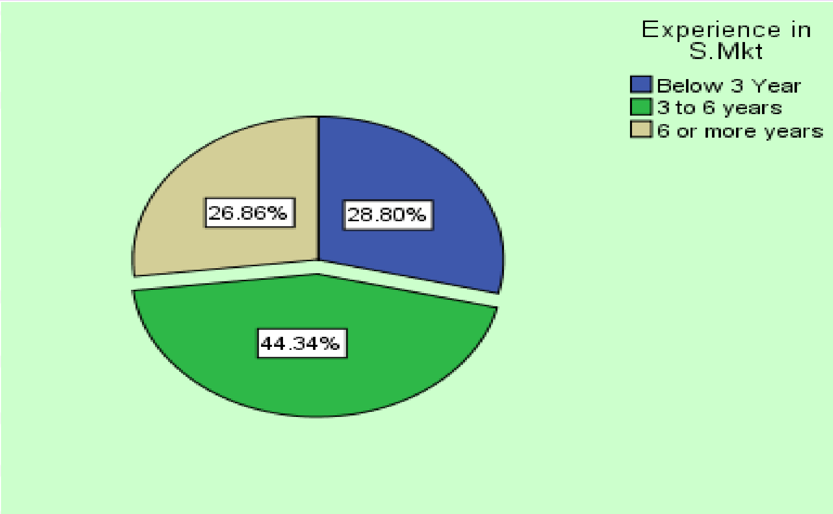


Figure 12 Source: developed for the study (2019)

The above four charts discuss the issues of annual salary, average annual investment, the amount invested in the share market and experience in the share market investment of the respondents. More than 82% of the respondents have an annual income greater than Rs. 3,00,000. Maximum 40% of the Demat account holders' average amount reserved for investment is between Rs. 1,50,000 to Rs. 3,00,00. Annual average investment in the share market is between Rs. 75,000 to Rs.1,50,000 for maximum 42% of the respondents. Finally, the average experience for the share market investment is 3 to 6 years for 45% of the investors.

TYPE OF INVESTOR

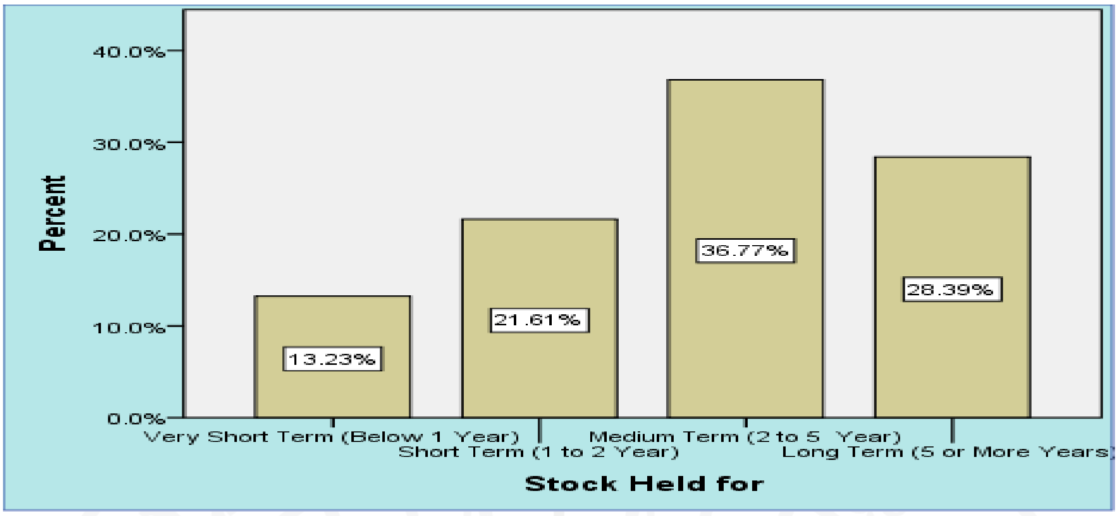


Figure 13 Source: developed for the study (2019)

Investment tenure of the investors in share market investment is considered as a base to decide the variable, 'type of investor'. Maximum 37% of the investor will hold their securities for 2 to 5 years which shows the medium-term investment characteristic. 29% of the investors are holding their positions for more than even 5 years shows long term attitude of the investors. Maximum people will have the fear of speculation and gambling which resulted in a negligible number of investors showing interest in the short term or very short term investment in the share market.

FACTOR ANALYSIS OF BEHAVIORAL VARIABLES INFLUENCING THE INDIVIDUAL INVESTMENT DECISIONS AND VARIABLES OF INVESTMENT PERFORMANCE

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.701
Bartlett's Test of Sphericity	Approx. Chi-Square	64.676
	df	28
	Sig.	.000

Figure 14: Source: developed for the study (2019)

The data were entered into Microsoft Excel and imported to SPSS and factor analysis supported by principal components analysis and was conducted to develop archetypes of investors based on heuristics and biases they exhibited. The data were screened first creating a correlation matrix. The results revealed that there were many coefficients in the moderate-to-high range, which encouraged continuing with the factor analysis. The first test, "KMO Test for Sample Adequacy" resulted in a score of .701. Any value greater than .6 for the KMO test indicates that factor analysis can be used. The next test, Bartlett's, also indicated that the data were suitable for factor analysis, which a chi-square test significant at .000. The satisfaction of both the test allowed us to move with principal components factor analysis.

The analysis provided evidence of the underlying structure and the existence of four components (latent variables). The first components explained 17.396% of the variance, second, third and fourth components explained 15.634%, 13.640% and 12.930% of the variance respectively. Together they explained 59.599% of the variance in our all variable.

Naming our newly discovered components, we look at the Components Matrix and the Rotated Components Matrix. When Varimax rotation is applied there is very few changes are expected, so we can select either matrix.

HYPOTHESIS 1

H_0 = There is no latent underlying structure and that all variables of heuristic load equally for investors' investment decisions.

Hypothesis rejected and it can be concluded that all variables of the heuristic behavioral factors don't contribute equally to investors' investment decision making.

Finally, it can be predicted that anticipation of returns (Gambler Fallacy), Use of trend analysis (Representativeness Bias), the role of previous experience in next purchase (Anchoring Bias) and information from the friends/relatives (Ability bias) plays a significant role in purchasing behavior of individual stock market investor.

Figure 15: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.392	17.396	17.396	1.392	17.396	17.396	1.350	16.879	16.879
2	1.251	15.634	33.029	1.251	15.634	33.029	1.219	15.236	32.115
3	1.091	13.640	46.669	1.091	13.640	46.669	1.149	14.365	46.481
4	1.034	12.930	59.599	1.034	12.930	59.599	1.049	13.119	59.599
5	.893	11.167	70.767						
6	.878	10.978	81.744						

7	.823	10.288	92.033						
8	.637	7.967	100.000						
Extraction Method: Principal Component Analysis.									

Figure 16:Component Matrix[a]

	Component			
	1	2	3	4
Purchasing Hot Stock	.520	.070	.581	-.235
Use of Trend Analysis	.601	-.254	-.374	.118
Out-Perform Through own skill	.291	.507	-.367	-.168
Previous Exp. in Next Purchase	.082	.404	.618	.023
Forecast Mkt. Price	-.113	.534	-.124	-.380
Anticipation of Return	-.022	.220	.132	.860
Local stock Purchase	-.792	.137	-.014	-.046
Information from friends/relatives	.171	.639	-.252	.223
Extraction Method: Principal Component Analysis.				
a. 4 components extracted.				

Figure 16: Source: developed for the study (2019)

Figure 17:Rotated Component Matrixa

	Component			
	1	2	3	4
Purchasing Hot Stock	-.261	-.047	.756	-.158
Use of Trend Analysis	-.736	.044	-.187	-.002
Out-Perform Through own skill	-.177	.684	-.017	-.074
Previous Exp. in Next Purchase	.215	.089	.681	.188
Forecast Mkt. Price	.288	.559	.080	-.238
Anticipation of Return	.011	-.028	.029	.897
Local stock Purchase	.759	-.026	-.266	.005
Information from friends/relatives	-.048	.653	.012	.350
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 5 iterations.				

Figure 17: Source: developed for the study (2019)

IMPACT LEVEL OF HEURISTIC FACTORS ON INDIVIDUAL INVESTMENT PERFORMANCE.

The sample mean of each variable will help us to understand the impact levels of heuristic behavioral variables on the investment decision making. In similar, the variables of investment performance are scored by identifying the mean values of the respondents' evaluation for each variable. Because 6-point scales are used to measure the impact levels of these variables, the mean values of these variables can decide their impact levels on the investment decision making as the following rules:

• Mean values are less than 2 shows that the variables have very low impacts

• Mean values are from 2 to 3 shows that the variables have low impacts

• Mean values are from 3 to 4 shows that the variables have moderate impacts

• Mean values are from 4 to 5 shows that the variables have high impacts

• Mean values are more 5 shows that the variables have very high impacts

Figure 18: Descriptive Statistics

	N	Maximum	Mean	Std. Deviation
Reaching Expected Return	310	6	3.50	1.243
Out form Market Return	310	6	4.30	1.307
Satisfaction of Investment Return	310	6	4.15	1.172
Valid N (listwise)	310			

From the above table, it can be seen that heuristic factors moderately impact reaching the expected returns of the investors with the mean value of agreement 3.50. Both, in terms of outperforming the market in achieving actual return and satisfaction in investment decisions taken by the investor, have shown the high impact of heuristic factors.

HYPOTHESIS 2

H_0 = There is no significant impact of heuristic behavioral variables on investment performance.

Table 17 depicts the information on average points of performance of share market investment due to heuristic variables and shows a high-level impact on all three cases.

Therefore the null hypothesis is rejected and it can be concluded that heuristic factors have an impact on share market performance and satisfaction level.

ANALYSIS /DISCUSSION/RECOMMENDATIONS/CONCLUSIONS

FINDINGS OF THE STUDY

The major findings of the survey are based on information obtained during the study and empirical results. Some of the important findings noted below.

a. All age group respondents found to be equal in the share market investment but, the ratio of males and females is found a big gap.
b. $3/4^{th}$ of the Demat account holders either from urban or semi-urban areas. Because of the lack of knowledge and confidence, still in villages, people stick to traditional investment avenues.
c. $7/10^{th}$ of the investors in the stock market is having a double degree.
d. Professional master degree holders covered to the extent of $4/10^{th}$ of the total Demat account holdings and coverage from the technical master degree holders is about $3/10^{th}$ proportion. Degree holders or people with lesser qualifications do not believe in the Indian share market.
e. $7/10^{th}$ of the total Demat account holders are employed either from a private employer or having their own business/profession. Lack of government employees' involvement in the share dealing is found to a larger extent.
f. More than 82% of the respondents have an annual income greater than Rs. 3,00,000.
g. $4/10^{th}$ of the Demat account holders reserved Rs. 1,50,000 to Rs. 3,00,00 for all kinds of investments.
h. Annual average investment in the share market is between Rs. 75,000 to Rs.1,50,000 for maximum of 42% respondents.
i. Nearly half of the Demat account holders having experience in the share market to the extent of 3 to 6 years. Only 29% of the individual investors do have experience lesser than 3 years, it shows a lack of new entrants to the share market investment.
j. Maximum 37% of the investor will hold their securities for 2 to 5 years which shows the medium-term investment characteristic. 29% of the investors are holding their positions for more than 5 years, which shows the long term attitude of the investors.

k. Maximum people will have the fear of speculation and gambling which resulted in only 1/3rd of investors showing interest in the short term or very short term investment in the share market.

l. The anticipation of returns (Gambler Fallacy), Use of trend analysis (Representativeness Bias), the role of previous experience in next purchase (Anchoring Bias) and information from the friends/relatives (Ability bias) plays a significant role in purchasing behavior of individual stock market investor. **(Hypothesis 1)**

m. Heuristic factors have a high degree of positive impact on share market performance and satisfaction level of share market investment decision. **(Hypothesis 2).**

RECOMMENDATIONS

RECOMMENDATIONS FOR INDIVIDUAL INVESTORS OF INDIAN STOCK EXCHANGES

In Indian not more than 7% of the total population is investing in the share market due to several reasons. One of the major facts behind this is fear of unexpected movement in share price and risk of loss. The influence of the heuristic behavioral factors on investment decision making and share market performance was verified through factor analysis depicted valuable findings. Recommendations offered to the individual share market investors for a better understanding of market price movement.

a. Variables purchasing hot stock by avoiding poor performer and using trend analysis for purchase decision (Representativeness Bias) has shown a high degree of positive correlation relations with investment decision making and performance of overall decisions.

b. Overconfidence will not result in outperforming the market performance.

c. Variable use of previous experience in the next purchase of (Anchoring bias) yielded a high degree of positive correlation with investment decision and performance, but this vice-versa in case of variable forecasting market price based on recent stock price (Anchoring Bias)

d. A strong positive correlation was found in respect of variable forecasting return of good or poor market conditions. (Gambler Fallacy).

e. Variable reference from friends or relatives while purchasing decisions (Ability Bais) as shown a high degree positive correlation, but purchasing local stock (Ability Bias) doesn't result in a positive impact.

An individual should refer these points before moving for actual investment thereby he can tackle negative issues rising because of heuristic behavioral factors.

RECOMMENDATIONS FOR STOCK BROKERS

Immediate requirement of the stockbroking houses to understand the inner minds of investors and suggest them in a way, which will result in them with a high positive return. Because of huge competitions among the agencies, it is must formulate strategies which will consider behavioral aspects and its role on investment decision as well as on investment performance.

CHANCES OF FURTHER RESEARCH

In this study, importance is given only on the impact of heuristic behavioral factors on investment decision making and on the performance of the share market. This study could be extended for other remaining factors like prospect theory, market theory, and hardening effects.

CONCLUSION

This study reaches the final stage by answering all the questions raised during the in chapter 1.3. Herewith we would like to conclude by presenting the main points to answer the research questions.

What are the heuristic behavioral factors influencing individual investors' decisions in Indian stock exchanges?

There are five behavioral variables of heuristic behavioral factors that impact the investment decisions of individual investors of Indian stock exchanges: Representativeness, Over Confidence, Anchoring, Gambler Fallacy, and Ability Bias. The finding suggested that Hypothesis 1 is rejected and concluded that all variables of the heuristic factors are contributing not equally to investors' investment decision making.

At what impact level heuristic behavioral factors influence the individual investors' decisions in the Indian share market?

Except overconfidence, forecasting market price based on the recent stock price of Anchoring variable and local stock purchase from ability bias shown a high degree of impact on investment decision making.

At which impact levels do the behavioral factors influence the investment performance of the individual investors of Indian stock exchanges?

It was found in the study that all heuristic factors played a significant role in the investment performance of the individual investors of stock exchanges. The mean value of the stock market is found to be highly acceptable due to the highest mean value.

The study draws overall conclusions on the heuristic factors, its influence on investors' investment decision making and the performance of share market investment.

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DECISIONS ON THE RAISING WORLD OF ARTIFICIAL INTELLIGENCE AND ACCOUNTING

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ABSTRACT

Artificial Intelligence has acquired almost all the part of the sectors of human life. Basically, artificial intelligence was made to bring up the best of human society. Artificial can be categorized into a week or even strong, week AI is known as narrow AI strong AI is known as artificial general intelligence

Companies today are embracing and implementing new technologies to streamline their business operations, and one of the operations which are on the top of their list is the accounting. That is because AI is providing positive results such as increased productivity, improved accuracy, and reduced cost. Artificial Intelligence is already impacting the marketing sector and would also bring radical changes in the accounting sector with a huge possibility of the reduction in costs and increased productivity.

