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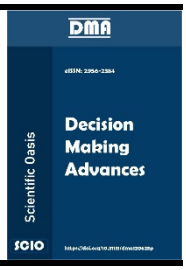

Effect of Perceived Technology Acceptance on Online Stock Trading Behavior: An Empirical Analysis

Jayalakshmi K U[1], Chidananda H L[1,*], Harshitha K[1]

1 School of Economics and Commerce, CMR University, Bangalore, India

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ABSTRACT

This study investigates the influence of perceived technology acceptance on the online stock trading behavior of retail investors. The objective of this research is to examine the predictors of online stock trading behavior and their impact. Using a regression model, the findings reveal that perceived usefulness, perceived ease of use, and perceived benefit significantly contribute to and promote online stock trading behavior. The standardized coefficients indicate a strong positive relationship between perceived usefulness (β = 0.838), perceived ease of use (β = 0.727), and perceived benefit (β = 0.783) with online stock trading behavior. The results suggest that retail investors are more inclined to engage in online stock trading when they perceive technology as useful, easy to use, and beneficial. This study underscores the pivotal role of technological applications in shaping the behavior of retail investors in the online stock trading environment, shedding light on the factors that drive participation in this increasingly digitized investment landscape.

1. Introduction

Artificial intelligence (AI) and information technology (IT) play a very important role in the present scenario. Advanced technology helps an individual to make an appropriate decision that benefits an individual monetarily. Technological advancement made it imperative for individuals to upgrade and adapt to technological changes as a sustainable skill to achieve competitiveness [1]. The Internet has expanded and now offers a wide variety of Web-based applications as a new means for businesses to keep clients satisfied as well as facilitate the introduction of new products and services [2].

A sophisticated and novel business-to-business (B2B) and business-to-customer (B2C) e-commerce system developed through unique internet and electronic commerce technology simplified the day-to-day economic operations and acted as the backbone of modern communication [3]. The rapid expansion of information technology facilitated the growth of knowledge-sharing

* *Corresponding author.*
E-mail address: chidanandahl@gmail.com

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platforms, which made it easy to exchange ideas and develop a broad network of people with knowledge.

Open network technological applications have become more popular globally due to their efficiency in delivering commercial services and scientific reliability in comprehending emerging phenomena [4]. The future of e-commerce and e-government depends on people's acceptance of Internet technologies as practical transactional tools, as well as their perception of the Web as a reliable and trustworthy platform [3]. Online banking services help individuals get various benefits like convenience, flexibility, comfort, and improved customer service from centralized customer service. This process is called a multidimensional focus for an information technology effective strategy to enhance value co-creation [1]. A single click has changed the individual's life and made their life simple. Deloitte's report stated that mobile users in India increased from 750 million to 1 billion between 2015 and 2026 [5]. As per Telecom Statistics India 2021, telephone subscribers in India were 996.13 (in millions) in the year 2015 and increased to 1200.88 (in millions) in the year 2021. Among these smartphone users in India, the Internet subscribers were 302.36 million in 2015, which increased to 825.30 million in 2021 [6]. Even the investment sector is fully transformed due to the upgrade in mobile or smartphone technology, and it allows and motivates retail investors and traders to trade actively and manage their various portfolios from anywhere in the world. Mobile technology has enhanced the investor's ability to explore the stock market and get benefits like faster, greater transparency, and flexibility in online stock trading [7].

More and more investors opt for online stock trading because it is quick, simple, and fee-effective when weighing trading costs and efficiency. The popularity of online trading has increased due to its convenience. Investors evaluate the benefits versus costs involved in online trading. Due to the increased adoption of the internet around the world, more and more products are offered on online platforms. Financial service providers found it to be the most efficient way to distribute financial products [8].

Internet stock trading offers a number of benefits, such as increased trading efficiency, enhanced information transparency, trend forecasting using historical data, and fewer operational costs. Cost reduction and time savings are two of the major merits of e-commerce Web-based technology that helps individuals make rapid decisions [9]. It also provides personalized service to each individual, which provides various business opportunities [10]. Online trading gives various benefits to its investors, like lesser transaction costs, transparency in trading, and flexibility in trading [11]. Self-investing trading services increased compared to traditional investment due to the low commission charged by online trading brokers [12]. The benefits and convenience of the online stock trading system brought drastic changes in the investment behavior and patterns of retail investors. In this direction, this study attempts to evaluate the contribution of technological applications and their role in promoting retail investors' online stock trading behavior.

