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IMPACT ASSESSMENT OF INFORMATION TECHNOLOGY ON INVESTMENT CHOICE DECISIONS OF ACADEMIC PROFESSIONALS

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ABSTRACT
The substantial impact of information technology on investment decision-making is explored in this study, and strong empirical support is provided through a significant regression model. Understanding the extent to which technology influences investment choices is of utmost relevance in a time of fast technological advancement. The research makes use of a varied dataset that includes a variety of economic and market characteristics, employing robust statistical analysis to evaluate the relationship between technology and investment decisions. Our findings show that information technology and investing choices are statistically significantly correlated. The regression model illustrates how technology is increasingly being used into investment strategies and how it influences investors' decisions. This study emphasizes the importance of incorporating technical expertise into investment plans, with a focus on data analytics, artificial intelligence, and long-term tech investments. Furthermore, the ease with which mutual funds can be invested in, with alternatives for both novice and experienced investors, has made them a practical and accessible option as the study points mutual funds as the most preferred option for investment. Their liquidity and transparency also resonate with investors who appreciate the ability to monitor their investments easily and access their funds when needed. The results of the study highlight how crucial it is to comprehend investor preferences for financial goods. The popularity of mutual funds not only demonstrates their benefits but also emphasizes the necessity for financial institutions and advisors to customise their services and products in order to meet investor needs.
KEYWORDS: *Information Technology, Investment Choice Decisions, Mutual Funds*

INTRODUCTION

Technology has always been considered as an enabler for business transformation, it cannot be disregarded because it is currently disrupting established business models. The investment sector is dynamic and sensitive to turnaround times for data processing, sharing, and storage as well as delivery. Whether it be on delivering research to the customer or launching an order earlier than the competition. At this point, technology enters the picture and offers a competitive advantage. Data delivery to investors, prospective and current clients, as well as the general public, is made possible by technology. Technology offers automated systems that make it easy to perform complex calculations and provide consolidated information quickly.

Since there are so many factors to take into account, investment information can vary. Systems like Bloomberg perform this analysis and give the team ready-made values that are simple to use.

The investment industry, which relies on algorithmic decision making, is also being significantly impacted by artificial intelligence and automation. Data visualization and analytics go hand in hand with these solutions. Big data and visualization can be used by AI and machine learning to find market entry and exit signals as well as to create robo-advisors. Although it can be argued that relying entirely on technology is unrealistic, a human security check can serve as a safeguard to check the advice given by artificial intelligence. Without mentioning Blockchain, one of the newest and fastest-growing technological disciplines, this list would not have been complete. Simply put, a blockchain is a way to create and validate transactions from one person to another. Ideally, this technology will lower commissions, improve trading security, get rid of fraud, and speed up transactions. Since blockchain technology has the potential to completely change the investment industry, it presents a rare opportunity for everyone in the sector to learn more about it and how to implement it in their company. The rise of technology

has also made the financial markets more approachable, enabling participation from investors of all experience levels. While robo-advisors offer individualized investment advice and portfolio management services, online trading platforms make it simple for investors to buy and sell stocks, bonds, and other assets. With the help of these tools, people can now manage their investments and create portfolios that are specific to their needs.
An entirely new era of investing has been ushered in by this transformation, one that is more effective, accessible, and transparent than ever. Technology's quick advancement has also spawned new investment instruments like cryptocurrencies and digital assets, which are giving investors new ways to diversify their portfolios. The rise of these assets has allowed a broader range of investors to access financial markets that were previously out of reach due to their complexity and high entry barriers.