Keywords: *Artificial Intelligence, Accounting*

INTRODUCTION

Artificial intelligence (AI) is the simulation of human **i**ntelligence processes by machines, especially computer systems. These processes include learning, reasoning, and self-correction. AI often revolves around the use of algorithms. An algorithm is a set of unambiguous instructions that a mechanical computer can execute.] A complex algorithm is often built on top of other, simpler, algorithms. A simple example of an algorithm is the following recipe for play at tic-tac-toe. This lack of understanding is a growing issue for financial staff dealing with massive amounts of data. In the digital transformation era, more and more clients are digitizing processes and increasing the number of spreadsheets and documents accounting and audit professionals must analyze

This paper here however clearly displays all the activity of the artificial works that are taken up for the good development of their own countries or nations. AI has helped many countries to become powerful countries or nations, not only about the countries but even its effect on each individual person around the globe

AI systems are undoubtedly very useful. As the world becomes more complex, we need to leverage our human resources and high-quality computer systems help. This also applies to applications that require intelligence. In 1956, a conference "Artificial Intelligence" was held for the first time in Hanover, New Hampshire, at Dartmouth College

HISTORY OF ARTIFICIAL INTELLIGENCE

In 1956, a conference artificial intelligence session at Dartmouth College was introduced for the first time. Marvin Minsky stated in his book "Stormed Search for Artificial Intelligence that "the problem of artificial intelligence modeling within a generation will be solved ". The first artificial intelligence applications were introduced during this period.

MILESTONES OF AI

*1956: The logic theorist (Logic Theory-LT) program for solving mathematical problems is introduced by Neweell, Shaw, and Simon. The system is regarded as the first artificial intelligence system.

*The end of the 1950s - the beginning of the 1960s: A schematic network for machine translation was developed by Margaret Masterman.

*1958: John McCarty of MIT created the LISP (List Processing language) language.

*1960: JCR Licklider described the human-machine relationship in his work.

*1962: Unimation was established as the first company to produce robots for the industrial field.

*1965: An artificial intelligence program ELIZA is written.

*1966: The first animated robot "Shakey" was produced at Stanford University.

*1973: DARPA begins development for protocols called TCP / IP.

*1974: The Internet has begun to be used for the first time.

*1978: Herbert Simon earned a Nobel Prize for his limited Rationality Theory, which is an important work on Artificial Intelligence.

*1981: IBM produced the first personal computer.

*1993: Production of Cog, a human-looking robot at MIT, began.

*1997: Deep Blue named supercomputer defeated world-famous chess player Kasparov.

*1998: Furby, the first artificial intelligence player, was driven to the market.

* 2000: Kismet named robot which can use gesture and mimic movements in communication is introduced.

* 2005: Asimo, the closest robot to artificial intelligence and human ability and skill, is introduced.

* 2010: Asimo is made to act using mind power

AI TECHNOLOGY IN ACCOUNTING

The job description of today’s accountant looks very different than that of the accountant of 20 years ago. In another 20 years, accountants will again, play a different role. Their roles will change substantially over the next decade. More emphasis will be placed on consulting, business development, advisory services, and risk management. Accountants will need to embrace specialization and the use of technology.[1]

Artificial intelligence is being designed to think, feel, and react like a living, breathing creature. According to a study done by Deloitte, AI could emerge with a whole new class of products and services specifically applicable in the areas of accounting. These include customer service, research and development, logistics, sales, marketing, and informational analysis. For those professions that require following specific methodologies, information analysis, report preparation, and many cumbersome processes (i.e. bookkeeping, transaction coding, etc.), AI has the potential to completely alter the profession. According to a study done by the Association of Chartered Certified Accountants, there is the possibility that automation will relieve many burdensome tasks that would enable accountants to focus on consulting services and other higher-value work. [2]

In the very near future, AI may be completely involved in the monitoring and evaluating of compliance with regulations, organizational policy, employee evaluations and even hiring and firing. Obviously, accounting software is not new to the profession. Tax filing software has not put accountants out of business, it has, in fact, made them more efficient and made it possible to file many more returns than they could before. However, the new incoming software could likely empower some users to the point when they will not need their accountant any longer. The latest evolution of products is more “cloud” based, such as the QuickBooks Online, which seems to compel some to take on some of the bookkeeping tasks of their business. There are differing opinions on how the role of an accountant will change. Some are of the opinion that there will be a major modification as was the case in the taxi/transportation industry when Uber and Lyft were introduced. Others believe that software will simply shift some of the less complicated tasks to the businesses themselves, but that they will still be in need of credentialed experts to conduct audits and sort through the highly complex regulations.[3]

1) What is the long-term vision for AI and accountancy?

We need to envision how intelligent systems can enable better decisions in business, and understand how accountants can help this process.

2) How do artificial and human intelligence work together?

We need to develop an understanding of what is new about the technology, how it can ‘turbocharge’ the capabilities of humans, and its limits

3) How are accountants using AI capabilities?

We need to explore real-world examples of accountants using AI systems, including the specific benefits and limitations, to help us develop the longer-term vision.

EXPERT SYSTEM APPLICATIONS IN THE COST ACCOUNTING AND MANAGEMENT ACCOUNTING

There are very few expert system applications in cost accounting and management accounting. These are mainly theoretical in nature (Akers et al., 1986; Bouche and Retour, 1986; Estrin, 1988; Shim and Rice, 1988; Böer, 1989a, 1989b; 1989c). Generally the applications developed in this domain are composed by two modules: a module which computes by means of traditional information technology or with a decision making aid tool (e.g., an electronic spreadsheet, a statistical package ...), and an expert system module which carries out interpretation, comparison, diagnosis, and forecasting decision processes. A very important feature of these applications is that they are specific for each firm and problem type in the organization. Another important feature of these systems is their capability to read data files and to link with the other databases in the firm, so it is possible to have available fast information to make decisions.

JOB GROWTH (NUMBER OF ACCOUNTANTS)

It is difficult to find an exact number of accountants in the United States because many are not registered. However, in 2016 there were 664,532 CPAs (Certified Public Accountants) in the US.9 According to the United States Department of Labor, Bureau of Labor Statistics there are 1,226,910 individuals employed in the accounting profession in the United States. Many fear that with the advances in technology, specifically in artificial intelligence, there will be a loss of jobs. The fear is that computers will take over for humans, offering free labor, better accuracy, and no personality conflicts. If those fears were being realized we'd expect to see a decline in the number of professional accountants. However, the exact opposite is true. The Bureau of Labor and Statistics reports that the accounting profession is projected to grow at a rate of 11 percent over the next 10 years, an increase of over 142,000 new accounting and auditing jobs. Some of this may be due to the openings left by the Boomer generation retiring, but not all of it can be attributed to that one factor. According to the Accounting and Financial Women's Alliance, businesses are modifying their business models to take advantage of big data and taking a more analytical view. Chief Financial Officers (CFOs) are looking to hire finance and accounting individuals who are experienced in data analytics, modeling techniques, proficient with accounting software and advanced in Microsoft Excel. In other words, they are looking for people who can work with new technology. They want people with the skills necessary to work in a global company and that can keep up with the quickly changing demands of technology

CONCLUSION

Artificial Intelligence is critical to the future of the accounting and auditing professions. AI is a vital tool that will provide these professionals with the needed tools to increase the efficiency and effectiveness of their occupations. The repetitive tasks of bookkeeping or process-driven assignments are more likely to be replaced with an automated technology than the higher value specialties that involve professional judgment. Many believe that the younger generation of accountants needs to understand and be prepared to work alongside artificial intelligence. So, are we finally at the point of machines taking over our world? Online education taking over for professors, investing websites taking over for personal financial advisors, legal software taking over for lawyers, the list goes on. The accounting profession is not immune to this phenomenon of new technologies disrupting the workforce. The use of tax filing software hasn't put accountants out of business; it simply changed the number of tax returns an accountant was able to prepare. Quick Books has not reduced the income of accountants, it simply changed the focus from paper and pencil entry to computer and software entry. AI in the accounting world will not replace accountants; it will simply change the focus.

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IMPACT OF THE TAX SYSTEM ON THE PERFORMANCE OF MSME's: A CASE STUDY OF SELECTED MSME's IN MYSORE CITY

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ABSTRACT

Taxation plays an important role in the economic development of every country and also a pivotal role in the growth of Micro, Small and Medium enterprises(MSME's) in a developing country like India MSME is playing a major role in the socio economic development of the country. Therefore, the streamlining of tax system for the growth of these MSME's can be considered an important agenda by the policy makers. Keeping this issue at focus, the study is aimed to explore the owners and managers perception about the present tax system in India on the profitability of MSMEs. The study is based on 105 owners and managers of MSME in Mysore an upcoming industrial hub of Karnataka. The survey will be administered using questionnaire and interview with the selected respondents. The data will be analyzed by using correlation and regression analysis and the finding will be presented in terms of frequencies and percentages. The finding would help the stakeholders in designing measures to align the tax system in a more effective manner to MSMEs.

Key word: *Micro, Small and Medium Enterprises (MSME), Tax system, India.*

INTRODUCTION

Tax is a source of revenue for the government of a country. Individuals and companies pay various taxes to the government of India. Governments use tax as part of measures to control the economy and its development. Also, taxes are used for redistribution of income. Part of the principles that guide taxes includes equality, certainty, economy, convenience, and fairness. Some MSMEs doing business in Mysore are not registered and recognized by the corporate affairs commission. Non-registration can be attributed to avoidance of tax payments, lengthy procedures in startups. The government makes various regulations and policies that either positively or negatively affect multiple sectors of the economy. since MSMEs play an important role in every economy as it creates employment, helps to check rural-urban drift, helps in international trade, provides services and support to big companies, and helps in the diversification of the economy these polices also affects them. Tax Laws frequently change in the Indian tax system. Some MSME taxpayers do not have adequate knowledge about tax laws. Lack of adequate knowledge sometimes results in low tax compliance. An MSME can deal with the indirect tax of government in India on the same Tax issue.

STATEMENT OF THE PROBLEM

The tax system poses a serious challenge to the Governments in India. According to the Ministry of Micro, Small and Medium Scale Enterprises of India, 14.20% of MSMEs die as on November 1st, 2018(10yr) report published by the Ministry of Micro, Small and Medium Scale Enterprises. One of the factors attributed to this high mortality rate is tax-related matters. These tax-related matters include multiple taxation, high tax rates, and penalties. Lack of knowledge of the transaction dynamics of MSMEs, payment for accumulated taxes, adverse publicity leading to loss of customers as a result of government tax officials sealing a company. Researches have revealed that more than 50% of potential tax revenue remains uncollected in most developing countries. Multiple taxations are common in India before adopting GST. The primary objective of this study is to examine the level of tax system among MSMEs in India.

METHODOLOGY

A descriptive study was carried out to ascertain the implication tax system of each independent factor towards the performance of MSMEs in Mysore. A total of 105 sets of questionnaires were forwarded via email and personal contact and drawn randomly selected MSMEs in the manufacturing and service sector all over Mysore.

H0: There is no significant relationship between the tax system and MSMEs' financial performance.

H1: There is a significant relationship between the tax system and MSMEs' financial performance.

THEORETICAL FRAMEWORK

Brief History of Income Tax in India: In India, this tax was introduced for the first time in 1860, by Sir James Wilson in order to meet the losses sustained by the Government on account of the Military Mutiny of 1857. In 1918, a new income tax was passed and again it was replaced by another new act which was passed in 1922. This Act remained in force up to the assessment year 1961-62 with numerous amendments.

In consultation with the Ministry of Law finally the Income Tax Act, 1961 was passed. The Income Tax Act 1961 has been brought into force with 1 April 1962. It applies to the whole of India and Sikkim (including Jammu and Kashmir). Since 1962 several amendments of far-reaching nature have been made in the Income Tax Act by the Union Budget every year. But this year (2019) the Modi government has taken a major role in merging the Jammu and Kashmir to India

ABILITY TO PAY THEORY OF TAXATION

Theories of Taxation

The economists have put forward many *theories or principles of taxation* at different times to guide the state as to how justice or equity in taxation can be achieved. The main theories or principles, in brief, are:

Benefit Theory

According to this theory, the state should levy taxes on individuals according to the benefit conferred on them. The more benefits a person derives from the activities of the state, the more he should pay to the government. This principle has been subjected to severe criticism on the following grounds:

Firstly, If the state maintains a certain connection between the benefits conferred and the benefits derived. It will be against the basic principle of the tax. A tax, as we know, is a compulsory contribution made to the public authorities to meet the expenses of the government and the provisions of general benefit. There is no direct quid *pro quo* in the case of a tax.

Secondly, most of the expenditure incurred by the slate is for the general benefit of its citizens, it is not possible to estimate the benefit enjoyed by a particular individual every year.

Thirdly, if we apply this principle in practice, then the poor will have to pay the heaviest taxes because they benefit more from the services of the state. If we get more from the poor by way of taxes, it is against the principle of justice?

THE COST OF SERVICE THEORY

Some economists were of the opinion that if the state charges the actual cost of the service rendered from the people, it will satisfy the idea of equity or justice in taxation. The cost of service principle can no doubt be applied to some extent in those cases where the services are rendered out of prices and are a bit easy to determine, e.g., postal, railway services, the supply of electricity, etc., etc. But most of the expenditure incurred by the state cannot be fixed for each individual because it cannot be exactly determined. For instance, how can we measure the cost of service of the police, armed forces, judiciary, etc., to different individuals? Dalton has also rejected this theory on the ground that there s no quid pro quo in a tax.

ABILITY TO PAY THEORY

The most popular and commonly accepted principle of equity or justice in taxation is that citizens of a country should pay taxes to the government in accordance with their ability to pay. It appears very reasonable and just that taxes should be levied on the basis of the taxable capacity of an individual. For instance, if the taxable capacity of person A is greater than person B, the former should be asked to pay more taxes than the latter.

It seems that if the taxes are levied on this principle as stated above, then justice can be achieved. But our difficulties do not end here. The fact is that when we put this theory in practice, our difficulties actually begin. The trouble arises with the definition of ability to pay. The economists are not unanimous as to what should be the exact measure of a person's ability or faculty to pay. The main viewpoints advanced in this connection are as follows:

(a) Ownership of Property: Some economists are of the opinion that ownership of the property is a very good basis for measuring one's ability to pay. This idea is out rightly rejected on the ground that if a person earns a large income but does not spend on buying any property, he will then escape taxation. On the other hand, another person earning income buys property; he will be subjected to taxation. Is this not absurd and unjustifiable that a person, earning a large income is exempted from taxes and another person with a small income is taxed?

(b) Tax on the Basis of Expenditure: It is also asserted by some economists that the ability or faculty to pay tax should be judged by the expenditure which a person incurs. The greater the expenditure, the higher should be the tax and *vice* versa. The viewpoint is unsound and unfair in every respect. A person having a large family to support has to spend more than a person having a small family. If we make an expenditure as the test of one's ability to pay, the former person who is already burdened with many dependents will have to' pay more taxes than the latter who has a small family. So this is unjustifiable.

(c) Income as the Basics: Most economists are of the opinion that income should be the basis of measuring a man's ability to pay. It appears very just and fair that if the income of a person is greater than that of another, the former should be asked to pay more towards the support of the government than the latter. That is why in the modern tax system of the countries of the world, income has been accepted as the best test for measuring the ability to pay tax by a person.

IMPORTANCE OF MSMES

For a country to grow, the government should actively promote business enterprises. Among business enterprises, the Micro, Small and Medium Enterprises (MSME) deserve special attention. Though MSMEs are small investment enterprises, their contribution to the Indian economy is very significant.

Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 which was notified on October 2, 2006, deals with the definition of MSMEs. The MSMED Act, 2006 defines the Micro, Small and Medium Enterprises based on

1. The investment in plant and machinery for those engaged in manufacturing or production, processing or preservation of goods and
2. The investment in equipment for enterprises engaged in providing or rendering of services.

BACKGROUND

MSME is the second-largest employment generating sector after the agriculture sector. It provides 80% of jobs in the industry with just 20% of the investment. It contributes around 31% of the nation's GDP and 45% and 34% share of the overall exports and manufacturing output (2017 report). At present Section 7 of MSMED Act classics MSMEs on the basis of investment in plant and machinery for manufacturing units and investment in equipment for service enterprises. The criterion of investment in plant and machinery stipulates self-declaration which in turn entails verification and leads to transaction costs.

NEW CLASSIFICATION CRITERIA (BASED ON TURNOVER)

Microenterprise: It will be unit with annual turnover does not exceed Rs. 5 crore.

Small enterprise: It will be unit with annual turnover is more than Rs. 5 crores but does not exceed Rs. 75 crore.

Medium enterprise: It will be unit with annual turnover is more than Rs. 75 crore but does not exceed Rs. 250 crore.