The paper offers an empirically supported analysis of the factors that influence online stock trading behavior and explores the impact of perceived technology acceptance on online stock trading activity. The uniqueness and originality of this study come from its careful analysis of the relationship between perceived technological characteristics—perceived utility, perceived benefit, and perceived ease of use—and how these aspects affect online stock trading behavior. This study is unique as it focuses specifically on the factors that influence technological acceptability in the online stock trading environment. Although earlier studies have frequently looked at broad characteristics of technological acceptability, this one sharpens the focus by concentrating on the unique dynamics of the stock trading industry. The research provides greater specificity and advances our knowledge of the psychological and practical factors influencing investors' decisions in the digital space by identifying perceived usefulness, perceived ease of use, and perceived benefit.

The study is extremely relevant in the Indian setting, which is marked by a growing number of retail investors and a growing digital infrastructure. The study is a valuable resource for investors who are increasingly using online platforms for stock trading since it sheds light on the elements that influence their decision-making. Understanding user views is critical for service providers as well as investors themselves in an environment where financial technology is drastically changing the investment experience. The study's significance extends to financial institutions and technology firms eager to meet the requirements of Indian investors. The research facilitates a mutually beneficial interaction between investors and technology by providing businesses with insights to enhance their platforms via an understanding of the complexities around perceived benefit, simplicity of use, and usefulness. The study provides essential insights that may direct the creation of user-friendly, efficient, and profitable online trading platforms at a time when customer-centricity is crucial.

The layout of this paper is as follows. In Section 2, we recall the literature review. Section 3 offers research methodology. Section 4 gives results and discussion. Section 5 summarizes contributions, while Section 6 gives implications of the study.

2. Literature Review

2.1 Perceived Benefits

Perceived benefits refer to a specific action that occurs due to a specific event. The development of Web-based Internet transactions has increased online trading [11]. Mobile phone technology has enhanced the ability of investors to explore the stock market and earn maximum returns. The transformed technology enables an individual to increase online transactions. Retail investors prefer online stock trading due to various technological benefits like transparency, speed, and flexibility in online trading compared to conventional trading. Perceived benefits are also influenced by social influence, mutuality, and recognition [13]. Khan et al. [14] stated that there was a significant moderate relationship between technology, regulation, and the adoption of Internet stock trading. Thus, the following hypothesis is constructed:

i. Perceived benefits have a positive influence on online stock trading behavior.

2.2 Perceived Ease of Use

Perceived ease of use refers to the importance of technology that reduces human effort [15]. Li & Li [16] stated that technology should be simple and easy to use. If information technology takes too much time to access and is expensive to learn and adopt, then an individual will never prefer to make an online investment. The important features of technology are perceived ease of use, perceived usefulness, and compatibility [17]. Clarity and simplicity reflect the perceived ease of use [16], and adopting smartphone banking technology positively affects the attitude and perceived ease of use of an individual [7]. Lee [11] stated that perceived ease of use has a significant influence on perceived usefulness and attitude. Hence, the following hypothesis is constructed:

ii. Perceived ease of use has a positive influence on online stock trading.

2.3 Perceived Usefulness

Perceived usefulness refers to individual perceptions of information technology benefits [18]. One of the most influential variables studied in technological acceptance is perceived usefulness. It has been found that consumer decisions rely on technology, and it is one of the significant predictors that influence decision-making [19]. Earlier studies have shown that consumer decisions on mobile internet activity depend on the perceived usefulness that influences the decision-making of individuals [20]. Hence, the following hypothesis is constructed:

iii. Perceived usefulness has a positive influence on online stock trading behavior.

3. Research Methodology

This study was conducted to analyze the effect of technology acceptance in terms of perceived benefit, perceived ease of use, and perceived usefulness on online stock trading behavior. The population of the study included retail investors trading online. A self-reporting questionnaire was used to gather the data on the basis of a convenience sampling method (Table 1). The questionnaire was administered through the stockbroker network using a Google Form, and the study received 342 responses. About 80 percent of the respondents were male, 69 percent of the respondents were aged between 31 and 35, 49 percent of the respondents were graduates, 55 percent of the respondents were salaried, and 65 percent of the respondents had 5 years or more of investment experience.