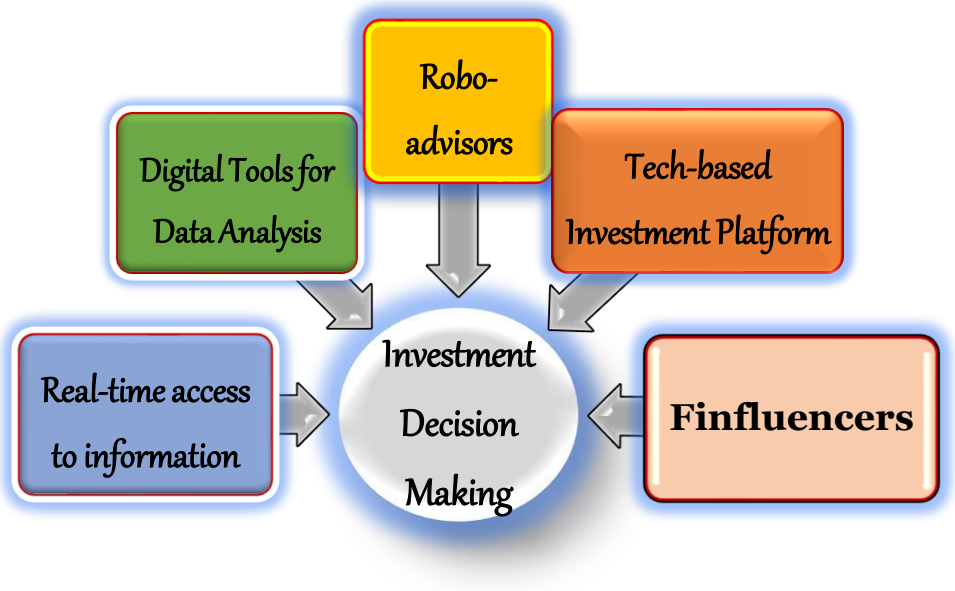
The financial markets are likely to place more emphasis on emerging technologies like blockchain, IoT, and AI, which could have a significant impact on how investors manage their portfolios and make decisions. The ability to use connected devices to enhance customer experience, develop new services, and automate difficult tasks is one of the benefits of IoT and AI. Automated trading systems and robo-advisors, which use AI algorithms to analyse customer data and offer individualized investment recommendations, are two examples of these advancements in automation.

Investors must stay abreast of the latest developments as technology becomes more pervasive in order to stay ahead of the curve. You can maximize your investments and take advantage of a new financial landscape by understanding the opportunities presented by innovation. Technology has also made it possible for society to connect online through various social platforms. Several internet postings have been found to influence people's investment decisions. In order to attract investors, businesses use social media platforms such as Facebook and Twitter to showcase their performance. It does, however, show that businesses are biased toward displaying positive performance on the social platform. Other than companies, those who post online comments are regarded as sophisticated investors who influence the trading behaviour of others. As previously stated, traders who leave online comments reflect information about their recent successful performance.

Information Technology & Investment Decision Making
The internet, as a part of technology, has made information available that would not have otherwise been discovered. It used to take hours for a person to consult a professional with years of experience before making an investment decision that can now be made in a matter of seconds thanks to an automated algorithm. Today's investors have options that were unheard of ten years ago. As software and computers have begun to replace human activities in the form of services provided by people, the environment has grown more difficult for the traditional practises. The ease of trading at a lower cost is made possible by the use of the Internet, which provides investors with access to a wealth of information. Over the past few decades, there have been significant changes to the process of making investment decisions. The emergence of high-speed internet and the development of sophisticated algorithms and artificial intelligence, among other technological developments, have ushered in an era in which information moves at breakneck speed, markets are open 24/7, and investment strategies are becoming more automated. A new breed of investors has emerged as a result of these changes, able to trade with unprecedented efficiency, access global markets, and analyse huge datasets in real time from the comfort of their digital devices.

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Figure.1



It should also be understood that technology adoption in investment decision-making is a multifaceted trend rather than a single one. Today's investors have access to a wide range of digital tools and platforms that support various investment strategies and preferences. Automated portfolio management is provided by robo-advisors, rapid-fire trading is carried out by algorithms, and crowdsourced financial insights are shared by online financial communities **(Figure.1).** The limitations of traditional media have been overcome by the availability of real-time updates and analysis on social media, financial news websites, and niche forums. Furthermore, technological advancements introduce intriguing behavioural dynamics into the investment process. Understanding how technology influences investor behaviour is critical, from behavioural biases amplified by algorithmic trading to the psychological implications of robo-advisors.