The amendment empowers Central Government to vary turnover limits, provided not exceeding thrice the limits specified in Section 7 of MSMED Act by issued notification.

ROLE OF MSMES IN INDIAN ECONOMY

The Micro, Small & Medium Enterprises (MSMEs) have been contributing significantly to the expansion of entrepreneurial endeavors through business innovations. The MSMEs are widening their domain across sectors of the economy, producing a diverse range of products and services to meet demands of domestic as well as global markets. As per the data available with Central Statistics Office (CSO), Ministry of Statistics & Programme Implementation, the contribution of MSME Sector in country's Gross Value Added (GVA)1 and Gross Domestic Product (GDP)2

The micro, small & medium enterprises (MSME) sector is the backbone of the Indian economy as it contributes significantly to the Gross Value Added (GVA), manufacturing output, employment, and exports. It is the second-largest sector for employment generation—after agriculture—in India, in terms of volume. Increasing the ease of doing business in the MSME sector will, therefore, help create more jobs. As per the fourth All-India Census of MSMEs (2006-07)—the last such available—94% of the enterprises are in the unorganized sector, having concomitant features like lack of access to social benefits, higher likelihood of tax evasion, feeding into the parallel economy.

The number of effective taxpayers in India is disturbingly low (about 1.3%), resulting in a relatively low tax-GDP ratio. India's 5% rate, in the GST rate basket, is the lowest in the world. The entry-level GST rate and measures like composition schemes are intended to facilitate the widening of the tax base. Research indicates that GST functions like a presumptive tax on the informal sector since tax credits are available only to registered entities. Thus, GST is more likely to lead to a shift in the market share from unorganized to organize in the medium-to-long-term by providing a positive incentive to those who are part of the GST credit chain.

MSMEs generally bear proportionally higher GST costs than large businesses as their compliance efforts take a greater share of their financial, technological and human resources. Therefore, the GST Council, in its October 6 meeting, decided to simplify the tax administration. The composition scheme is meant to reduce the transaction cost and the compliance requirements of small businesses. To increase the reach of this scheme, the threshold turnover for eligibility has been increased from Rs 75 lakh to Rs 1 crore. The composition window will be kept open till March 31, 2018, as less than expected had registered.

The GST Council has constituted a ministerial panel on the composition scheme to make the scheme more attractive as only about 15.5 lakh businesses out of the total of 98 lakh registered under the GST regime have opted for it. The flip-side of the composition scheme is that there is no input tax credit (ITC) and inter-state trade is not covered. Most of the businesses opting for composition levy are small restaurants while bigger restaurants and restaurant chains have opted for full-fledged GST registration to avail ITC. Tax rates on restaurants must be revisited as they are reportedly not passing ITC benefits on to customers.

Anecdotal evidence indicates that the Moradabad Cluster was affected as workers making inter-state supply have to get registered (hitherto not required to register), thereby imposing compliance costs that affect their pricing strategy. So, it has been decided by the GST Council that service-providers having turnover less than Rs 20 lakh would be exempted from registration even if they are providing inter-state taxable services. To ensure a smoother transition of small businesses into GST with low compliance cost, the periodicity of GST returns has been reduced from monthly to quarterly for businesses with turnover up to Rs 1.5 crore. Well-performing GST regimes, like that of New Zealand, also provide for half-yearly filing for assesses whose turnover is less than $500,000.

Reverse charge mechanism (RCM) shifts the liability to pay GST from the supplier of the service to the buyer while, in normal circumstances, the supplier pays the tax. RCM is a standard practice in international VAT law—for instance, the EU uses RCM to tax cross-border supplies. Though RCM facilitates tax administration and prevents tax evasion, there were some unintended consequences for supplies made by an unregistered dealer. Goods Transport Agency (GTAs) were reluctant to pick up a cargo of unregistered dealers (URDs) as, in that case, the GTAs would have to take registration. Therefore, the enforceability of RCM in the case of URDs has been suspended till March 31, 2018.

Earlier, small enterprises were required to pay duty once in a quarter by which time they would have received the payment from their customers. Under GST, the tax has to be paid by the 20th of the succeeding month. Now, small entrepreneurs have had to take working capital loans to pay taxes. Therefore, the Council's decision that there is no need to pay GST when the advance is received or goods are sold is a welcome relief for taxpayers of turnover up to Rs 1.5 crore. GST will prove a boon for MSMEs, provided the tax structure is appropriately designed and fairly administered.

METHODOLOGY

RESEARCH DESIGN

This research was an explanatory or causal study. This is because it aimed at establishing a causal relationship between two variables i.e. the relationship between the tax system and the performance of MSMEs. Since it involved collecting the views, perspectives or opinions of respondents regarding a particular issue or research interest, the research has employed the survey method that uses questionnaires, personal interviews with respondents and perusal of past records and publications. The choice of this method was made due to the fact that the survey method is effective when it comes to getting opinions, attitudes, and descriptions as well as getting cause and effect relationships. The selection of small and medium enterprises was done by a random sampling method.

TARGET POPULATION

For the purposes of our study, the population designated comprised of selected MSMEs in the Mysore city. This target population enabled the researchers to form an objective view of MSMEs who have actually been paying tax and the extent to which tax payment affects their business.

SAMPLE SIZE

The study sampled one hundred five (105) MSMEs with up to date information with respect to their tax payment.

PRIMARY DATA COLLECTION

Questionnaires served as a preliminary data collection technique for providing empirical analysis in the study. Both open- and closed-ended questionnaire was self-administered. The nature of the study was explained to the respondents; hence the respondents' confidentiality of any information provided was assured. Respondents were provided with detailed instructions as to how the questionnaires should be completed and returned. The rationale behind providing clear instructions and assuring confidentiality of information is based on the fact that this significantly reduces the likelihood of obtaining biased responses.

DATA ANALYSIS

To analyze the impact of the tax system on MSMEs and its performance, the regression method, particularly multiple linear regressions are the major statistical tool used to analyse the data. Graphs such as histograms, pie charts, bar charts, and tables are used to summarize the result obtained with the help of the Statistical Software such as the Statistical Package for Social Science (SPSS) and Microsoft Excel.

MODEL SPECIFICATION

Sales revenue and return on investment are the most frequently used financial ratios in researches. Researchers argue that sales revenue is less, subject to manipulation and as such, it is an appropriate measure used to reflect the financial performance of MSMEs. This study, therefore, adopted sales revenue(s) as its dependent variable for the performance of MSMEs. It is measured as the annual sales made by MSMEs. With regard to the independent variables, the study used the amount of tax (VAT) paid by a particular MSME for the past one year as the main explanatory variable (since the tax rate is constant for many MSMEs). Other independent variables used based on the literature were the Time spent in compiling and paying tax (TM), tax impact on purchases (IP) which is measured as an index score (average score on a scale of 1-3), cost by employing tax practitioners (CP) and tax reliefs (TL) which is a dummy (yes or no). Applying the Ordinary Least Square (OLS) regression Method, the multiple regression equation that will be fitted for the study is in the form;

ANALYSIS AND DISCUSSIONS

DATA PRESENTATION

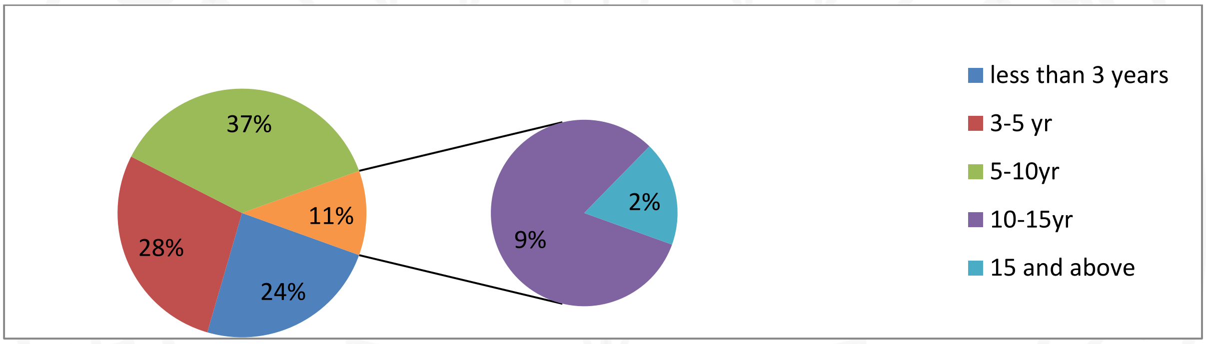
Table 4.1 depicts the gender distribution of the respondents. It was observed that 53.33% of the respondents were males while 46.66% were females. Fig. 4.1 shows the pie chart on the age of business in which 37% responded that they had been in business between 5-10 years, while 28% responded that they had been in business between 3 to 5 years, 24% had been in less than 3 years, 9% in business for 10-15 years while 2% of respondents had 15 and above business in collected MSMEs in Mysore city.

GENDER

	Frequency	Percent	Valid Percent	Cumulative Percent
MALE	56	53.33	53.33	53.33
FEMALE	49	46.66	46.66	100
Total	**105**	**100**	**100**	

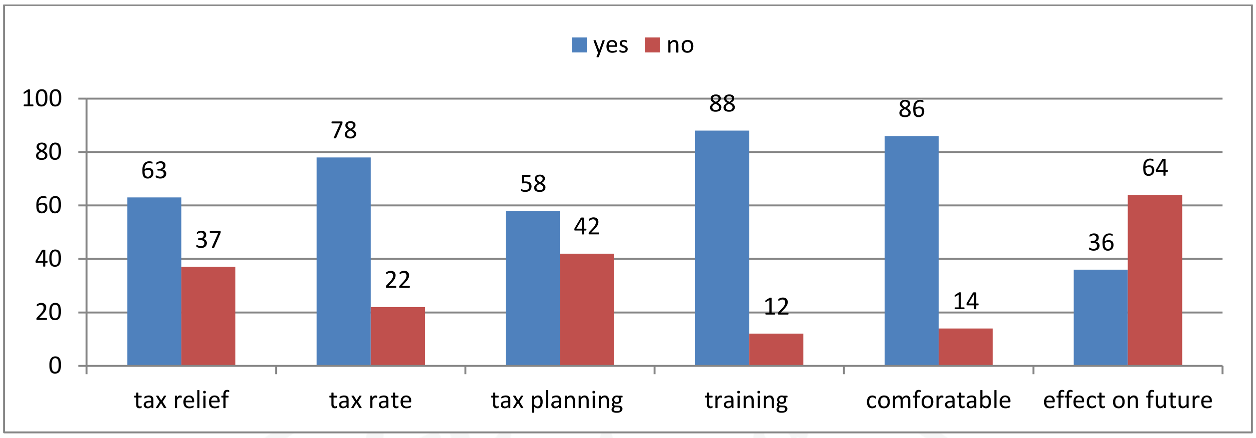
Source: primary data

Years in Business



Source: primary data

The next issue was to assess the respondents' perception of the tax system in general. Figure 4.2 shows the multiple responses to simple questions demanding YES or NO answers. The analysis was to measure the respondent's perception of the existing Tax-System in India. The developed countries are characterized by high tax rates and cumbersome tax administration procedures. Hence it was necessary to ask these questions to know the respondents' perceptions towards tax rates and tax concepts.



Source: primary data

The presented in the figure, show that most of the respondents had a positive perception towards tax rates. When the respondents were asked if they were generally comfortable with the tax system in India, the response was that the 63% of them said they are comfortable with the tax system and the other 37%of the respondent is not comfortable with the tax system of India. The reason behind this is the respondent are satisfied with the concept of GST but some of the respondents are not satisfied with this GST concept due to many reasons that like literacy, cost, time, Etc., drawn by the respondent. Tax relief 63%, present tax rate 78%, tax planning of their 58%, training to file the needed documents 88%, comfortable of tax rates 86%, and future effects on tax system 36% said yes to the questions. By this we are concluding the present tax system has boosted the MSMEs sectors in Indian and that may lead to the economy and future development of the country.

One of the possible impacts of increasing tax is the corresponding increase in the prices and thus, purchases, which in turn affect the growth of MSMEs by influencing their competitiveness adversely. The table presents the perceived impact of GST increase on the purchase of an enterprise.

Table 4.2: Impact of GST on purchases

	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
NEGATIVE	56	53.33	53.33	53.33
NEUTRAL	49	46.66	46.66	100
Total	105	100	100	

Source: primary data

	Number	**minimum**	**Maximum**	**Mean**	**Std. Deviation**
Profit	105	300	84000	9944.12	14894.604
Time	105	2	9	5.75	2.268
Tax paid	105	100	9500	1109.31	1658.813
Valid N	105				

Source: primary data

The study looked at the profit; taxes paid and amount of time spent to file tax returns. The average profit made in a year by the 105 respondents was Rs 9,944.12 with a minimum of Rs 300 and a maximum of Rs 84,000. The average time spent to complete monthly tax return forms which imply that the MSMEs in the Mysore used averagely they need around 2 days to file documents and a maximum of 9 days. And tax amount with each consumer is Correlation analysis the correlation analysis presented in the table measures the relationship between the profit and time, tax paid, impact on purchases and tax reliefs. The results show that profit is strongly positively correlated with the amount of tax paid. This is of no surprise since both the tax paid and profits made are from the same source which is sales. Profit also recorded a negative relationship with the impact of taxes on purchases. Purchases are made in the form of inputs for the businesses which yield profit. The more expensive the purchases are in respect of taxes, the less the business makes profit and less the amount paid as taxes (this is shown in the negative relationship between tax paid and impact on purchases).

CORRELATION ANALYSIS

	PROFIT	TIME	TAX PAID	IMPACT ON PURCHASES	TAX RELIEFS
PROFIT	1				
TIME	0.029 (0.771)	1			
TAX PAID	0.601** (0.000)	0.159 (0.111)	1		
IMPACT ON PURCHASES	-0.259 ** (0.009)	-0.005 (.959)	-0.228* (0.021)	1	
TAX RELIEFS	-0.074 (0.461)	0.084 (0.401)	-0.233* (0.018)	-0.277** (0.005)	1

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

**. Correlation is significant at the 0.05 level (2-tailed).*

Profit was not correlated to both times spend in filing tax returns and tax reliefs since both are not directly related to the operation of the business to yield profit. For the issue of tax reliefs, it can be seen from the Table that it is negatively related to both tax paid and impact on purchases. The more there are tax incentives, the lesser tax paid and the lesser negative influence on purchases.

REGRESSION ANALYSIS

In this section, the study has determined the impact of the tax system on the profitability of the MSMEs by conducting the regression below where the cost of employing a tax practitioner had been omitted due to the fact that the respondents could not provide an accurate measure of the variable.

MODEL SUMMARY

R	**R** Square	Adjusted R Square	Square Std. Error of the Estimate	Durbin-Watson
0.618	0.382	0.357	11943.899	1.574

REGRESSION OUTPUT

Model	Beta	Std. Error	**t**	**Sig.**
(Constant)	14362.916	7499.762	1.915	0.058
TIME	-456.659	536.916	0.851	0.397
TAX PAID	5.354	0.792	6.761	0.000
IMPACT ON PURCHASES	-3439.708	2704.845	-1.272	0.207
Tax relief	1292.596	2851.778	0.453	0.651

Source: primary data

The results from the regression analysis show that the specified model was significant at 5% level of

Significance since the p-value is less than 0.01. The R-square which measures how much of the variation in the dependent variable is explained by the explanatory variables is 0.382 implying that up to 38.2% of the variations in the profit of the SMEs can be explained by the independent variables. The results further show that only the amount of tax paid significantly impacts the profit of the MSMEs with a p-value of less than 0.01. The amount of time spent on filing tax returns and the impact on purchases have no significant impact on the profitability of the MSMEs. Tax relief was treated as a binary variable with a score of 1 for yes and 0 otherwise. The results indicate its insignificant impact on profitability. This is understandable since the vast majority of the respondents eluded to the fact that they were unaware of such reliefs nor even benefited from them.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSION

After the study conducted the main conclusion is that taxes imposed on micro, small and medium enterprises impact their growth in terms of profits in different ways. From the study, it has been found that changes in the tax system lead to the changes in prices of various goods and services. The results show that the increase in tax rates leads to higher production, distribution and selling costs which lead to higher prices and as a result consumers change their buying behavior. People react to higher prices by buying less of the product. Whenever prices increase due to an increase in tax rates; prices of goods and service increase and there is a drop in the consumption rate and a decrease in sales volumes reducing profitability which leads to retarded growth of MSMEs. More so, tax payment is among the outflows of cash from the business which reduces the purchasing power of an enterprise. This is due to the fact that a large amount of cash collected is used to pay taxes rather than to expand the business. The study shows that the purchasing power of an enterprise drops immediately after the payment of taxes. That is why the amount of tax paid relates negatively to the impact of taxes on purchases.