Table 1
Questionnaire items

Sl. No.	Construct
1	Perceived benefit
i	Using an online stock trading platform will minimize transaction costs
ii	Using an online stock trading platform will minimize communication time
iii	Using an online stock trading platform will minimize search time
iv	The transaction speed of online stock trading platform is very fast
v	The information transacted through the online stock trading platform is accessible and transparent
2	Perceived ease of use
i	An online stock trading service is easy to use
ii	Not much mental effort is applied when using an online stock trading platform
iii	The interaction with an online stock trading service is flexible
3	Perceived usefulness
i	Online stock trading services are useful for searching for stock information
ii	I use an online stock trading platform to enhance my skills in stock trading
iii	Online stock trading services provide valuable information regarding stock investment opportunities
iv	The use of an online stock trading platform can help increase the transparency of financial markets
4	Online stock trading intention
i	I intend to trade my stocks through an online stock trading platform
ii	I expect to trade stocks using an online stock trading platform in the future
iii	I want to use an online stock trading platform as soon as possible if I can access it
iv	I would predict that I would use an online stock trading platform if I could access it
v	It is my plan to use an online stock trading platform in the future

The self-reporting questionnaire administered to collect the primary data included a questionnaire to measure technological acceptance in terms of perceived benefit, perceived ease of use, and perceived usefulness of online traders and online stock trading behavior. The data was

collected from stock traders using Likert-scale-based questionnaires ranging from strongly disagree (1) to strongly agree (5).

The reliability of the data has been measured through Cronbach's alpha. SPSS-20 was used for reliability, correlation analysis, and regression analysis. Regression analysis has been used to find out the influence of perceived benefit, perceived ease of use, and perceived benefit on online stock trading behavior.

4. Results and Discussion

The main objective of the study is to analyze the perceived technological acceptance of online stock trading behavior. The following analysis was conducted to test the validity, relationship, and effect of technology acceptance on online stock trading behavior.

The reliability analysis for all the constructs showed that Cronbach's alpha values ranged from 0.711 to 0.891 (Table 2). All the constructs indicate alpha points above 0.7 [21]. This demonstrated that all the research variables, perceived benefit (α =0.711), perceived ease of use (α = 0.821), perceived usefulness (α = 0.836), and perceived usefulness (α = 0.836), and online stock trading behavior (α = 0.891), were internally consistent and had acceptable reliability values. All items for the constructs were assessed using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 2
Reliability analysis

Scale	Items	Cronbach's alpha (α)
Perceived benefit	5	0.711
Perceived ease of use	3	0.821
Perceived usefulness	4	0.836
Online stock trading behavior	5	0.891

Online stock trading behavior is positively related to perceived usefulness (r = .835), perceived ease of use (r = .747), and perceived benefit (r = .911) ($p < 0.05$). The bivariate correlation between the variables represents a strong and significant positive relationship, which explains that perceived usefulness, ease of use, and perceived benefit of trading online positively influence the online stock trading behavior of investors (Table 3).

Table 3
Relationship between variables

Variables	Perceived usefulness	Perceived ease of use	Perceived benefit	Online stock trading behavior
Perceived benefit	1			
Perceived ease of use	.752**	1		
Perceived usefulness	.816**	.854**	1	
Online stock trading behavior	.835**	.747**	.911**	1

The regression model in Table 4 shows that 80.9 percent (adjusted R square 0.809) of the variability in online stock trading behavior is due to variability of perceived ease of use, perceived usefulness, and perceived benefit. Meanwhile, the remaining 19.1 percent was due to other variables that were not included in the objectives of the research study.

Table 4
Determinants of online stock trading behavior

Model	*R*	*R* square	Adjusted *R* square	Std. error of the estimate
1	.815a	.835	.809	.41167

Predictors: (constant)
Technological acceptance (perceived ease of use and perceived usefulness, perceived benefit)

Table 5 presents a comprehensive analysis of the predictors affecting online stock trading behavior. The results reveal significant insights into how individuals' perceptions of technology influence their engagement in online stock trading. Perceived usefulness emerges as a potent factor, with a substantial unstandardized coefficient of 0.903 and a high standardized coefficient (Beta) of 0.838. This indicates that individuals who find online stock trading beneficial for achieving their financial goals are more inclined to participate in this digital investment activity. Perceived ease of use also demonstrates a notable impact, as evidenced by an unstandardized coefficient of 0.833 and a Beta of 0.727, revealing that users are more likely to engage in online stock trading if they perceive the technology as user-friendly and accessible. Moreover, perceived benefit, with an unstandardized coefficient of 0.723 and a Beta of 0.783, significantly influences online stock trading behavior, suggesting that individuals who believe they can gain tangible advantages from this technology are more inclined to participate. The remarkably low *p*-values (all < 0.001) further affirm the robustness of these relationships.