THEORETICAL BACKGROUND AND LITERATURE REVIEW

With the emergence of internet in every sector it cannot be denied that internet is revolutionising every sector with time and internet has also changed the way information is delivered to investors and the ways in which investors can act on that information**.** Through cost reductions and the opening up of new, smaller businesses to competition, the internet has also over time changed the financial services sector. Online brokerage firms and other e-commerce businesses have emerged, providing investors with a variety of services. **(Brad M., Barber & Odean) [3].** In a series of events, it was found that websites like SeekingAlpha.com; which provides stock market opinion and analysis **(Chen et al. 2014) [5]** and posts on internet by professionals **(Drake et al. 2017) [7]** can be informative, and articles on social networking platforms can also provide accurate and reliable information **(Van Bommel's 2003) [18].** It was also found in several studies that Individual investors comprehend and interpret data depending on their own personal experiences **(Kaustia and Knüpfer 2008) [12]** or tend to enter the stock market through social learning **(Kaustia and Knüpfer 2012) [13].**

The foundation of decision-making is information and knowledge, which, when used successfully with information and communication technology, can be a resource for investment techniques **(Atoom, S., Khalaf A., K., & Al-Fedawi) [2].** Several studies also suggested that Internet articles significantly affects individual investors' decisions **(Cho, H., Choi, G.-Y., & Lee, J.) [6]**. The investment decision making is a complicated task as there are several alternatives available in the market and in modern era sources of information are also varied. It can be seen that investment decisions are affected by various factors and internet is also one of them. Investment decision-making can also be termed as the process that lessens uncertainty and helps consumers understand all of their options so they can make an informed decision. **(Harris, 2012) [10]**. Studies also revealed that Online communication platforms and websites are working to transfer more financial news and information in a timely manner to investors, which leads to rationalization of their investment decision-making process **Bollampelly (2016) [4]**, and **Pelster & Gonzalez (2016) [14]** also confirmed that social media has a significant impact on how investors decide whether to buy or sell shares listed on a global financial market. **(Abdul Jamal et al.,**

2014) [1] also stated that managing investors' financial decisions requires information to play a key role and **(Hyun Shin, Tae Kim & Seay) [11]** found that the primary sources of information used by individual investors while making decisions about saving and investing were financial planners, brokers, and the internet. **(Fares and Khamis, 2011) [8]** in their study revealed that the Internet has a favourable impact on how individual investors behave in the stock market. The usage of the internet for investing and savings decisions increased faster than the use of financial planners. It's anticipated that internet usage for saving and investing will continue to rise quickly, potentially widening the gap between it and the use of financial planners **(Son, Jiyeon, 2014) [9].**

STATEMENT OF PROBLEM

The integration of technology into investment decision making is a topic of enormous current importance, reflecting the urgency of our rapidly changing financial environment. It calls into question long-held paradigms, reshapes traditional investment practices, and presents both opportunities and risks in an era defined by digitalization and information acceleration. As the financial world grapples with the complexities of technology-driven transformations, this research paper aims to investigate the complex and fluid relationship between technology and investment decision-making, offering a thorough analysis of its effects on the investment environment. By peering into this digital frontier, it hopes to provide a comprehensive overview of its profound and far-reaching impact on the investment landscape, which transcends financial markets and reaches into the core of our economic and social fabric.

OBJECTIVES OF THE STUDY

1. To identify the most preferred investment avenue.
2. To analyse the impact of information technology on the investment choice decisions.

HYPOTHESES

- **$H_0$1:** There is no significant impact of information technology on the investment choice decision.
- **H_a1:** There is a significant impact of information technology on investment choice decisions.

RESEARCH METHODOLOGY

This research is descriptive and causal in nature and tries to analyse the impact of information technology on investment decision making. The research is based on primary as well as secondary data. The primary data was collected by using a structured questionnaire in which the questions were asked on Likert scale. For the purpose of secondary data various journal articles were reviewed to have conceptual clarity on the topic.

For the purpose of gathering primary data the questionnaire was distributed among 213 academic professionals[1] but 159 responses were received and out of the received responses 5 responses were found incomplete during the data cleaning process. Finally, the study was performed on the data collected from 154 respondents (Male = 84; Female = 70).

