Prospects of Trade Management System (TMS) in Nepalese Stock Market: Evidence from Structural Equation Modelling

Pushpa MAHAT

Quest International College, Pokhara Univeristy, Gwarko, Lalitpur, Nepal pushpa19s5@quest.edu.np

Niranjan DEVKOTA, PhD

Kathmandu Model College, Tribhuvan Univeristy, Bagbazar, Kathmandu, Nepal niranjandevkota@gmail.com_

Krishna DHAKAL

Research Management Cell, Quest International College, Pokhara Univeristy, Gwarko, Lalitpur, Nepal krishna19s5@quest.edu.np

Surendra MAHATO, PhD

Nepal Commerce Campus, Tribhuvan University, Minbhawan, Kathmandu usr.mahato@gmail.com

Udaya Raj PAUDEL

Quest International College, Pokhara Univeristy, Gwarko, Lalitpur, Nepal udaya@quest.edu.np

Corresponding email: niranjandevkota@gmail.com

Abstract

This paper attempts to get opinions from the TMS users about its performance along with its main barriers in Nepalese stock market. Signaling theory and explanatory research design are adopted to seek causal relationship amongst online stock traders in Kathmandu valley. Following convenient sampling technique, 316 TMS users were interviewed with structured questionnaire; where data collection is done by using Kobo Toolbox. Structural Equation Modelling (SEM) is used to see the prospects of Trade Management System amongst TMS users using SPSS and SPSS AMOS software. Findings indicate that volume signals and online trading are significant causal relationship to investment behavior of TMS users in Kathmandu Valley which support Signaling Theory. Therefore, online trading would emerge as a more reliable investment platform and will provide large-scale investment possibilities in Nepalese stock market.

Keywords: Stock Market, Trade management system (TMS), Trading Decision, Nepal Stock Exchange, Kathmandu valley.

JEL Classification: G11, G12, G14, and C12

1. INTRODUCTION

In 21st century internet is the driving force behind transformation (Paudel et al., 2018). In today's economic world, any organization must cope successfully with global competition and the rapid rate of technological development (Sabir et al., 2019; Zahra, 2021). Therefore, internet has been critical in reshaping business in the new millennium (Reed et al., 2021). Besides, the internet is crucial for online stock trading. In the context of developing nations, stock trading systems are gradually gaining reputation, but a major market remains untapped (Gebashe et al., 2022). However, online trading differs from traditional phone-based buying and selling in several ways (Devkota et al., 2021). Therefore, brokerages can utilize online trading to cut costs by eliminating human interaction and unbundling trading from other products such as financial advice (Urban et al., 2020).

The usage of internet trading rose substantially from the mid- to late-1990s. European investors are increasingly using e-trading accounts (Roca et al., 2009). Since the introduction in 1995, online buying and selling has multiplied dramatically (Glaser & Risius, 2018). Additionally, in 2000, there had been 7.8 million people trading online, making 807,000 trades per day, and the quantity of on-line trading bills represented 12.5% of all security investment accounts (U.S. Securities and Exchange Commission, 2001). The history of internet stock trading may be a captivating and radical history about the two key focuses always competing and setting up an underused shape of showcasing globe. The two areas that will be available on the internet are web benefit and online stock trading. Initially, brokerage companies used electronic communications networks to offer and enquire about stock positions (Kwon et al., 2020).

Nepal Stock Exchange Limited (NEPSE) started an internet-based fully automated online trading system on November 6, 2018. The implementation of NEPSE Online Trading (NOTS) has been a milestone in the history of NEPSE. As a result, NOTS completely stopped the physical trading of securities from January 17, 2021 (CDS & Clearing Ltd., 2021) and features twenty modules related to the internal control system (Nayak, 2018Likewise, Devkota et al. (2021) revealed that online trading in Nepal allows traders/ investors to trade in the stock market without the involvement of stock brokers or investors. This enables a trading mechanism in which investors can place orders and confirm transactions via an electronic communication channel Internet, mobile phones, and so on. Web-based stock trading has become a very popular method, and internet stock brokers with specialized websites offer convenient trades trading; however, there is much he or she should learn, and there are precautions to be taken (Chauhan et al., 2022). To address the historical context within NEPSE, this paper investigates issues in the online trading system of NEPSE among NOTS

users, considering the nearly two years since the implementation of NOTS and the introduction of the NEPSE Trade Management System (TMS) Uniform Resource Locator (URL) gateway following the onset of the COVID-19 pandemic (Vaidya, 2021).