On incentives for MSMEs growth in Mysore city, most of them could not benefit from the tax system because they are meant for fully registered MSMEs only but even with the registered business very few are aware of such incentives. This is because of the lack of education and training for the MSME operators. The many MSMEs that operate in the informal sectors cannot benefit from growth incentives.

RECOMMENDATIONS

Based on the findings made from this study, the following recommendations are therefore made:

- Tax regulations governing MSMEs should be even more simplified in order to make compliance easier for them. This includes clear and simple tax regulations and an undemanding tax filing process. The use of information technology should be encouraged.
- Tax administrators should carry out their duties more efficiently with the most care and integrity as this will help combat issues such as with timely submission of returns
- Tax administrators should improve their support services towards MSMEs for example, micro, small business owners should be educated on issues such as taxes they are expected to pay and the incentives and exemptions they are eligible for.

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A COMPARATIVE STUDY ON TAX REVENUE

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ABSTRACT

Tax revenue is an important aspect of the economic development of the country. It is a part of a receipt budget which in turn is a part of the annual financial statement of the union budget. Corporate tax, income tax, wealth tax, customs, union excise, service tax on union territories, like land revenue, stamp registration, etc. The most important categories which give a detailed report on revenue collected. Both direct and indirect taxes collected are considered to be tax revenue. This paper develops an analysis of tax revenue earned by the government with various factors. To analysis the revenue a comparative study is made between direct and indirect taxes with the central union budget of India from 2013 to 2019. With this information, it helps to evaluate the changes in the tax rate and tax collection that leads to the economic growth of the country.

***Keywords**: union budget, tax collection, direct tax, indirect tax*

INTRODUCTION

Today Indian taxing system is going a revolutionary change owing to spreading the wings of Indian business into the global market. The most important objective of taxation is to raise the required revenues to meet expenditures. Apart from raising revenues, taxes are considered as instruments of control and regulation with the aim of influencing the pattern of consumption, production, and distribution. The concept of taxation is also important to a business because the government can fund this money back into the economy in the form of loans or other funding forms. Taxes help raise the standard of living in a country. The higher the standard of living, the stronger and higher the level of consumption likely is

What is a direct tax?

A government levy on income, property, or wealth of people or companies. A direct tax is borne entirely by the entity that pays it and cannot be passed on to another entity. Examples include corporation tax, income tax, and social security contributions.

What is an Indirect Tax?

An indirect tax is collected by one entity in the supply chain (usually a producer or retailer) and paid to the government, but it is passed on to the consumer as part of the purchase price of a good or service. The consumer is ultimately paying the tax by paying more for the product.

Tax is one of the most important sources of revenue to the Government and at the same time one of the deciding parameters for economic growth. Whereas direct tax impacts directly the disposable income, the indirect tax impacts the prices of goods and services in the market.

LITERATURE REVIEW

Om Prakash and A.S. Sidhu (2011)55 state that, in developing economy like India, tax occupies a strategically important position in the overall development of the country, due to its significant contribution to the national exchequer, which is ultimately spent on the overall development of different sectors of the economy. The study analyzes the impact of direct tax reforms on the Indian economy in terms of various economic indicators and compares it with the pre-reform period. The study reveals that tax reforms introduced during the post-liberalization period could not generate the results as desired. The reduction in direct tax rates could not lead to better tax compliance in a much-desired manner. The researchers opine that the tax reforms have increased the number of assesses but the resultant increase in the tax revenue has not been sufficient. The major share of taxes comes from low-income groups. This ineffectiveness will widen the gap between rich and poor and will lead to further inequality in society. The study also argues that there is again a very strong need to review the tax reform policies being followed in the post-liberalization period.

Holani and Holani (1989): Taxation policy in ancient India was highly logical and based on the principles of economic theory and equity in comparison with the current taxation policies of the government. The tax system of our ancients was quite reasonable, rational, convenient, elastic, appealing and based on the principles of maximum welfare with some exceptions‖.

Richard Bird (1993): reviewing the three-volume Report of the Tax Reforms Committee, states, the three reports on tax reform in India . . . generally, offer clear and sound guidance as to what can and should be done. The Report of the Task Force on the Implementation of Fiscal Responsibility and Budget Management Act, 2003(Government of India, 2004b) States, for example ―Indirect tax policy in India tends to be constantly battered by special interest groups that find it to their interest to have the structure cater to their particular benefit.

Deloitte (2010) explained that India‘s economy has been among the fastest-growing economies in recent years. This growth has been supported by several factors like market reforms, a large inflow of foreign direct investment, rising foreign exchange reserves, a booming technology, and the real estate sector and flourishing the capital market. As per Income Tax Circular of 2010, India has a tax charter with a three-tier federal structure

(Union, state governments & local bodies)

Kumat (2014): In his research paper on the Taxation laws of India- overview and fiscal analysis focus on the overview of the Indian tax system and challenges ahead. He thinks that there should be a coordinated consumption tax system. He also states that improving the productivity of the Indian tax system continues to be a major challenge in India.

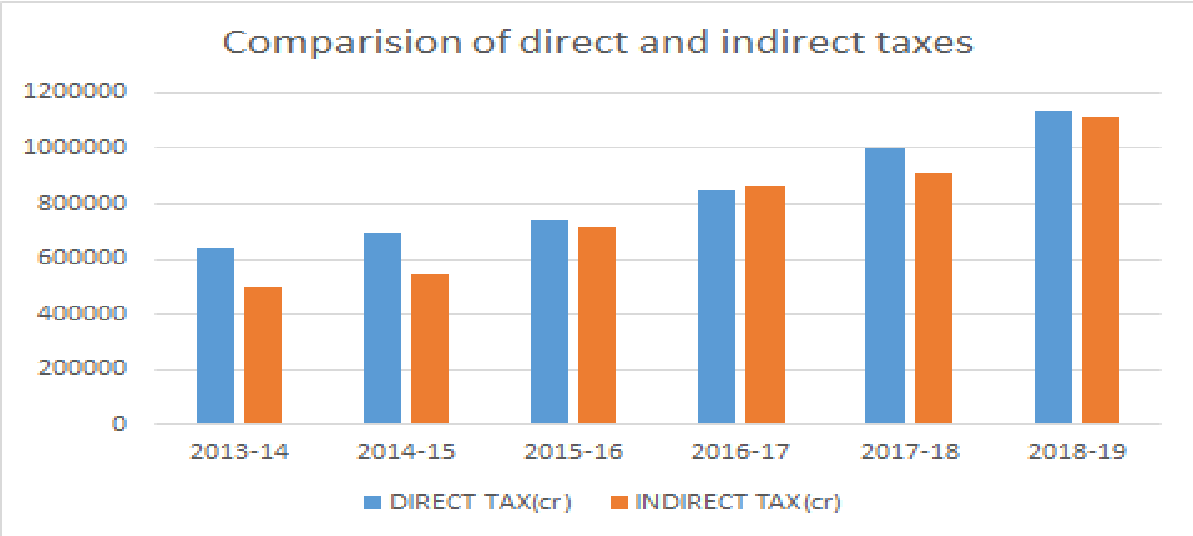
Jha (2013)in his research paper on Tax structure in India & its effect on corporate and individual in India suggests that high dependence on indirect taxes should be reduced and direct taxes should be increased on super rich to compensate for the losses. He also states that corporate tax evasion techniques like transfer pricing should be checked.

Rao (2005)in his research paper on Tax system reforms in India: achievements and challenges ahead focus on the union and state-level reforms. He states that the reforms are just the beginning and considerable distance in reforming the tax system is yet to be covered.

ANALYSIS

FINANCIAL YEAR	DIRECT TAX (cr)	INDIRECT TAX (cr)
2013-14	638596	495347
2014-15	695792	543215
2015-16	741945	711885

2016-17	849818	861515
2017-18	1002741	911466
2018-19	1137686	1116000



As per the above graph, it represents the changes happened in both direct and indirect taxes over the years.

In a similar context, we can see that the direct taxes have increased over time from Rs. 638596cr to Rs.1137686cr. The reason-

- GST collections were not as expected and that can be one of the reasons for the increase in the direct tax-GDP ratio.
- The number of salaried taxpayers, whose taxes are diligently deducted at source, is rising at a faster pace than the non-salaried.
- This shows a higher level of compliance resulting from various legislative and administrative measures taken by the government, including effective enforcement measures against tax evasion.
- The rise in tax compliance has been attributed to the various measures taken by the Union government including:

1. The effect of demonetization.
2. Increase in the use of the information being collected digitally and being used by the tax department.

3. The movement towards digital assessment and a decrease in the number of cases being picked up for scrutiny.
4. Ease of getting refunds, majorly by small and medium taxpayers.
5. Lowering of various other tax compliance costs.

Similarly, we can see that the indirect taxes have increased from 2013 to 2018 from Rs.495347cr to Rs.1116000cr. The reason is that economists say that governments must strive to collect more revenue from direct taxes and comparatively lesser from the regressive indirect taxes if they want to reduce inequality. but a close look at data since 2013-14 indicates that India has moved in the opposite direction.

CONCLUSION

Both direct and indirect taxes are important for the betterment of the Indian economy. Under the comparison of the union budget from 2013 - 18, there are various changes in tax collection. Tax is determined under the analysis of income tax, wealth tax and estate tax of direct tax and central excise duty, customs duty, service tax, sales tax and GST of indirect tax.

The increase of tax collection every year majorly depends upon an increase in population. Not only that reason but also some policies and changes in the economy leads to an increase in tax collection in India. Examples like announcements of demonetization and GST implementation in the economy by PM, Make in India policy by FM, inflation of economy, changes in the value of currency notes, etc. But the contribution to such taxes by the government and it gives better earnings for the economic growth

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IMPACT OF LOGISTICS AND E-COMMERCE

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ABSTRACT

Web based business is the action of purchasing or selling of the item on online administrations or over the web. Electronic business draws on innovation, for example, portable trade, web promoting on the web exchange, preparing electronic information exchange (EDI), stock administration framework and computerized information gathering framework. Coordination is basically the administration of the manner in which assets are obtained, stored and sent to their destination. Execution and control of the development and position of this products and enterprises should all happen inside a given framework that is configuration to accomplish explicit objectives, which may be changed by the industry. In this paper, we explained the subsequent progression of online business coordination, it's idea model and fundamental business process with regards to "Web PLUS"

Keywords: *e-commerce, logistics and middle-men*

INTRODUCTION

E-commerce has been buzzwords from the recent years. By using e-commerce, people can enjoy a convenient life. Today ,as digital technology is increasing in numbers the adoption of e- commerce logistics is growing more today and it is leading to domination in the market They are dominating middlemen, wholesalers , distributors by giving discounts, offers ,flash sales by attracting the customers.

CHARACTERISTICS OF ECOMMERCE

- **Interaction:** In traditional commerce interaction between buyer and seller is directly accessed but as in e- commerce the interaction between buyer and seller is indirect which means through internet they connect with each other.

- **Level of competition:** In e-commerce websites the competition is very high due to its vast range of offering goods and their way of offering the products to its consumers, like it takes very less time to check out all available products in the market in no time and the profit margin for ecommerce websites is very high and comparatively less price for its customers.

- **Easy checkout and navigate:** Ecommerce websites can be checked out at any time on matter what you are doing without having any trouble or without spending much time as compared to the normal shops. E-commerce websites offer tracking of the product to its customers which can provide clear information for its customers to know their products accurately where it is moving.

- **Effective, accurate product photos**: There is a huge difference while purchasing the product physically and through online. The consumer could touch the product physically in the local shop but whereas in the online it never it should provide the accurate product photos and information to make the customer buy the product easier on website.

- **Showcase the most popular product:** Majority of the websites are opting this method for increase in sales of their products. This is also a strategy of Showcasing their items which grab the attention of the customer while searching their interested items this will grab the attention of visitors using the homepage of the site to promote their new product. This area could update frequently or it includes some types of slideshow also.

THE CHARACTERISTICS OF LOGISTICS COMPANY

- **Good Communication:** Flourishing logistics companies emphasize the importance of communication in facilitating a successful customer relationship. They understand the needs of their clients and make sure to follow up throughout the services process.

- **Flexibility:** Excellent logistics companies will provide a tailor-made plan as per unique customer needs. They would be willing to expand and accommodate changes hand in hand with the transforming business environment.

- **Technology:** First-rate logistics companies have a technological edge over its competitors. They can automate processes, track results, catch errors and provide efficient and effective order management through their sophisticated systems. These organizations are also open to integrating the latest available technology to ensure class apart services.

- **Human Resource:** A strong employee base often reflects the capability of a company. Service providers having specialized employee base to cater to your needs prove beneficial in the long run. A committed and knowledgeable workforce makes sure that all legalities and regulations are met with at the right time.

- **Experience & Financial Stability:** Financial stability, as well as relevant experience, is an important aspect when it comes to estimating the performance of a provider. Past relationships and success rates also provide an insight into the capacity of a company.

LOGISTICS AND ECOMMERCE - DOMINATING THE MARKET

- **E-Commerce Logistics Market Overview**

It is expected to reach $535,895 million by 2022, supported by a CAGR[Compound Annual Growth Rate] of 21.2%.The growth of digital technology has steered the adoption rate of e-commerce logistics in a number of applications. The market growth is primarily driven by factors such as rise of cross-border e- commerce activities, and upsurge in the internet penetration, exclusively in developing countries. This leads to the growth of the market as it will intensify the overall foreign goods consumption across various regions. Categorized into trucking/over road, air/express delivery, freight/rail, and maritime. Based nonoperational area, the market is segmented into domestic and international (cross border) e- commerce logistics services. The report includes the study of the global e-commerce logistics market focusing on various growth prospects and restraints in the market based on regional analysis. The study highlights Porter’s five forces analysis for the market that comprises the impact of suppliers, competitors, new entrants, substitutes, and buyers in the market.

- **Increasing Effects of E-Commerce on Market Year by Year**

In 2009, India's e-commerce market was worth about $3.9 billion. As per "India Goes Digital”, a report by Avenues Capital, the Indian e-commerce market is estimated at Rs 28,500 Crore ($6.3 billion) for the year 2011. Online travel constitutes a sizable portion (87%) of this market today. Online travel market in India had a growth rate of 22% over the next 4 years and reach Rs 54,800 crore ($12.2 billion) in size by 2015. Indian e-tailing industry is estimated at Rs 3,600 crore (US$800 million) in 2011 and estimated to grow to Rs 53,000 crore ($11.8 billion) in 2015. The market went up to $12.6 billion, the e-retail segment was worth US$2.3 billion, about 79% of India's e-commerce market was travel related in 2013. According to Google India, there were 35 million online shoppers in India in

2014 and was expected to cross 100 million mark by the end of year 2016.[9] CAGR vis-à-vis a global growth rate of 8–10%. Electronics and Apparel are the biggest categories in terms of sales. Overall e-commerce market had reached Rs 1,07,800 crores (US$24 billion) by the year 2015 with both online travel and e-tailing contributing equally. Another big segment in e-commerce is mobile/DTH recharge with nearly 1 million transactions daily by operator websites. 2016 also saw online sales of luxury products like jewelers. Most of the retail brands have also started entering into the market and they expect at least 20% sales through online in next 2–3 years. According to Google India Research in 2016, by 2021 India is expected to generate $100 billion online retail revenue out of which $35 billion will be through fashion e-commerce. The ecommerce industry was reported at USD 24 billion in 2017 and was recognized as the fastest growing industry in India. The ecommerce market grew to USD 38.5 billion in 2018.