The reliability of the questionnaire was checked using Cronbach's Alpha, which measures the internal consistency of the items in a research instrument. For tabulating and cleaning of data Microsoft Excel and SPSS Software were used and the analytical part was performed using Correlation and Regression Analysis on SPSS software.

DATA ANALYSIS & INTERPRETATION

The compelling findings and revelations from our research will be covered in detail in this crucial section. We have uncovered intriguing insights that answer the questions raised in our study through a careful examination of the data we have gathered and a rigorous analysis process. This section includes results and an interpretation of the same, relating them to the larger context of the study and the initial research questions.

[1] *Individuals who work professionally in higher education institutions and research institutes to produce, discuss, preserve, and disseminate systematic knowledge through teaching and research.*

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➢ **Table No. 1: Test of Reliability**

Reliability Statistics	
Cronbach's Alpha	**No. of Items**
.855	**10**

Table.1

The Cronbach's Alpha value is 0.855, which denotes that the variables included in the analysis have a high degree of internal consistency and also indicate that the variables accurately reflect the same underlying construct **(Table.1)**.

➢ **Table No. 2: Model Summary**

Model Summary[b]					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	**.759[a]**	**.577**	**.574**	**.45407**	**1.698**

Table.2

a. Predictors: (Constant), INFORMATION TECHNOLOGY (IT)
b. Dependent Variable: INVESTMENT DECISION (ID)

- Value of multiple correlation coefficient **(R)** is 0.759 **(Table.2)**, which indicates a moderately strong positive relationship between the independent variable (INFORMATION TECHNOLOGY) and the dependent variable (INVESTMENT DECISION).
- The coefficient of determination **(R Square)** is 0.577 **(Table.2)**, indicating that the proportion of variance in the dependent variable (INVESTMENT DECISION) that can be described by the independent variable is explained by the independent variable(s) (INFORMATION TECHNOLOGY). In this situation, information technology can explain around 57.7 percent of the variance in investment decisions. While the remaining 42.3 % (100% -57.7 %) is explained by the factor outside the model.

➢ **Table No. 3: ANOVA**

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	**42.666**	**1**	**42.666**	**206.933**	**.000[b]**
	Residual	**31.340**	**152**	**.206**		
	Total	**74.005**	**153**			

Table.3

a. Predictors: (Constant), INFORMATION TECHNOLOGY (IT)
b. Dependent Variable: INVESTMENT DECISION (ID)

- The highly significant F-statistic **(F = 206.933, p 0.000)** in the ANOVA table **(Table.3)** indicates that the regression model is a strong fit for the data. This implies that the independent variable "INFORMATION TECHNOLOGY" is a significant predictor of the dependent variable "INVESTMENT DECISION." The model explains the variation in investment decisions in a meaningful way.

➢ **Table No. 4: Coefficients**

Coefficients[a]					
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	**.659**	**.240**		**2.748**	**.007**
	INFORMATION TECHNOLOGY (IT)	**.843**	**.059**	**.059**	**14.385**	**.000**

Table.4

a. Dependent Variable: INVESTMENT DECISION (ID)

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Based on the results of the regression analysis, the following equation represents the relationship between the dependent variable "INVESTMENT DECISION" and the independent variable "INFORMATION TECHNOLOGY."

ID= 0.659+ (0.843*IT)

Where, **ID**= Investment Decision; **IT**= Information Technology

- For the T-test, the table shows that the significance value of independent variables (INFORMATION TECHNOLOGY) is **0.007 (Table.4)**. Since, the significance value is less than 0.05 **(p< 0.05)**, it implies that the independent variable has a significant impact on the dependent variable. Besides, the independent variables depicted a positive sign seen from the t value.
- The coefficient for "INFORMATION TECHNOLOGY" is 0.843, with a p-value of < 0.001. This indicates that "INFORMATION TECHNOLOGY" is a highly significant predictor of "INVESTMENT DECISION.