One of the main issues that need to be addressed is the integration of the NOTS user account with the investor's bank account. This might further reduce the settlement time and address the issue of the settlement risk. However, NEPSE has recently partnered with Nepal Clearing House Ltd. (NCHL) to establish a payment gateway system whereby the investors can directly pay for shares from their bank account. Similarly, Yomari Company (YCO) - the software company that built the NOTS for NEPSE and providing services. But, many times it was reported that the system couldn't handle the load and addressing that NEPSE stated that the system currently can handle more than 20,000 order matches per second (Vaidya, 2021). Still several questions were unanswered in the context of trade management system which needs to be addressed. Thus, this study explores the prospects of Trade Management System among the users in Nepalese stock market.

2. LITERATURE REVIEW

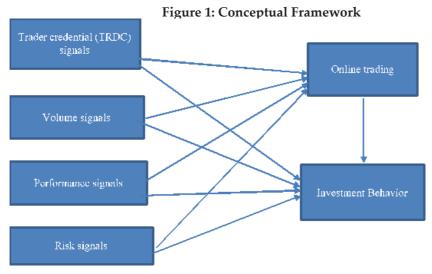
Theoretical Value and Conceptual Framework

In this study, several theories were discussed, including modern portfolio theory, prospect theory, rational expectation theory, signaling theory, principal agent theory. The first theory, signaling theory can be applied to get a better understanding of leadership in online social trading networks (Ahlers et al., 2015). Likewise, rational expectation theory provides traders with crucial information for buying and selling stocks from the past trend. Modern Portfolio theory provides a framework to construct and select portfolios based on the expected performance of the investments and the risk appetite of the investor. Similarly, principal-agent theory suggests that the trader is more likely to behave in the interest of the follower. Lastly, in the prospect theory, subjective value is modeled by a value function that is concave for gains, convex for losses, and steeper for losses than for gains; the impact of probabilities are characterized by a weighting function that overweights low probabilities and underweights moderate to high probabilities.

Amongst the available theories signaling theory best fits for this study. As this theory, intended to describe this environment should be capable of delivering insights into information flows, communication signals, and perceptions that influence network leadership and trading behavior for investment opportunities (Amabile et al., 2004). Traditionally, signaling theory has been used to describe how new enterprises seeking external finance and having more knowledge about their firm strive to communicate

this and connect with external funders seeking profitable investment prospects (Connelly et al., 2011). Therefore, this theory appears to be the greatest fit for study as it is useful for describing behavior when two parties (individuals or organizations) have access to different information. Typically, one party, the sender, must choose whether and how to communicate (or signal) that information, and the other party, the receiver, must choose how to interpret the signal, respectively.

Kromidha and Li (2019) in their research conclude that consequences such as trader credentials, volume of trades, performance, and risk signals are not just for top traders, followers, and social trading platform management, but also for policymakers and regulators of such investment instruments. Likewise, Boateng, (2019) depict that signaling theory has been widely employed to explain consumer decision phenomena in a variety of domains. Similarly, Mavlanova et al.(2015) corroborate a model for understanding the effect of website signals on perceived deceptiveness and purchase intentions. Apart from this, Ahlers et al.(2015) concluded that keeping ownership and giving more extensive risk information can be viewed as effective signals and hence have a significant impact on the likelihood of funding success. Lastly, Kharouf et al.(2020) indicates that managers should provide strong signals (communicating the degree of resources committed in recovery attempts) that are portrayed as customer advantages rather than business expenses. When brand awareness is low or an integrity breach has occurred, strong signals are extremely critical for repositioning relationships.



Source: Adapted Modified from Kromidha and Li (2019)

Figure 1 explains the signaling elements that influence trading decisions in the Nepalese stock market which consists online trading as mediating variable, investment behavior as dependent variable and TRDC signals, volume signals, performance signals and risk signals are independent variables respectively.