CONCLUSION

Now a day, e-commerce is playing a major role as it is growing day by day with the help of logistics. They have huge platform in all sectors and people are into the e-commerce websites, within seconds they can access globally and they get everything in door step instead of wasting time for shopping and anything. Having all these, the major drawback is these websites are mainly dominating the wholesaler and the details which is not a business ethics, so it can be minimized through some measure.

FUTURE RESEARCH

In e-commerce, as it is growing in a huge way, middleman, wholesalers, and retailers also face unemployment. But the E-commerce sectors need these people for the stability in business.

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IFRS AND INDIAN ACCOUNTING STANDARDS –BOON AND BANE

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ABSTRACT

A strong financial reporting system is very much necessary for effective and efficient business. Every country has its own accounting standards which brings transparency, accountability and efficiency in their accounts. However, different accounting standards produce financial statements which are not consistent and not reliable from company to company and country to country. To address this challenge, International Accounting Standards Board (IASB) framed International Financial Reporting Standards (IFRS) for making uniformity in accounting procedures all over the world. But India has not adopted IFRS standards rather it has adopted specifically designed Indian Accounting Standards for the Indian context. Indian-AS is the convergence form of IFRS. It is the accounting standard adopted by the companies of India and issued under the supervision of Accounting Standards Board (ASB).

This paper aims to do a small comparative analysis on IFRS and IND-AS by highlighting the major differences. It also helps us to understand the key differences of the accounting systems.

***Keywords**: IFRS, IND-AS.*

INTRODUCTION

The accounting standard defines the financial reporting system of every country. The American GAAP and IFRS are the most adopted systems. International Financial Reporting Standard is a common language for all the accounting standards. The main purpose of IFRS is to make the company accounts understandable and comparable across the boundaries of the world. IFRS which is popularly known as International Accounting Standards was adopted by the International Accounting Standards Board (IASB). The International Accounting

Standard Committee (IASC) was established in the year 1973 which devised and developed many accounting standards. Later in 2001 IASC was replaced by IASB. IFRS helps to improve the transparency in accounting and it helps the users with relevant and accurate results. It became the main alternative for many accounting standards of different countries.

Accounting standards in India are issued by the Accounting Standards Board which came into existence on 1977 and recommended by the National Advisory Committee on Accounting Standards to the ministry of corporate affairs. Now Indian AS is mandatory for all the domestic companies which have a net worth of 500 crores. Before adopting Indian AS, India followed the principle of Indian Generally Acceptable Accounting Principle (IGAAP). Ind-AS is in line with IFRS.

There are bulk of similarities between IFRS and Ind-AS, both are homogenies but named differently with some alternations.

OBJECTIVE /PURPOSE OF THE PAPER

To make a faithful comparison between IFRS and Ind AS. And to study the implications of importance of IFRS in the present situation and the process of adopting IFRS.

LITERATURE REVIEW

This research paper brings out the fact that International Financial Reporting Standard focuses on quality, reliability & relevancy aspects of the information to all its users all over the globe while setting a new standard. Harmonisation of accounting standard is a need to create & develop global economy. Harmonisation wills result into true and fair presentation of financial statement that can be easily accessible to all the potential users including potential investors. IFRS provided detailed guideline for presentation of financial statement & it gives more insights about the financial information of the entity so that investor can compare it with other entity to find out best investment option. For MNC's adoption of IFRS will result into reduction in the cost of preparation of financial statement & also overcome the difficulty of consolidation of financial statements working in different country.

(A study of international Accounting Standard and Indian accounting standards by Parmanand Barodiya and Sonal Saxena)

A research paper demonstrates that India is striving ahead on the path of financial and economic progress, Indian corporates need to unify and compete with global peers. The financial reporting thus has to be competitive and based on global accounting standards. Indian accounting standards as many loopholes in our accounting standard such as No accounting standards for Agriculture, share based payment, Exploration for and Evaluation of Mineral Resources, Accounting and Reporting by retirement Benefit Plans Investment Property. All these items are not matched to Indian accounting standards or if it's matched, but not treated as separate standard. They need to focus on that and try to overcome in near future years. As I came to know that in the recent budget, there was proposed that in Government of India will go to inject the international concept of IFRS. I hope this could be a key to driving the economy. The major loophole has caught hold of currency volatility in the market. I hope, these barriers will be a disappear in the near future.
(An analysis and comparison between IFRS and Ind AS of the firm by Naresh KV and Vishlesh KH)

ANALYSIS

COMPARISON OF IFRS AND INDIAN ACCOUNTING STANDARDS

Here are some of the major differences which make each heads special.

1. PRESENTATION OF FINANCIAL STATEMENTS

TOPIC	IFRS TREATMENT	IND AS TREATMENT
Governing standard	IAS1	AS1
Current and non-current classification	All assets and liabilities are required to be classified as current and non-current in the statement of financial position except when the presentation is based on liquidity.	The Companies Act, 1956 and other relevant statues prescribe the format of presentation of the statement of financial position. Schedule VI to the Companies Act, 1956 has been recently revised and it now specifies the requirement of the current and non-current classification.
Format of the statement of financial position	Statement of financial position is presented segregating the current and non-current assets and liabilities. An option of using a liquidity-based	These standards do not provide any format for the statement of financial position. Formats in India have been prescribed under

	presentation is also allowed where it provides more relevant and reliable information. Certain minimum line items have been specified to be presented on the face of the balance sheet.	the Companies Act, 1956, Banking Regulation Act, Insurance Regulatory and Development Authority Act, etc.
Analysis of expenses in the income statement	An analysis of the expenses is presented using a function-based or a nature of expense–based classification. If presented by function, specific disclosures by nature are required to be included in the notes.	Schedule VI under the Companies Act, 1956 requires analysis of expenses by nature.
Statement of changes in equity	IAS 1 requires a "Statement of Changes in Equity" which comprises all transactions with equity holders. It shows the movements in the share capital, retained earnings and the elements of the other comprehensive income. In addition all these elements are segregated into the controlling and the noncontrolling interest.	This statement is not required to be presented.
Disclosure of critical judgements	IAS 1 requires disclosure of critical judgments made by management in applying accounting policies.	No such disclosure is required.Accounting policies are stated but the critical judgments made by the management need not be disclosed.
Extraordinary items	IAS 1 prohibits any items to be disclosed as extraordinary items. All items in business are considered as ordinary expenses or revenues.	AS 5 specifically requires disclosure of certain items as extraordinary items. Extraordinary items have been described as incomes and expenses arising from events and transactions that are distinct from the ordinary activities, and are expected not to recur regularly or frequently. AS 3, *Cash Flow Statements*, also requires separate disclosure of extraordinary items while preparing the statement of cash flow.

2. STATEMENT OF CASH FLOWS

TOPIC	IFRS TREATMENT	IND AS TREATMENT
Governing standard	IAS 7	AS 3
Bank overdraft	Bank overdrafts are to be treated as cash/cash equivalents if they form an integral part of an entity's cash management.	AS 3 is silent. They are generally considered in cash flow from financing activity.
Extraordinary items	Presentation of an item as extraordinary is not permitted under these standards, hence separate disclosure of extraordinary items in cash flow statements is not required.	AS 3 requires disclosure of extraordinary items classified as arising from operating, investing and financing activities.
Interest and dividend	IAS 7 requires interest and dividend paid to be classified either under operating activities or financing activities. In deciding the classification IAS 8 is to be applied and a classification is chosen so that it reflects the economic transaction.	AS 3 mandates disclosure of interest and dividend paid under financial activities only. In case of financing company it would be operating activity.
Cash payment under finance lease	IAS 7 requires additional disclosure of cash payments by a lessee relating to finance lease under financing activities.	No such disclosure required

3. ACCOUNTING POLICIES, CHANGES IN ACCOUNTING ESTIMATES AND ERRORS.

TOPIC	IFRS TREATMENT	IND AS TREATMENT
Governing standard	IAS 8	AS 5
Restatement of financial statement on change in accounting policy.	Retrospective effect needs to be given by adjusting retained earnings. Where retrospective effect is not possible, effect is given from the year in which it is practical. Comparative years' information is restated and the amount of adjustment relating to prior periods is adjusted against the opening balances of retained earnings of the earliest prior period	Restatement is not required. The effect of changes in accounting policy needs to be given in the year's income statement. The impact of the change needs to be disclosed.

	presented.	
Restatement of financial statements on correction of errors.	The opening balances of assets, liabilities and equity for the earliest prior period presented are to be restated.	Restatement is not required. The effect of correction is included in the current year's income statement. The impact of the change needs to be disclosed.
Changes in the rate of depreciation	Depreciation rates are arrived at based on the estimate of the useful life. Hence a change in the rate occurs due to a change in an accounting estimate.	The depreciation rate is guided by the Companies Act, 1956 and any change therein is treated as a change in accounting policy.
Proposed dividend	Dividend is accounted for when accepted and due to the shareholders. No provision for proposed dividend is required to be made.	The Companies Act, 1956 requires companies to disclose the proposed dividend on the statement of financial position. A provision for it is made even before it is declared and accepted by the shareholders during the annual general meeting.

4. INVENTORIES

TOPIC	IFRS TREATMENT	IND AS TREATMENT
Governing standard	IAS 2	AS 2
Net realizable value	A new assessment of net realizable value is required to be made in every subsequent period. Write-down of inventory is reversed when conditions that previously required the cost write-down no longer exists or when there is clear evidence of increase in the net realizable value because of changes in the economic circumstances.	No such guidance is provided under AS 2. AS 5 requires reversals to be disclosed as a separate item in the statement of profit and loss.
Cost formula	IAS 2 prescribes same cost formula to be used for all inventories having a similar nature and use to the entity.	AS 2 requires that the formula used in determining the cost of an item of inventory needs to be selected with a view to providing the fairest possible approximation to

		the cost incurred in bringing the item to its present location and condition. However, no stipulation for use of same cost formula is in AS 2 as compared to IFRS.
Deferred settlement	Excess over normal price is to be accounted as interest over the period of financing.	No guidance is provided under the Indian standard.
Pledged inventory	Inventory pledged as security for liabilities requires separate disclosure	No such disclosure is required.

5. INCOME TAX

TOPIC	IFRS TREATMENT	IND AS TREATMENT
Governing standards	IAS 12	AS 22
Deferred income tax	Deferred tax is computed for temporary differences between the carrying amount of an asset or liability in the statement of financial position and its tax base except those arising from initial recognition of goodwill or assets and liabilities in a transaction which is not a business combination and at the time of the transaction neither affects the accounting or tax profit. The approach is therefore statement of financial position oriented.	Deferred tax is computed for timing differences in respect to recognition of items of profit and loss for the purpose of financial reporting and for income taxes. The approach is therefore profit and loss statement oriented.
Dividend distribution tax	Treated as a tax expenditure	Treated as an appropriation of income
Classification	Always classified as non-current where current and non-current classification is presented.	Deferred tax assets are to be presented in the statement of financial position after “investments” and deferred tax liabilities are to be disclosed after “unsecured loans.”

6. PROPERTY PLANT AND EQUIPMENT

TOPIC	IFRS TREATMENT	IND AS TREATMENT
Governing standards	IAS 16	AS 6
Depreciation	Depreciation is calculated based on the useful life	Depreciation calculation is based on higher of useful life of the asset or Schedule XIV rates.
Change in method of depreciation and residual value	Change in estimate—prospective effect. Residual value revisited. IAS 16 requires estimation of residual value without considering inflation effects, i.e., residual value has to be estimated assuming that the asset was already of the age and in the condition expected at the end of its useful life.	Change in policy—retrospective effect. Residual value not revisited.
Cost of property plant and equipment.	Historical cost or revalued amount is used. Regular valuations of entire class of assets are required when the revaluation option is chosen.	The historical cost approach is prescribed. Revaluation is permitted. Frequency of revaluation has not been specified. Revaluation of the whole class of assets is not required.
Re placement	Replacements are capitalized and replaced part is derecognized.	Replacement cost may be capitalized when there occurs an increase in future benefits beyond the asset's original standard of performance; else the replacement cost would be expensed.
Depreciation on revalued portion	Depreciation on the revalued portion cannot be recouped out of revaluation reserve. However, transfer of revaluation reserve directly to retained earnings is required.	Depreciation on the revalued portion can be recouped out of revaluation reserve.
Transfer of revaluation reserve	The revaluation reserve is directly transferred to retained earnings on de-recognition.	Revaluation reserve is transferred to income statement on de-recognition.

7. REVENUE

TOPIC	IFRS TREATMENT	IND AS TREATMENT
Governing standard	IAS 18	AS 9
Measurement	Where payments are deferred the fair value of revenue from sale of goods and services are computed by discounting all future receipts using an imputed rate of interest. The difference between the fair value and the nominal amount is treated as interest income using the effective interest rate method.	Revenue is recognized at the nominal amount of considerable receivable.
Interest income	IAS 18 requires effective method to be followed for interest income recognition.	AS 9 requires interest income to be recognized on a time proportion basis.
Barter transactions	Revenue on barter transactions recorded on dissimilar exchange.	No guidance on barter transactions

8. ACCOUNTING FOR GOVERNMENT GRANTS AND DISCLOSURE OF GOVERNMENT ASSISTANCE.

TOPIC	IFRS TREATMENT	IND AS TREATMENT
Governing standard	IAS 20	AS 12
Grant related to non-monetary assets	In case of non-monetary assets acquired at nominal/ concession rate, IAS 20 permits accounting either at fair value or at acquisition cost.	AS 12 requires, if the asset is given by the government at a discounted price, the asset and the grant to be accounted at the discounted purchase price. Assets given free of cost are accounted at a nominal value.
Refund of grant related to specific fixed asset.	In respect to grant related to a specific fixed asset becoming refundable, IAS 20 requires retrospective re-computation of depreciation and prescribes charging off the deficit in the period in which such grant becomes refundable.	AS 12 require enterprise to compute depreciation prospectively as a result of which the revised book value is provided over the residual useful life.
Disclosure	IAS 20 requires separate disclosure of unfulfilled	AS 12 has such no disclosure requirement.

	conditions and other contingencies if grant has been recognised.	

(Primary data collected from comparisons of IFRS and IND AS by Abbas Ali Mirza and Nanda kumar Ankarath)

BACKGROUND

The standards are being at phase manner

*Phase 1 :(listed &unlisted net worth greater, equal to 500 crores as on March 31/2014)

*phase 2 :(Applicable to all listed entities irrespective of their net worth)

Implementation of IND AS

Particulars	**Phase 1**	**Phase 2**	**Voluntary adoption**
Year of adaption	**2016-17**	**2017-18**	**2015-16 or thereafter**
Covered companies			
a)Listed companies	All companies with net worth equal to, or more than 500cr.	All listed companies, and those in the process of getting listed	Any company could voluntary adopt IND AS
b) Unlisted companies	All companies With net worth equal to, or more than 500cr.	Companies having net worth equal to or more then,250cr.	Any company
C)Group of companies	Applicable to holding, subsidiaries, joint venture, or associates of the companies covered in (a) &(b) above.		

IMPACTS OF IND AS

Changing the reporting standards of an country is not an easy job that requires lot of risk undertaking sometime even it may lead to economic slowdown, but following the old standards will block the Indian companies to play with high potential.