Table 5
Predictors of online stock trading behavior

Model		Unstandardized coefficients		Standardized coefficients	*t*	Sig.
		B	Std. error	Beta		
1	(Constant)	.944	.081		.844	.218
	Perceived usefulness	.903	.065	.838	13.151	.000
	Perceived ease of use	.833	.083	.727	6.646	.000
	Perceived benefit	.723	.123	.783	17.213	.000

a. Dependent variable: Online stock trading behavior

Overall, these findings underscore the pivotal role of perceived technology acceptance in shaping online stock trading behavior, where perceived usefulness, ease of use, and tangible benefits act as crucial drivers for individuals navigating the complex landscape of online financial markets. These results offer valuable insights for financial service providers and policymakers aiming to encourage and facilitate online stock trading by emphasizing the importance of enhancing technology acceptance through user-friendly interfaces, clear benefits, and effective communication of the advantages of online trading platforms.

5. Conclusions

Online financial services brought a paradigm shift in the financial system and significantly promoted the young population's participation in the financial market due to greater access to smartphones and technology. This study explored the effect of technological acceptance on investing in the stock market. Technological acceptance was measured through the perceived ease of use, perceived usefulness, and perceived benefit that influence online stock trading behavior.

The empirical results showed that perceived ease of use, perceived usefulness, and perceived benefits significantly contributed to online stock trading behavior. This indicates that the advancement in technology has simplified day-to-day operations and made it easy for investors to

access financial services at the tip of their fingers, which has facilitated investment behavior. This study confirmed the reason for increased participation in stock market trading after the pandemic. Even though the study is not without limitations, it only considered three variables to understand technological acceptance. Additionally, since the study was restricted to only the Bangalore region, perceptions and experiences might vary with geographical, cultural, and demographic differences. That implies that the findings of the study may not be generalizable to other parts of the country.

The study has notable limitations, including its cross-sectional design, which does not establish causation, a sample size of 342 that may not fully represent the diversity of online stock traders, and its reliance on self-reported data with potential response bias. Future research should consider longitudinal or experimental designs to explore causal relationships, increase sample size and diversify of participants, as well as blend quantitative data with qualitative insights to gain a deeper understanding of the psychological factors at play. Moreover, investigating external influences, like market conditions and emerging technologies, can provide comprehensive insights for both academia and the finance and technology sectors.

6. Implications

The study on the influence of perceived technological acceptability on online stock trading behavior has significant implications for investors, online stock trading platform providers, and the overall economic environment. The research emphasizes three important factors: perceived benefits, perceived ease of use, and perceived usefulness. It shows that investors are more likely to trade stocks online when they believe that it offers real benefits, easy-to-use interfaces, and a helpful tool for reaching financial objectives. Equipped with this understanding, investors are able to make well-informed selections, selecting platforms that provide speed, flexibility, and transparency. For service providers, including financial institutions and technology firms, the identified variables serve as crucial focal points for enhancing technology acceptance. By investing in user-friendly interfaces and effective communication of tangible benefits, providers can set their platforms apart in a competitive market. The economic implications extend to policymakers, emphasizing the need for a supportive regulatory environment. Policymakers can design regulations fostering innovation, competition, and consumer protection, contributing to overall economic growth. The study underscores the transformative role of online trading in traditional economic operations, promoting efficiency, transparency, and cost-effectiveness. This aligns with broader economic trends, necessitating policies supporting and regulating these transformative changes. The study is especially relevant in the Indian context, where the financial landscape is being shaped by an increase in retail investors and rising digital infrastructure. These findings may be used by policymakers to craft policies that better suit the needs of the growing number of retail investors who trade stocks online.

Conflicts of Interest

The authors declare no potential conflicts of interest in relation to this study.

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