Trader credentials (TRDC) and online trading: Top traders are known for their drive, leadership motivation, honesty, integrity, self-confidence, cognitive capacity, and business knowledge, but there is less support for attributes like charm, inventiveness, and adaptability (Kirkpatick & Locke, 1991). The scenario is much more complicated in the group context of an online trading platform, where the disposition effect can compound as participants get increasingly exposed to one another. According to Heimer (2016), traders' network connectedness and social impact approximately doubles their disposition effect. Access to the network can increase the number of connections available, allowing individuals to influence but also be influenced to become top traders or followers.

H1: online trading is positively related to individual credential signals of top traders. Volume signals and online trading: In financial markets, the number of trades is anticipated to give key indications. Market agents regularly change their positions in the market, and anomalous trade volumes are not always indicative of disagreement but might be attributed to conflicting prior expectations, leading markets to fail to clear quickly Karpoff (1986). The number of transactions sent out sends favorable signals regarding investment possibilities and the trader's dedication to trading. The network's herding effect might multiply such signals, and we'd expect a persistent, regular trader with relatively significant volumes to gain a greater following.

H2: online trading is positively related to the volume of trade signals of top traders. **Performance signals and online trading:** Altshuler & Pentland (2012) depict that

although top traders' reputation and trustworthiness are not totally influenced by their performance, it appears that trading in online networks surpasses solo trading owing to the social impact and wisdom of crowds.

H3: online trading is positively related to performance signals of top traders.

Risk signals and online trading: Individuals who handle their money online might benefit from online social trading networks and platforms that provide more peer or aggregated crowd information for improved risk management. Due to enhanced transparency and a sensation of being watched, the disposition effect, or traders' inclination to forego loss realization in favor of gain realization, appears to be reduced in an online social trading environment Lukas & Danbolt (2017). Consistency in

giving information in a virtual investing community is seen to be beneficial in making less hazardous and more lucrative decisions, however it is not satisfactory owing to members' herding behavior Shang et al. (2013).

H4: online trading is positively related to risk signals of top traders.

Trader Credential signals and investor's behavior: A trade signal is a signal created by analysis that prompts one to act, such as buying or selling a securities or other asset. That analysis can be created by humans using technical indicators, or by statistical algorithms based on market behavior, sometimes in conjunction with other market aspects such as economic indicators. Trader Credential signals and investors satisfaction have positive and significant relationship with each other trader Kromidha and Li (2019). Trader Credential signals and investor's behavior have positive and significant relationship with each other.

H5: Trader Credential is positively related to investor's behavior.

Volume signals and investment behavior: The strength or conviction behind price advances or declines for a stock, sector, or even the entire market is indicated by volume signals. A bullish signal is one in which the price rises on growing volume, whereas a bearish signal is one in which the price falls on heavy volume. Volume signals and investment behavior have positive and significant relationship with each other. Volume signals and investment behavior have positive and significant relationship with each other (Toms, 2002).

H6: A Volume signal is positively related to investment satisfaction.

Performance signals and investment behavior: A performance indicator is a technical indicator used in the stock market to show the pace of change of a stock over a certain time period. Traders need to keep track of stock market performance in order to make trading decisions (Kromidha & Li, 2019). Market Memory also gives customers Alpha Curves to assist them see which way the dominating trend is going. Performance signals and investors satisfaction have positive and significant relationship with each other. Performance signals and investment behavior have positive and significant relationship with each other (Boateng, 2019).

H7: Performance signals is positively related to investment behavior

Risk signals and investment behavior: A risk-on climate encapsulates favorable investing attitude in which investors spend their money to buy stocks and other high-yielding assets (Maelane, 2010). A rise in the stock market and demand for high-yielding currencies are two effects of a risk-on attitude. As a result, the carry trade strategy has a good track record. Risk signals and investment behavior have positive

and significant relationship with each other. Risk signals and investment behavior have positive and significant relationship with each other (Gulati & Higgins, 2003).

H8: Risk signals is positively related to investment behavior

Online trading and investment behavior: The stock market is one of the most powerful economic factors, and it has a significant impact on the country's financial situation. investment satisfaction research is critical to any business's success (Isobe et al., 2000). The purpose of this study is to determine the degree of satisfaction among online stock traders. Investors experience issues with mental strain, network connectivity, and personal information confidentiality, according to the survey. Online trading and investment behavior have positive and significant relationship with each other. Online trading and investment behavior have positive and significant relationship with each other Goethner et al. (2021).