IMPACTING AREAS

Ind AS covers all the major sector or aspects of financial statement

1. Revenue recognition norms
2. Changes in the net worth on account of fair valuation of instruments, property and acquired entities
3. Guidelines on consolidation of financial statements—changes from the proportionate consolidation method for joint venture to the equity method
4. Changes in the p&l on account of derivatives as well as foreign currency loan obligations
5. Proposed dividend and deferred tax assets
6. Employee based payments
7. Re classification of actuarial gains and losses

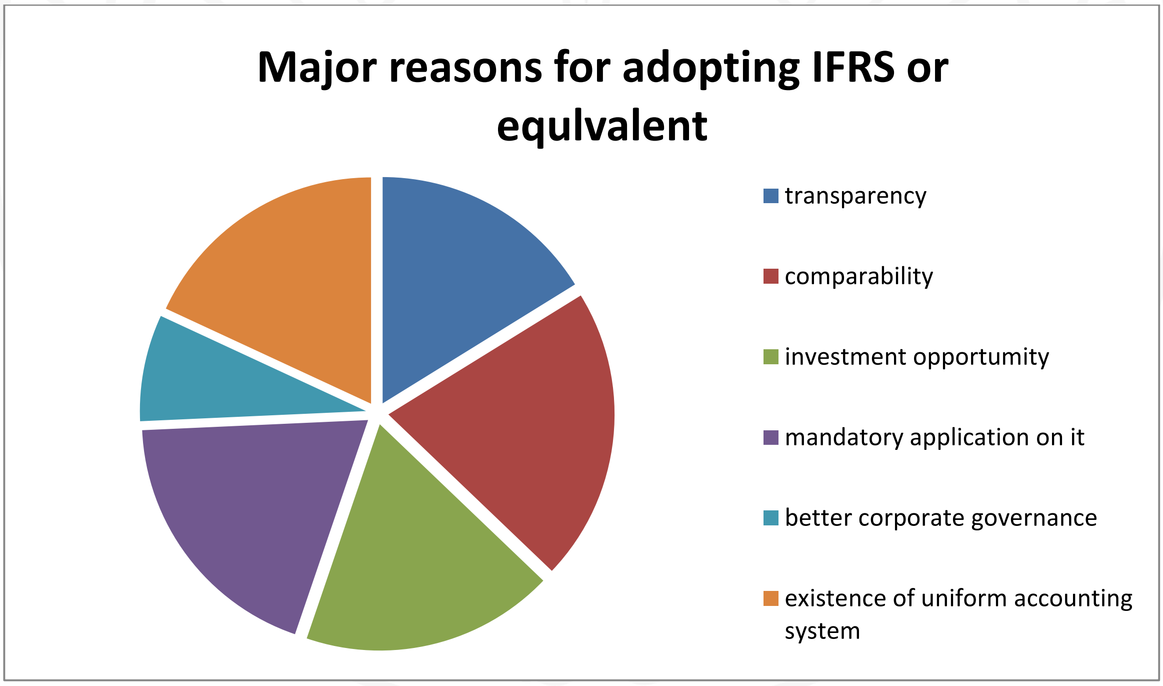
EXTENT OF IMPACT

Through this changes CRISIL's study the 80% of reported there first quarter results for current fiscal as per IND AS, shows only 8 of them have reported information on changes in net worth as on march 31,2016.

Four companies have deviation of 5% in their net profit.

Areas of accounting change	Impact on net worth	Impact on profitability
Fair valuation of land and PPE	Significant	low
Fair valuation of financial instruments	significant	moderate
Intangible assets and goodwill	low	Moderate
Re classification of accrual gains and losses	negligible	significant
Employee stock options	moderate	Low
Consolidation of entities	moderate	moderate
Foreign currency translation	Moderate	Low

ACCOUNTING AREA IMPACTING NET WORTHY AND PROFITABILITY



Areas of accounting changes	**Auto**	**IT**	**pharma**	**Infrastructure and capital goods**	**telecom**	**Retail**
Revenue recognition	✓	✓	--	✓	✓	✓
Fair valuation of PPE	✓					✓
Fair valuation of gains and losses through FVTPL	✓	✓	✓	—	✓	
Fair valuation of financial instruments (net worth)	✓	✓	✓	✓	✓	✓
Amortisation of intangibles/good will	—	✓	✓	—	—	—
Consolidation	✓	✓	✓	✓	---	---
Capitalization of exchange difference of foreign currency loans	✓	✓	—	✓	✓	—
Reclassification of actuarial gain/losses as OCI	—	✓	✓	—	—	—
Employee stock options	✓	✓	✓	—	—	—
Capitalization of spares/costs as fixed assets	✓	—	—	✓	—	—

Lease accounting	—	—	—	—	✓	✓
Service concession agreement	—	—	—	✓	—	—

Sector specific impact

(*reference and secondary data from Crisil's analysis)

CONCLUSION

Every country needs good reporting standards, but it is not an easy job for adopting new accounting standards. So sticking on old a standard which leads to hindrance of Indian company in the global world. since the IND AS is still in implementation stage it has lot of difficulties &disadvantages, at the same time there are advantages. Since IND AS may not be competitor for IFRS. But in comparability, transparency, investment opportunity but it has edge in corporate governance. Both IFRS and IND AS have their own advantages and disadvantages finally it's all about how an state or government implement it. Since India has adopted new standards called IND AS there is no means in talking about implementation of IFRS in India, now it's all about altering the existing standards when it requires. IND AS has enough potential to lift the Indian companies and make them globally competitive.

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON ACCOUNTING INDUSTRIES

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Abstract

The purpose of this paper is to understand and analyze the use of artificial intelligence on accounting industries and to analyze how it can create a massive impact on the ways in which accounting is carried out. As for now, in 2019, when technologies are reaching people beyond social and economic barriers like never before, a number of concerns are often voiced about artificial intelligence. To sum it up, we shall be comparing the advantages and disadvantages of Artificial Intelligence in accounting, in India as compared to that of the United States of America, and the uses of Artificial intelligence in accountancy and exploring the possibilities of the same.

***Keywords**: Artificial Intelligence, Accounting, Industries,*

INTRODUCTION

Artificial intelligence, sometimes called machine intelligence is an intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. Artificial Intelligence is a particular type of technology which emphasizes on creating intelligent machines that can understand, analyze and interpret information in a humanly manner. Artificial intelligence makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks

Accounting is the systematic and comprehensive recording of financial transactions pertaining to a business. Accounting also refers to the process of summarizing, analyzing and reporting these transactions to oversight agencies, regulators and tax collection entities. Accounting is one of the key functions for almost any business. It may be handled by a bookkeeper or an accountant at a small firm, or by sizable finance departments with dozens of employees in larger companies. As far as advantages are concerned, now, at 2019 where the accounting frauds and manipulations have increased more than ever before, people strongly believe that there is a need of the interference of machine that can think, which is Artificial Intelligence. As Artificial intelligence can always give unbiased and truthful financial statements without any manipulations or frauds. The goal here is to eradicate malpractices and frauds from the accounting system and to make it easier than ever before.

Now when we discuss the disadvantages of Artificial intelligence in accounting, the major concern here is unemployment and the chances of the databases being affected by many sorts of security issues mainly Cyber security.

The case of India and that of the United states are taken here because of varying trends in their markets and the labor market conditions of both the countries.

The United States is a capital-intensive market and India is a labour-intensive market. We can analyses the differences in both the markets and choose which is best for what kind of case or scenarios respectively

LITERATURE REVIEW

Stone et al (2001). These are: reasoning, programming, artificial life, belief revision, data mining, distributed Artificial Intelligence, expert systems, genetic algorithms, systems, knowledge representation, machine learning, natural language understanding, neural networks, theorem proving, constraint satisfaction, and theory of computation.

Peng and Zhang (2007), Zhou et al. (2007) and Wang et al. (2007). Since many readers of this article may require a glance view of the Artificial intelligence field, the author has utilized a flow diagram to illustrate the whole structure of this paper, and the relationship among the diverse fields of Artificial intelligence. What follows is a brief discussion of some of the important areas of Artificial Intelligence.

OBJECTIVES OF THE STUDY

The objectives of the study are as follows

1. To study the impact of Artificial Intelligence in accounting industries
2. To analyze the challenges faced on implementation of Artificial Intelligence

3. To explore the Possibilities of Artificial Intelligence contributing towards the ease of application of Accounting
4. Comparing the Application of Artificial intelligence in accounting, both India as well as The United States of America.

WHAT IS ARTIFICIAL INTELLIGENCE

Artificial intelligence is basically the ability of a machine to think, and learn in a very humanly manner. Artificial intelligence helps machines to learn from the past experiences. This technology enables the betterment of the machine the longer you use it. This intern enables a machine to behave in a very human like fashion. Learning always improves the capability of the machine making it better in what it does over a period of time.

Artificial intelligence is a technology where the machines learn to interpret data, analyze and understand it and perform the required actions

Unlike the software's that are used now which run programs that are executed on the basis of commands which intern never understand what the data is, Artificial intelligence is a technology that understands and interprets it

Artificial Intelligence has provided machines and software the ability to;

1. Recognize Patterns
2. Remember data for future applications
3. Learn from decisions made in similar circumstances
4. "Understand" and replicate tasks performed by human operators

WHY WE NEED ARTIFICIAL INTELLIGENCE IN ACCOUNTING INDUSTRIES

RISING TRENDS IN ACCOUNTING FRAUDS

1. LEHMAN BROTHERS SCANDAL (2008)

Global financial services firm which was ranked the 1st "Most Admired Securities Firm" by Fortune in 2007. The fraud was that they had hidden over 50 billion dollars in loans disguised as sales. Lehman executives and the company's auditors, Ernst & Young were the main people behind this particular manipulation. They allegedly sold toxic assets to Cayman Island banks with the understanding that they would be bought back eventually. They created the impression Lehman had $50 billion more cash and $50 billion less in toxic assets than it really did. They went bankrupt, and were forced into the largest bankruptcy in American history. They were not prosecuted due to lack of evidence.

2. SATYAM SCANDAL (2009)

Indian IT Services Company and back-office accounting firm, falsely boosted revenue by $1.5 billion. Founder/Chairman Ramalinga Raju was the main person behind the scandal. He manipulated the people by generating falsified revenues, margins and cash balances to the tune of 50 billion Rupees. He was caught as he admitted the fraud in a letter to the company's board of directors. Raju and his brother were imposed with a penalty and charged with breach of trust, conspiracy, cheating and falsification of records. Released after the Central Bureau of Investigation failed to file charges on time.

ERADICATES THE CHANCES OF HUMAN ERROR

"New technology paired with human error is a leading cause of accounting mistakes, with more than a quarter (27.5%) of professional reporting that incorrect data had been manually input into an enterprise system at their firms," the researchers report. So, from this report we can say that there is a significant amount of human errors that take place in the field of accounting. Even in terms of using technologies, there are mistakes recorded which pertain to that of the input of incorrect data and mistakes that are taking place on a regular basis. The use of Artificial Intelligence in accounting makes a major leap in the positive direction. This helps in eradicating the chances of human error as the goal is to perform work without human intervention.

WHY WE ARE HESITANT TO USE ARTIFICIAL INTELLIGENCE

The late Stephen Hawking famously expressed his secret fear that Artificial Intelligence might one day take over, saying that thinking machines "could spell the end of the human race". There is irony in his concerns considering that Hawking had to rely on artificial intelligence to give him the voice that allowed him to interact with the world.

As we are totally surrounded by machines and computer systems, this gave humans a general thought like *"Can a machine think and behave as humans do?"* Though this was a general thought, its curiosity leads to the development of artificial intelligence.

Requires financial investment and can be quite costly, artificial intelligence replacing humans can become the cause of unemployment.

Robots and other products of artificial intelligence do not possess such human qualities, as creativity and emotional intelligence.

Sometimes robots get out of control, and it is dangerous. Artificial intelligence as far as 2019 is concerned, is a very narrow topic and people are presently exploring the possibilities of the same.

The concept of artificial intelligence has not yet been established in a form that it can be used in day to day uses and applications.

ARTIFICIAL INTELLIGENCE AS A BOON IN THE UNITED STATES OF AMERICA

The United States of America is a capital intensive market. Basically, *"capital intensive"* refers to business processes or industries that require large amounts of investment to produce a good or service and thus have a high percentage of fixed assets, such as property, plant, and equipment.

Since The United States of America is a capital intensive market, the capital that they can spend on machinery, technologies and properties is a lot more as compared to that of a labor intensive country.

When we take up the case of the United States in particular, the labours that are available at their disposal are remarkably expensive.

As the labor market conditions are not conducive in America, it is always preferred to replace the workers with machines wherever possible.

All the software's that are presently available makes accounting a lot simple than what it initially was These software's are still not fully capable of executing tasks without any human intervention. Artificial Intelligence provides us with the advantages of perfectly solved calculations without the necessity of human intervention. It helps enterprises to work efficiently and reduces unnecessary wastage of time, money and materials too. Artificial intelligence also eliminates the probability of any kind of frauds or malpractices, especially in a country like The United States prefer technology over labour since most of the labours that are available in the United States are unskilled and expensive.

Artificial intelligence automates many tasks that were previously done by labours and workers, such as ingesting data, and it analyses 100% of the dataset without requiring a human to create tests, write scripts, or remember all the rules. Key to the future of audit is that Artificial Intelligence is changing the definition of reasonable assurance, by understanding the entirety of the ledger and identifying anomalies based on risk, rather than rules. This would contribute towards the betterment of the country in a lot of aspects primarily in terms of cheap production and better execution.

This intern would help the enterprises in that particular country towards contribution to the GDP as well as ease of manufacturing.

In short, we can say that we will soon find Artificial Intelligence working in accounting enterprises in economies that are capital intensive in nature especially in cases like The United States of America.

ARTIFICIAL INTELLIGENCE AS A BANE IN INDIA

In India, most of the markets that exist are labour intensive in nature. Labour intensive basically refers to a production process where labour costs are the largest component. Labour intensive implies that capitals (machines/factories) are a small percentage of the final cost. Labour intensity is the percentage of labour which is used in the production process. The degree of labour intensity is typically measured in proportion to the amount of capital required to produce the goods or services: the higher the proportion of labour costs required, the more labour-intensive the business.

Less developed economies, as a whole, tend to be more labour-intensive. This situation is rather common because low income means that the economy or business cannot afford to invest in expensive capital. But with low income and low wages, a business can remain competitive by employing many workers. In this way, firms become less labour-intensive and more capital-intensive.

Labour costs encompass all of the costs necessary to secure the human capital necessary to complete work. These costs can include funds directed toward base wages, along with any benefits that may be given.

Labour costs are considered variable, while capital costs are considered fixed. Since labour costs can be adjusted during market downturns through layoffs or reductions in benefits, labour-intensive industries have some flexibility in controlling their expenses.

Disadvantages of labour costs in labour-intensive industries include limited economies of scale, as a firm cannot pay its workers less by hiring more of them, and susceptibility to wage forces within the labour market.

New technology such as Artificial Intelligence and more powerful computers is challenging certain industries which were always considered labour intensive. For example, even in surgery powerful robots are able to take the place of surgeons. There has also been new developments in robots which can pick fruit and vegetables – making this traditionally labour intensive industry much less labour intensive.

India’s labour-intensive industries are languishing. Not only are exports of these industries in the doldrums, industrial production data also shows tepid growth in these sectors. What’s more, imports of labour-intensive products are increasing. These trends could have a severe impact on employment.

The major reason of concern is the amount of unemployment that it can generate in a labour intensive country like that of India.

We can take an example of banks in India and their computerisation. In the late 1990’s and the early 2000’s computers were introduced onto the banking system which ended up creating a miniature recession in the field of Banking.

A concern is often voiced about the implication of artificial intelligence in the accounting industries in India mainly because as far as 2019 is concerned, the technology had not been developed to an extent where it can be used in real life situations.

Another major reason is that there is no enough capital that is available to fund. Investing in such expensive technology as the human labour is leading to unemployment particularly in India. Hence, we conclude that AI needs to implement in a judicious manner.

CONCLUSION

Artificial Intelligence is a particular technology that has achieved tremendous growth over the years; it is a field of technology wherein there is a lot of debate that is taking place weather to use this technology in real life or to avoid it considering the betterment of people, as artificial intelligence may result in creating large scale unemployment. It is also easier said than done to replace all the existing workforce with Artificial Intelligence as the whole process will end up being expensive, lengthy and cumbersome. Accounting as a field, is one that is very peculiar in nature, it is the process of summarising, analysing and reporting transactions. As for the present case scenario, for audit and accounting, a combination of both new technology paired with the work of human beings is followed. But because of the major reasons like human error, malpractices, frauds, high time consumptions people have started to believe that Artificial Intelligence should enter the field of accounting. However this is true for capital intensive countries but for the case of labour intensive countries, wherein cheap and skilled labour is available, Artificial Intelligence is not preferred as it can create large scale unemployment.