Table No. 5: Ranking of Various Investment Avenues:

Descriptive Statistics					
Investment Option	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Mutual Funds	154	1	8	3.28	1.915
Bank Deposits	154	1	8	3.33	2.026
Stocks	154	1	8	3.85	2.331
Treasury Bills/PPF/NPS	154	1	8	4.30	1.903
Bonds	154	1	8	4.66	1.988
Gold	154	1	8	4.79	2.406
Real Estate	154	1	8	5.20	1.978
Cryptocurrencies	154	1	8	6.43	2.058
Valid N (listwise)	**154**				

Table.5

Table.5 represents the average ranking of various investment options that investors prefer and after analysis it was found that:

- "Mutual Funds" have the lowest average rank of 3.28, making it the most preferred investment type among respondents. On average, respondents ranked Mutual Fund as their first preference for investment and if not first then most of the respondents kept it among their top three preferences.
- "Cryptocurrencies" has the highest average rank of 6.43, indicating that it is the least preferred investment option among respondents. On average, respondents ranked Cryptocurrencies as their least favourite choice for investment.
- "Bank Deposits", "Stocks", "Treasury Bills/PPF/NPS", "Bonds", "Gold", "Real Estate" fall in the middle of the rankings. While "Bank Deposits" has an average rank of 3.33, it's more preferred than "Stocks" (3.85), "Treasury Bills/PPF/NPS" (4.30), "Bonds" (4.66) and Real Estate (5.20)
- The spread of rankings is relatively moderate, suggesting that respondents had varying preferences, but there is some consensus. "Cryptocurrencies" is notably less preferred than the other options.
- Based on these rankings, it appears that respondents are preferring combination of low risk and high-risk investment avenues in their portfolio in order to have moderate return at lower risk level.

RESULTS & DISCUSSION

The findings of this study provide solid evidence in favour of our alternate hypothesis that information technology has a substantial influence on investing choices. The results of the regression model, which have shown statistical significance, offer strong proof that technology does, in fact, significantly influence and shape investment decisions.

Our alternate hypothesis asserted that **"There is a significant impact of information technology on investment choice decisions"**, and the data analysis has supported this statement. The statistically significant link between information technology and investment decisions shows how increasingly, investors are considering technological factors while making investment decisions.

- Therefore, Null Hypothesis **($H_0$1)** which stated that **"There is no significant impact of information technology on the investment choice decision"** is **rejected** and alternate hypothesis **(H_a1) "There is a significant impact of information technology on investment choice decisions",** is accepted**.**

CONCLUSION OF THE STUDY

This study has provided insightful information about how technology affects investment choices. We have identified fascinating facts that highlight the tremendous influence of technological improvements on the investment environment through the meticulous investigation of a significant regression model.

The study's findings show that there is a statistically significant connection between information technology and investment choice decisions. Our regression model has shown that investors are increasingly taking technological factors into consideration while making investments decision, as technology continues to advance and permeate different economic sectors. This indicates that technology has now become a central and pivotal determinant while making investment choice decision.

This study's consequences go beyond the realm of academic inquiry. These findings have real-world implications for governments, financial institutions, and investors alike. Investment plans, risk analyses, and policy development can be guided by an understanding of the tremendous influence of technology on investment decisions. It highlights how crucial it is to keep up with technological advancements and their effects on financial portfolios.

These findings highlight the necessity for all participants in the investing ecosystem to embrace technology as the primary factor influencing investment choices. A tech-savvy strategy is necessary for success in the contemporary investment landscape, whether it is through the use of big data analytics, the incorporation of artificial intelligence into investment algorithms, or taking the sustainability of technology-driven businesses into account.

The substantial regression model used in this study underlines the indisputable and fundamental influence that technology has on how investment decisions are made. It is essential for all stakeholders to adapt and fully utilise technology in order to succeed in the dynamic world of investing as it continues to develop and have a greater impact on investment decisions.

Moreover, the findings of this study also reveals that mutual funds are the most popular investing choice among the surveyed people. The facts and analysis have continually demonstrated a clear and strong preference for mutual funds by people looking to increase their wealth and meet their financial objectives.

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