H9: online trading is positively related to investment behavior.

3. RESEARCH METHODOLOGY

Variable and its Definition

The various variables that are used in this study are discussed in this section. The detailed description of observed variables that SEM has verified is shown in the table 1.

Construct	Observed variables	Variables notation	Explanation
	Career	TCS1	For followers, placing trust in someone with a strong career and professional background in investment trading is the most pertinent factor.
Trade Credential	Membership	TCS2	Membership duration, and experience of trading in months.
Signals (TCS)	Popular	TCS4	Retain one variable (Popular) from the TRDC group, because a trader's popularity can change daily, but it is unlikely that considerable changes in the other variables.
	Daily trading volume	VS3	Volume is the amount of shares a security is traded over the selected period.
Volume Signals (VS)	Daily high -low price range	VS4	If trading volume increases, prices generally move in the same direction. That is, if a security is continuing higher in an uptrend, the volume of the security should also increase and vice versa.
	Daily return volatility	VS5	Volatility represents how large an asset's prices swing around the mean price—it is a statistical measure of its dispersion of returns.

Table 1: Observed variables and its Description

	Performance current month	PS3	Profit/Loss (P/L) of the current month profit.
Performance Signals (PS)	Performance current year	PS4	P/L of the current year.
	Performance Past	PS5	Composite index based on trader's P/L: since start, 1 year, 6 months, 3 months.
Risk Signals (RS)	Risk Trader	RS1	Composite index based on trader's risk profile that includes information of: MAR ratio, maximum draw down, Shape ratio, value at risk, volatility, risk score
	Debt	RS2	Too much debt on trading.
	Skills	RS3	Poor investment skills of investors.
	Intention	OT1	Intension to invest.
Online	Usefulness	ОТ3	Online trading helped in better risk management like limit of the total transaction, limit on total securities traded.
Trading (OT)	Trust	OT4	Online trading is safe if you use a regulated online stock broker. Trading stocks online is inherently risky.
	Risk Behavior	IB1	Risk-taking behavior is also used by individuals to make the selection of their stocks.
Investors Behavior (IB)	Availability of information	IB3	It plays an important role in decision-making as it affects investors' consideration and decision making for investing.
	Trust	IB5	Investors invest in unit trust because it gives stable returns and revenues

Note= TCS3, TCS5, RS4, RS5, PS1, PS2, VS1, VS2, OT2, OT5, IB2 and IB4 were dropped after performing Confirmatory and Explanatory Factor Analysis since their value remains below 0.5.

Study Area, Sampling and Sample Size Determination

The study area chosen for the study is Kathmandu valley which comprised of three districts namely Kathmandu, Lalitpur and Bhaktapur (see figure 2) which is in province 3 of Nepal (Shrestha et al., 2020). Being the capital city of Nepal and one of the only regions which accumulates highest concentration of population and center for different major stock securities conducting research on prospects of trade management system in trading of stock market of Kathmandu valley would give better and more factual results (Devkota et al., 2021). This study is unable to determine the actual number of active traders and traders in the Kathmandu valley. Therefore, non-sampling technique is adopted to choose sample. The convenience sampling approach is chosen to collect sample and is used to evaluate the traders who participate in online stock trading (Taherdoost, 2016).

Sitzmann (2006) suggests the following formula to calculate the sample size which is given as: $n_0 = z^2 pq/l^2$

Where, n_0 = sample size required for study, z is standard tabulated value for 5% level of significance, p is prevalence or proportion of an event 50 % = 0.50 (Kharel, 2019), allowable error that can be tolerated (e) is 6 % and non-response error is 5%. Thus, sample size taken for study is 280 but researcher has collected total of 316 respondents for the study.