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THE IMPACT OF E-COMMERCE ON ONLINE SHOPPERS: A STUDY AT MYSORE CITY

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ABSTRACT

Digital marketing is a form of marketing and e-commerce is a form of business. Digital marketing assists e-commerce. Digital marketing consists of different marketing techniques used to drive traffic to your 'e-commerce' website in order to bring sales & conversions. E-commerce is a business where buying and selling completely depends on the internet. Therefore, the digital marketing comes into the picture, as it is the only medium to help e-commerce business to grow. Using digital marketing, e-commerce creates huge revenue as it helps to acquire customers, brand value and brand loyalty. This paper aims at e-commerce and its impact on online shoppers in Mysore city. A questionnaire is circulated among 100 people, of age group ranging from 18 to 50 years. It is primary data which includes few interesting inputs that gives an idea about the impact of e-commerce websites through various digital modes.

***Keywords**: digital marketing, e-commerce, primary data*

INTRODUCTION

Digital marketing is the marketing of products or services using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium. Digital marketing channels are systems based on the internet that can create, accelerate, and transmit product value from producer to the terminal consumer by digital networks. It encompasses all marketing efforts that use an electronic device or the internet. Businesses leverage digital channels such as search engines, social media, email, and other websites to connect with current and prospective customers.

Digital marketing's development since the 1990s and 2000s has changed the way brands and businesses use technology for marketing. As digital platforms are increasingly incorporated into marketing plans and everyday life, and as people use digital devices instead of visiting physical shops, digital marketing campaigns are becoming more prevalent and efficient.

E-COMMERCE

E-commerce is the activity of buying or selling of products on online services or over the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems.

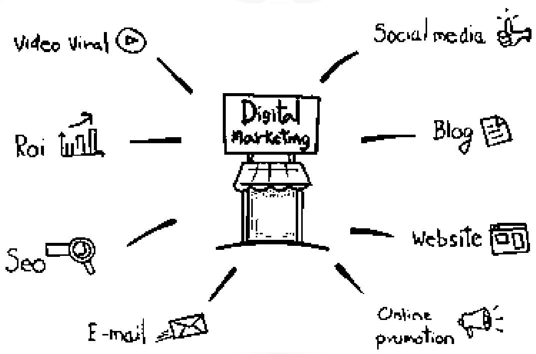
Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle although it may also use other technologies such as e-mail. Typical e-commerce transactions include the purchase of online books (such as Amazon) and music purchases (music download in the form of digital distribution such as iTunes Store), and to a less extent, customized/personalized online liquor store inventory services. There are three areas of e-commerce: online retailing, electronic markets, and online auctions. E-commerce is supported by electronic business.

LINK BETWEEN DIGITAL MARKETING AND E-COMMERCE

Digital marketing is a form of marketing and e-commerce is a form of business. Digital marketing assists e-commerce. Digital marketing consists of different marketing techniques used to drive traffic to your 'e-commerce' website in order to bring sales & conversions. E-commerce is a business where buying and selling completely depends on the internet. Therefore, the digital marketing comes into the picture, as it is the only medium to help e-commerce business to grow. Using digital marketing, e-commerce creates huge revenue as it helps to acquire customers, brand value and brand loyalty.

E-commerce is a business platform and digital marketing is an umbrella of skill set like SEO, SEM, SMM, email marketing which helps you to generate leads and help to convert leads into sales .E-commerce and e-marketing are online tools which have to be used together to generate best results. E-commerce marketers can use social media, digital content, search engines, and email campaigns to attract visitors and facilitate purchases online.

Customers are no more dependent just on content or a word-of-mouth before buying a product; they make sure to read the reviews about a product on all the platforms on which the product is listed. It has become very important to grab customers' attention as they get distracted really easily; this is where digital marketing comes into the picture and help e-commerce businesses to go through such challenges.



OBJECTIVES OF THE STUDY

- The paper aims at e-commerce and its impact on online shoppers.
- Link between digital marketing and e-commerce and digital modes.
- Link between age and the shopping pattern and choices.

LIMITATION OF THE STUDY

- Only 100 respondents were taken.
- While taking the survey, age was a limitation, hence equal number of same gender or age couldn't be considered.

LITERATURE REVIEW 1

The digital revolution has impacted consumers and businesses alike. Over the past decade technology and the way it is used has changed drastically. The Internet, once purely a source of information has become a place where people meet to share their stories and experiences, a platform for discussion and debate, a source of entertainment and much more. Furthermore, the Web has several important marketing aspects that enable companies to boost their performance: 24 hours online; multimedia compatible; globally available; interactive; micromarketing compatible; integration ready. (Rowley, 2004, p. 26)

Communication across continents now takes seconds, not weeks. When consumers experience your brand through the web (positively or negatively) the impact is immediate. Nutella is a perfect example; when many passionate consumers began creating online communities around the brand the company intervened – preventing consumers from using the Nutella name – and the company suffered as a result (Cova & Pace, 2006).

Kiani (1998) also presents a set of guidelines for advertising on the web; attract users by making it easy to find your site, engage their interests by creating communities or linking to other sites they will find valuable, ensure they return by constantly updating your content and keeping it „fresh", learn their preferences by tracking their activity on your site, and relate to them by taking the information gathered to provide customized content.

A similar study conducted by Parsons, Zeisser and Waitman (1998) delves deeper into these fives guidelines, explains why they are important, the issues inherent in them, and how marketers began to implement them. The authors claim most marketers struggle in engaging their customers and present two key concepts marketers should understand in order to do so. First, understand that the web is an interactive medium and simply transferring content from traditional media will likely fail because it does not generate an interaction with the consumer. Secondly, in order to engage you must create or enable the creation of valuable content.

Parsons et al. (1998) expand on Kianis view on retaining consumers by arguing for a creation of switching costs through the development interactivity – where consumers invest more of their personal time and resources on a site and as a result making it more costly for them to switch to a competitor The authors also identify various ways to gather information on consumers (p.36). Since the amount of information marketers can acquire from the Internet can be overwhelming, the authors stress the importance of defining which is most important for them.

Winer (2009) highlights the opportunity of advertising on blogs, which he describes as a website built around a theme where the user shares their opinions and encourages others to discuss (p.111) by explaining that marketers pay to place a banner ad tailored to the theme of the blog. However he fails to explore the potential word-of-mouth value for companies in blogs.

Furthermore, blogs may also fit into the non-intrusive media category if they are created and maintained by the company to inform consumers and engage them in conversation. Lastly the author discusses ratings/recommendations as a form of user-generated content. Through the use of sites such as Amazon.com users can rate, and share their opinions of, products or vendors (Winer, 2009, p.111). This medium can be either beneficial or harmful for marketers as they have no control. Moreover, it illustrates the importance of word of-mouth in the digital world.

Kwak, Lee, Park and Moon (2014) present an empirical study of Twitter and how information spreads across the service. The authors analysed 41.7 million users, 1.47 billion social relations, 4,262 trending topics and 106 million tweets. During the research the authors noted a tendency on Twitter; contact between similar people occurs at a higher rate than among dissimilar people.

Twitters homophily can benefit businesses that establish their Twitter presence and start building a follower database. It enables companies to reach out to the right people and be sure that the information will be passed on and reach people with similar interests who could be potential clients. When looking deeper into how Twitter operates and spreads information the authors noted that any re-tweeted tweet reaches an average of 1000 users no matter the number of followers had by the original tweet.

Reaching a thousand potential customers by only one click is undoubtedly a valuable opportunity for businesses. The article presents a good description of how Twitter operates and how tweets reach masses. However the article, though valuable, is purely scientific and very limited as it does not address how the business world is making use of this potentially profitable tool.

Gupta (2014) in her paper **"E-Commerce: Role of e-commerce in today's business"**, presents a comprehensive definition of e-commerce while isolating it from e-business. The paper enlists the different ecommerce models i.e. B2B, B2C, B2G and C2C, narratively analysing the nitty grittiness of each. **Rina (2016)** also elaborates the different applications of e-commerce in **"Challenges and Future Scope of Ecommerce in India"**, at the same time, defining the degree to which they are operational in the country. **Gunasekaran, Marri, McGaughey, & Nebhwani (2002)** give a broad outlook of electronic commerce within organisational systems in **"E-commerce and its impact on operations management"**, defining it with reference to e-trading and elaborating- how it has permeated every field of business. The paper identifies the revolutionary role played by earlier internet applications like e-mail and electronic data interchange and details the revolutionary changes brought by the internet technologies in manufacturing, marketing, purchasing, design, production, selling and distribution, warehousing and human resource management. Internet based technologies have enabled businesses to shorten development, purchase and procurement cycles, maintain upto date product and market information, significantly increase the speed of communications and increase the quality of customer relationships by facilitating close contact and constant communication. The paper studies in depth, the significance of web based technologies in different business operations, thus, improving their efficiency through effective B2B e-commerce.

Mishra & Kotkar (2015) trace the timeline and development of B2C e-commerce in **"A Study on Current Status of E-Commerce in India: A Comparative Analysis of Flipkart and Amazon"** with its inception in the mid-1990s through the advent of matrimonial and job portals. However, due to limited internet accessibility, weak online payment systems and lack of awareness, the progress was very slow. The Indian B2C e-commerce industry got a major boost in mid 2000s with the expansion of online services to travel and hotel bookings which continue to be major contributors even today. **Das & Ara (2015)** observe in **"Growth of E-Commerce in India"** that though online travel and hotel bookings still control the lion's share of e-commerce market, their share has comparatively fallen over the years due to the recent augmentation and consequent rise of e-tailing services. There has been a tremendous surge in the volume of investment in this sector. With the e-commerce markets in the west reaching their saturation, investors see tremendous potential in the Indian market, in the light of which, many start-ups have received funding from venture capitalists and private equity firms.

China's Alibaba Group and affiliate Ant Financial became the largest shareholders of One97 Communications, the parent of Indian e-tailer. Paytm, by investing $680 million, in 2015 **(Aulakh, 2015)**. To tap the potential of what it regards as "underdeveloped internet economy" of India, Japanese investment company and technology powerhouse Softbank invested $627 million into online retailing marketplace Snap deal and $210 million in Ola cabs. **(Mac, 2014**). Similarly, New York firm Tiger Global Management has funded companies such MakeMyTrip, Flipkart, Myntra and Quickr. The availability of funds has presented a favourable ecosystem and growth opportunities for big as well as small companies. It has enabled local start-ups to survive in cut throat competition against foreign giants and has facilitated the penetration of e-commerce to every facet Growth of E-commerce in India: An Analytical Review of Literature DOI: 10.9790/487X-1906019195 www.iosrjournals.org 93 | Page of human life; such that the differentiation between e-commerce and traditional business is getting blurred. **(Aggarwal, 2014).**

Through **"Problems and Prospects of E-Commerce", Raghunath & Panga (2013)** present a comprehensive analysis of various nuances of e-commerce while accentuating that, in present time every business activity, be it advertising, ordering, payment etc., can be performed in the digital ecosystem. The paper also enlists numerous points on the importance of e-commerce which are responsible for its development as the new convention. It has enabled the creation and exploitation of new business opportunities, at the same time increasing the say of customers in the development of new products and services. E-commerce has not only augmented the performance of internal business management, but, has also enabled better customer relationships by promoting a business model that is essentially based on information sharing. The accessibility of internet connectivity and other online tools herald a new revolution. SWOT analysis of e-commerce conducted by **Awais & Samin (2012)** highlights ubiquity, low operating cost, improved customer interaction and time saving as the unique strengths of e-commerce but, at the same time accentuates upon the necessity for the firms to adapt themselves to the changing environment and innovate constantly to come up with better offerings for customers.

With an increase in the number of players in the B2C segment, competition for the first position is set to intensify, making it imperative for the firms to enhance service quality and to invest in logistics, so as to derive benefits from increase in the disposable income of households, rise in internet subscriptions and infiltration of mobile commerce. (Das & Ara, 2015). In the face of rising competition, the survival of the firms will depend upon how efficiently they are able to bridge the existing gaps in e-commerce transactions. The ubiquitous nature of internet has enabled e-commerce to defy geographical boundaries and permeate different markets, so as to elicit demand from sub-urban and rural areas, after having successfully tapped its potential in metropolitan cities. In anticipation of increasing demand from Tier 2 and 3 cities, many e-commerce firms are undertaking efforts to widen their reach by investing in better infrastructure. In the light of growing number of websites, offering similar goods and services, greater significance is being attributed to Internet Marketing, which shall play an unparalleled role in audience acquisition for e-commerce websites, by displaying the advertisements on search engine result pages and other portals. Internet Marketing shall not only propel ecommerce but will also emerge as an important support tool to brick and mortar stores. **(Gangeshwer, 2013).**

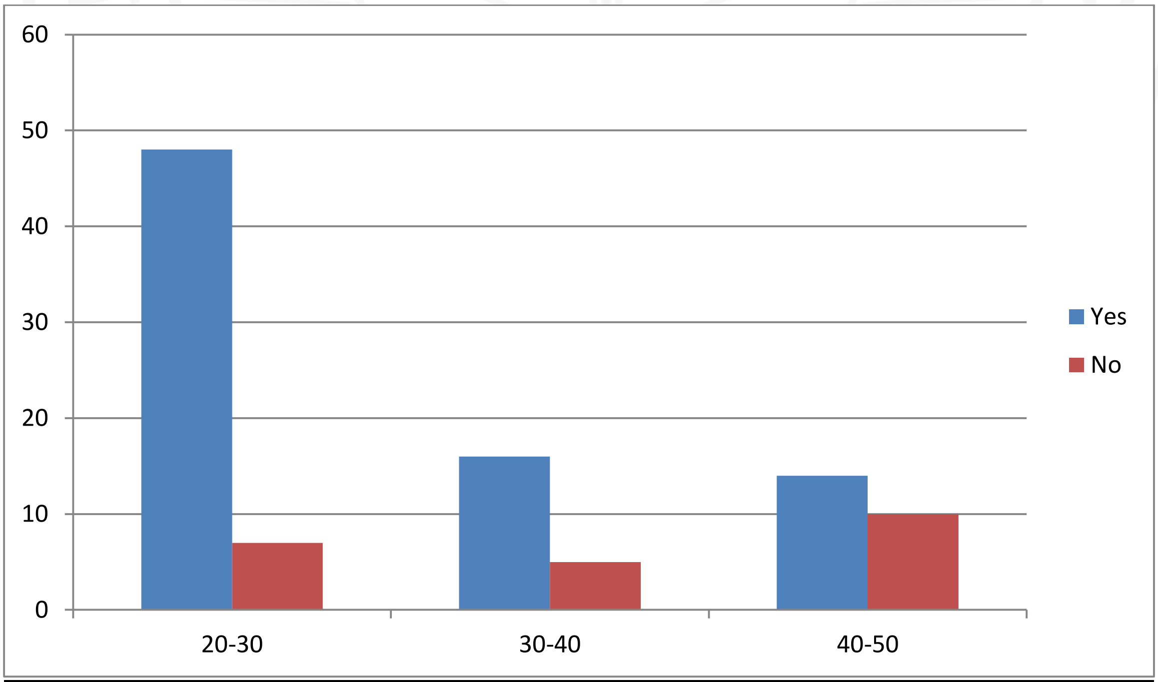
Apart from Internet Marketing, **Deshmukh, Deshmukh & Thampi (2013)** recognize another important development: m-commerce, which they identify as a subset of e-commerce. **Transformation from Ecommerce to M-commerce in Indian Context"** reviews the current and potential status of e-commerce and m-commerce in the Indian market, while projecting the latter as the potential future. The paper discerns ubiquity, personalization, flexibility and immediacy as the singular advantages of m-commerce. The authors affirm the idea that smart phone penetration and rise in internet user base, mostly driven by youth, shall propel the growth of e-commerce. Statistical data is used to emphasize that the infrastructure requisite for m-commerce development already exists; however, it is yet to be properly deployed. With mobile penetration providing a boost to digital downloads and enabling cheaper monetary transfers, the need of the hour is to enhance customer confidence by providing them assurance of safety and privacy, which shall accelerate movement towards a cashless economy.

Despite innumerable prospects, the growth of e-commerce in India has not been up to its full potential due to certain challenges that inhibit the growth of firms. The growth of digital commerce in India is impeded by inadequate infrastructure, logistics failure, lack of tax uniformity and declining margins. In the face of intense competition, firms have to pamper the customers with huge discounts, everyday offers and liberal returns policy which prove detrimental to their profits. As against the firms following inventory model, e-marketplaces are more adversely affected by subsidies as they have to offer incentives to the seller for listing their products on the website in addition to the humungous discounts and wide range of offers to the customers. The increasing fulfilment costs (includes every cost incurred from the point an order is placed till the time it's delivered to the customer.), lack of last mile connectivity in many sub-urban and rural areas and the rising reverse logistics also hinder the the growth of e-commerce firms by resulting in huge loss. (Rina, 2016).

ANALYSIS

- **Online Shopping**

Age	Usage of online shopping	
	Yes	No
20-30	48	7
30-40	16	5
40-50	14	10



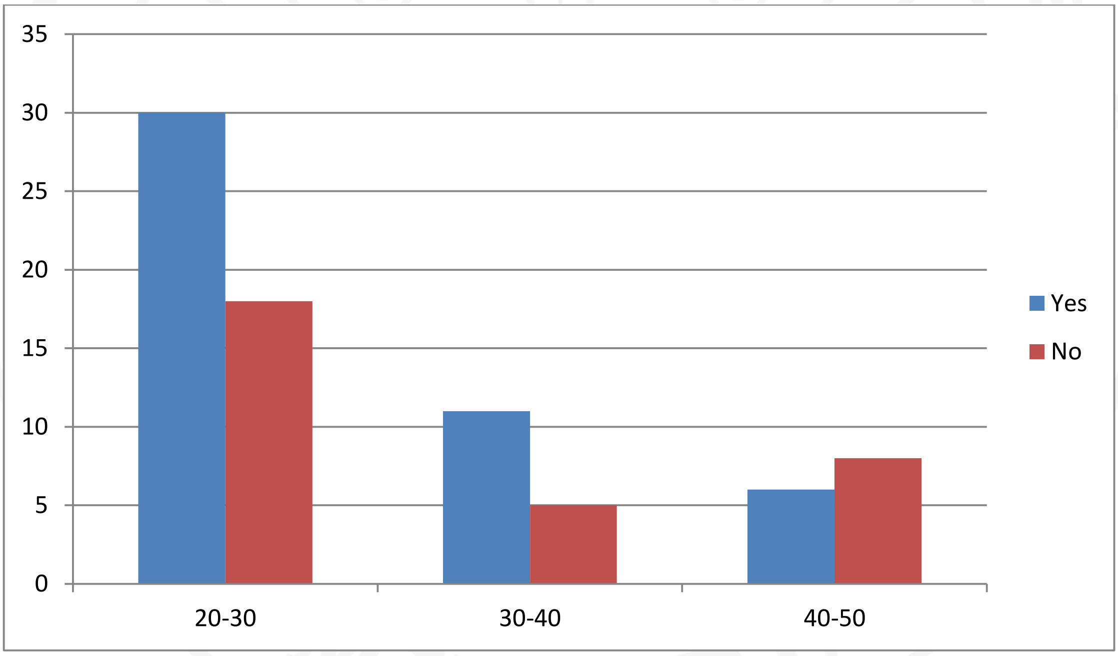
(Fig.1)

As per the above graph, the age between 20-30 years, have shown a lot of interest in shopping online.

- **Required products**

Age	**Availability of required products**	
	Yes	**No**
20-30	30	18
30-40	11	5
40-50	6	8

(Table.2)



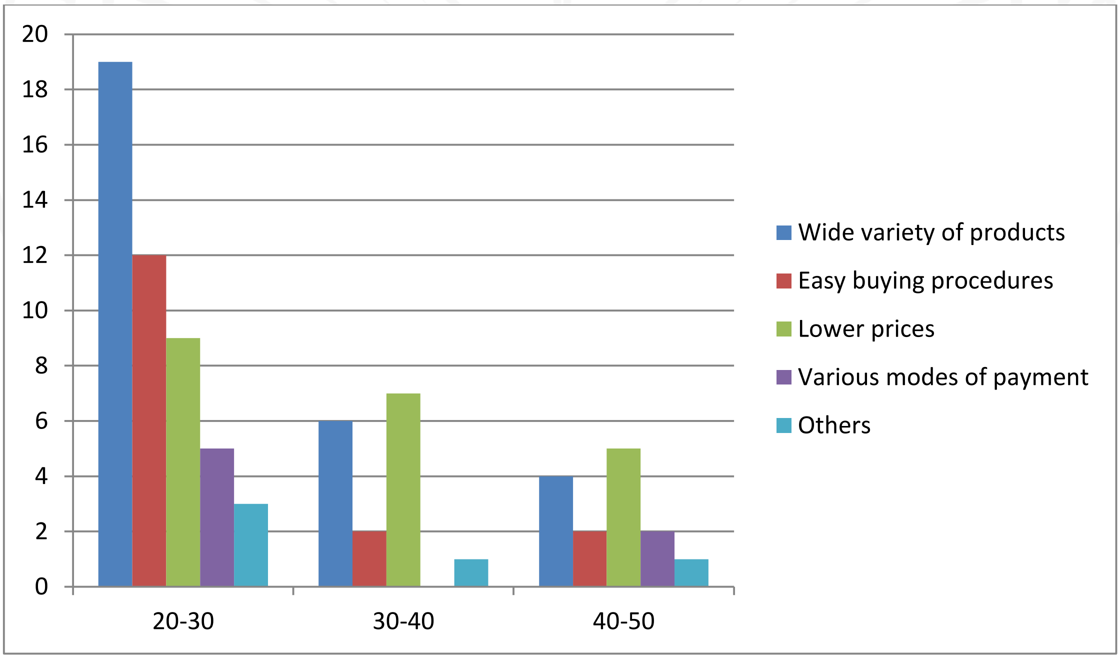
(Fig.2)

As per the above graph the people aged between 20-30 years get the products they are in need of whereas, in the remaining two categories, most of the people don't get the products they need.

- **Preference**

Age	**Why online shopping is preferred**				
	Wide variety of products	**Easy buying procedures**	**Lower prices**	**Various modes of payment**	**Others**
20-30	19	12	9	5	3
30-40	6	2	7	0	1
40-50	4	2	5	2	1

(Table.3)



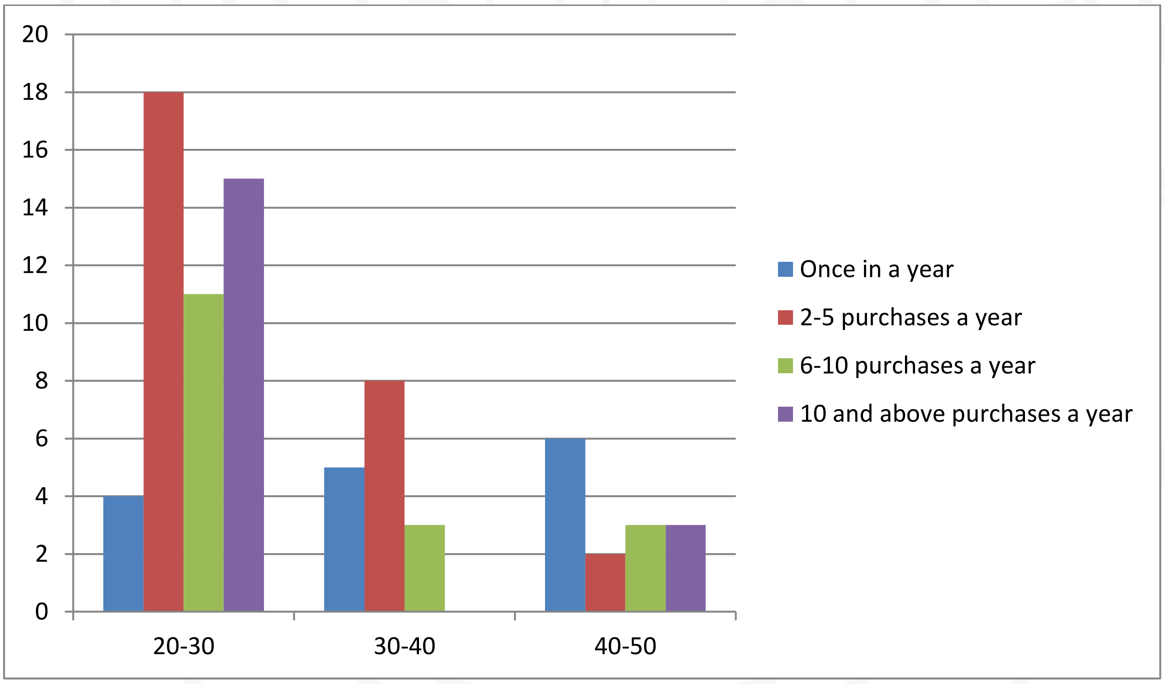
(Fig.3)

As per the above graph, wide variety of products is the main reason for people to shop online. Another significant reason for buyers is lower prices compared to offline market.

- **Frequency of purchases**

Age	Frequency of online purchases			
	Once in a year	2-5 purchases in a year	6-10 purchases in a year	10 and above purchases in a year
20-30	4	18	11	15
30-40	5	8	3	0
40-50	6	2	3	3

(Table.4)



(Fig.4)

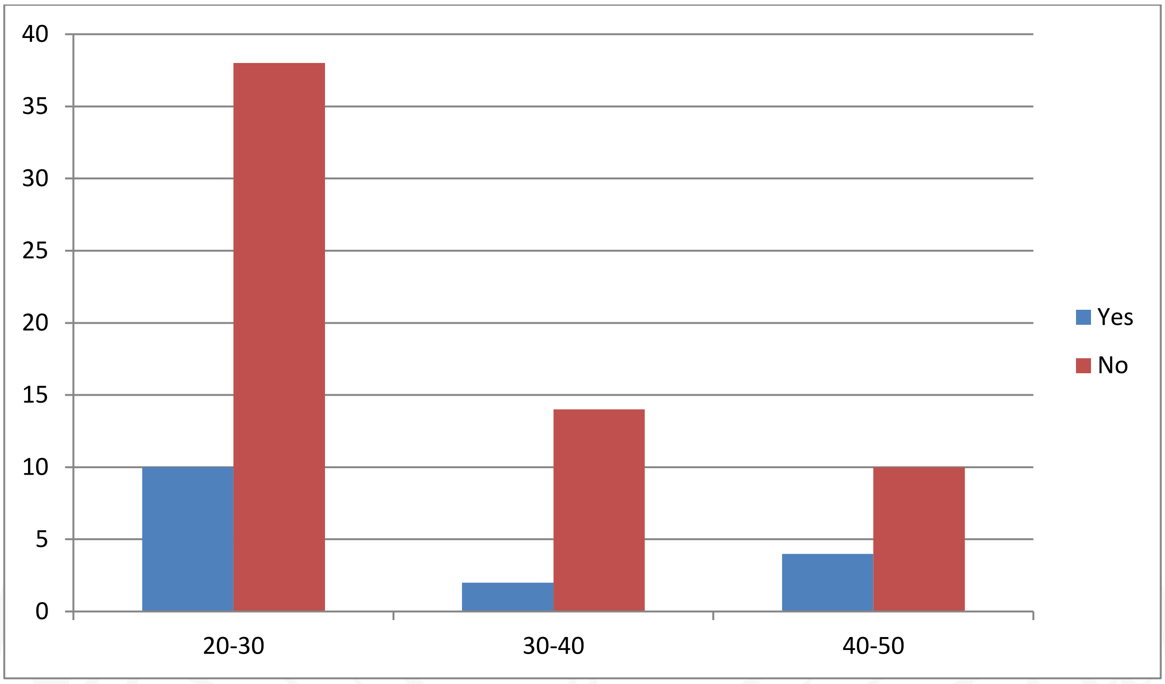
As per the above graph, the youth purchase more online compared to people from the other age groups.

- **Membership**

Age	Plus membership holder	
	Yes	No
20-30	10	38

30-40	2	14
40-50	4	10

(Table.5)



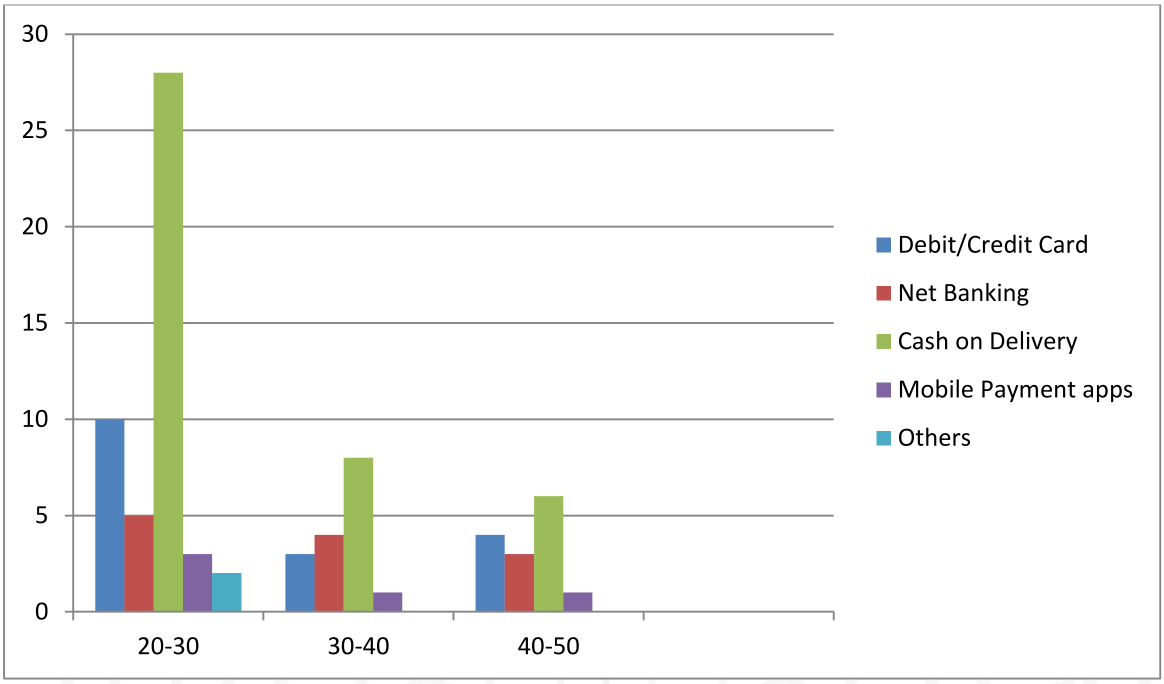
(Fig.5)

As per the above graph, majority of the respondents aren't plus membership holders.

- **Payment modes**

Age	**Payment modes preferred**				
	Debit/Credit card	**Net Banking**	**Cash on Delivery**	**Mobile payment apps**	**Others**
20-30	10	5	28	3	2
30-40	3	4	8	1	0
40-50	4	3	6	1	0

(Table.6)



(Fig.6)

As per the above graph, cash on delivery is preferred by most of the respondents. Debit/Credit cards are the second most preferred mode among the youths. Mobile payment apps are mostly preferred by 20-30 year olds compared to the other two age groups.

FINDINGS

- The age between 20-30 years, have shown a lot of interest in shopping online.
- As per the above graph the people aged between 20-30 years get the products they are in need of whereas, in the remaining two categories, most of the people don't get the products they need.
- Wide variety of products is the main reason for people to shop online. Another significant reason for buyers is lower prices compared to offline market.
- The youth purchase more online compared to people from the other age groups.
- Majority of the respondents aren't plus membership holders.
- Cash on delivery is preferred by most of the respondents. Debit/Credit cards are the second most preferred mode among the youths. Mobile payment apps are mostly preferred by 20-30 year olds compared to the other two age groups.

CONCLUSION

- Usage of digital modes for online purchase is high among youth as compared to middle aged and old aged group of people.
- Hence the digital modes must be made still stronger, safer and flexible, so that people of all the age groups start shopping online frequently.
- From the above analysis, it is very clear that digital marketing is reaching customers of all age and its impact on youth and society is creating a good platform for digital marketers.

Hence, through this paper impact of e-commerce on online shoppers has been fairly presented.

REFERENCES

➢ Primary data for analysis: 100 respondents were provided with questionnaires to answer.

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