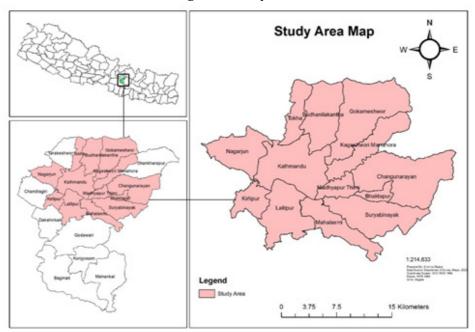


Figure 2: Study Area

Source: GIS ArcMap 10.2

Research Instruments and Data Analysis

The structured checklist is the primary research tool that has been developed and created for data collecting in order to conduct a study on the prospects of trade management systems (TMS) in Nepalese stock market. For data collection, the formulated structured checklists are kept in the KOBO toolbox. Data analysis was performed with the help of descriptive analysis and inferential analysis consisting of structural equation modeling based on several latent constructions with the help of software's such as KOBO Toolbox, Microsoft Excel and SPSS AMOS.

4. RESULTS

Socio-Demographic Status

Socio-demographic information generally deals with the personal characteristics of the respondents. The results indicate that among the respondents 54.11% are female and unmarried (52.85%); 34.49% of them are ranging from 25-30 age groups, with secondary to bachelors' level education 83.55% and are working in private service sector (48.73%) (See table 2). Similar results were found in many other studies, Devkota and Phuyal (2017) indicate that people whose age is below than 40 years are termed to be youthful; Biais et al. (2005) conclude the fact that after deducting trading costs, they found that the performance of women was superior to that of men. They concluded that men's lower performance was due to overconfidence. In addition, Devkota et al. (2021) indicates that education level of the respondent helps to determine the effectiveness of online trading because the higher the level of education the better will be effectiveness and understanding of the online trading of share market. Therefore, age, gender, marital status, education and profession impacts in trading online platform.

Table 2: Socio-demographics Characteristics

Variable	Category	Frequency	Percentage (%)
Gender	Male	145	45.89
	Female	171	54.11
Age	15-20	16	5.06
	20-25	77	24.36
	25-30	109	34.49
	30-35	36	11.39
	35-40	34	9.81
	40-45	34	9.81
	45-50	6	1.89
	Above 50	2	0.62
Education	Secondary	109	34.5
Level	Bachelor	155	49.05
	Master	51	16.14
	Above master	1	0.32
Marital	Single	167	52.85
Status	Married	149	47.15

Profession	Housewife	21	6.65
	Farmer	1	0.32
	Government employee	30	9.49
	Private service	154	48.73
	Banker	17	5.38
	Student	86	27.22
	Other	7	2.22

General Understanding of Traders

In this part, the general expertise of traders is attempted to be studied using a questionnaire, which aids in understanding the current state of traders in stock markets. Result indicates that 58.23% of traders have been trading their stocks for 2-5 years; 62.66% respondents invest up to 10 % of annual income from their saving (59.81%). It indicates that income of the individual is one of the factor which play a vital role in influencing the investment decisions of an investor, which is also supported by the study of Bansal et al. (2018). Result also indicates that, 49.37% of investors have been trading their stocks for <1 years who usually trade occasionally (58.23%). However, the predication about price patterns is supported by the traded volumes (Dhungana & Arjun, 2010).

In addition, 59.81% utilized their personal savings for trading and have taken trainings related to stock market. In the Kathmandu valley, traders invest their own money in equities. Only a few people borrow money from the bank. It shows that there are a few huge traders and a lot of minor traders in the Kathmandu valley. Small traders relied on their own funds and family reserves. Many investors may feel that it's a great opportunity to make profit by investing the money into the stock market. The opinion differs from person to person and Investors to Investors towards the Stock Market (Biradar, 2019). "Less Cost" and "Less Time" are the two important motives which makes investors to go through Online Trading.

Trading Prospects in Nepalese Stock Market

This section describes the general trading system and awareness among traders. This study shows that, 89.24% respondents are aware of present trading system, share delivery date (49.05%), payment date (47.78%), 43.355% of them are aware of buy and sell order. Likewise, 53.16% of traders usually hold their share for more than 1 year and think that they prefer online stock trading on no dependency on others. However, they usually trade equities (76.9%), mutual funds (25.32%), F&Q equities (13.29%), 4.12% trades on other stocks through online medium. Therefore, online trading has become very popular in the last couple of years because of easy and convenience

method of trading. Looking with other similar studies, so far many companies are left through online trading to meet the needs and demands of investors and permitting them to trade when they want and how they want (Chauhan et al. 2022). Thus, it is important factors to consider the methods of training for its effectiveness.

The Trade Management System (TMS) has come into operation as a means of connecting investors to the system of brokers and NEPSE which allows investors to enter purchase and sale orders online. Brokers provide this medium to the investor's computer, laptop, tablet or mobile. Result indicates that brokers providing the awareness among the clients about trade management platform (TMS) properly. Similarly, other online traders who have experience of online trading of a year or more stated that they took the service of NOTS due to the rise in cases from the COVID- 19 pandemic(Vaidya, 2021). But, improvements in informational and operational efficiency are expected to inspire greater confidence in domestic markets (El-Wassal, 2013). Lastly, respondents were asked if they are aware about T+2 methods. The survey indicates that 83.86% respondents are aware about settlement day and 16.14 % respondents are not aware about settlement day, respectively.

Challenges and managerial solutions in Stock Trading

Respondents were asked if they see any complexity of trading in NEPSE. The findings show that 92.41% traders find challenges in Nepalese stock market and such challenges arise from political factors (79.75%), technology (74.37%), economic factors (48.42%) and social factors (16.77%). Such challenges are: lack of stock trading awareness (68.35%), lack of good online trading system (49.68%), internet connection (46.52%) and lack of broker support (40.82%) (see table 3). Similarly, the lack of a reliable online trading system is a barrier to stock trading. They believe that current trading software is insufficient for the smooth operation of the stock market, and the low responders believe that financial institution help is lacking. Lastly, amongst these, investors/traders felt NEPSE (77.22%), Financial Institutions (46.2%) and investors (32.59%) are main stakeholders responsible for challenges.

Table 3: Major Challenges Face by Stock Traders

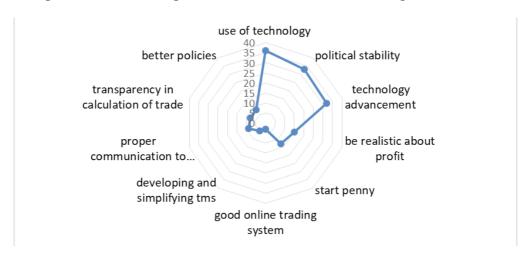
Factors	No. of Respondents	Percentage (%)
Lack of stock trading awareness	216	68.35
Lack of good online trading system	157	49.68
Internet connection	147	46.52

Lack of broker support	129	40.82
TMS crash	120	37.97
Lack of financial support	108	34.18
Others	2	0.63

Source: Survey

In addition, 95.88% respondents believes that such challenges are manageable by the development of technology, increasing awareness, low cost of transactions, no interference of political party and support of financial institutions respectively.

Figure 3: Possible Things That Can Be Done to Make Trading More Effective



Source: Field Survey

Most of the investor learns new idea, technics about trading in short span of time. With the development of TMS system, it helps to trade conveniently in leisure time from anywhere with the proper internet connection and mobile/laptop. Many customers from remote have started investing in IPO, secondary market share from the bank and online trading account facility. It's all due to the development of proper system, banking channels, linkage between bank and broker, Broker support will make the trader easy and good online system is also preferable, no interference of political parties. However, figure 3 shows the possible solutions that can be done to make trading more effective.

The NEPSE and SEBON should collaborate to develop a good policy that helps to eliminate insider trading in the market. SEBON should keep a close eye on the brokers. The broker's sluggish service is discouraging traders. Brokers keep the shares and money for an extended period. To address the broker issue, SEBON should issue a broker license to FI. A comparable study (Koirala & Bajracharya, 2002) discovered that the solution to issues is effective corporate governance, openness, and information disclosure. The NEPSE and SEBON should collaborate to develop a good policy that helps to eliminate insider trading in the market. SEBON should keep a close eye on the brokers. The broker's sluggish service is discouraging traders. Brokers keep the shares and money for an extended period.

Inferential Analysis

Descriptive Summary Statistics and Exploratory Factor Analysis (EFA)

The data is summarized using mean, standard deviation, skewness, and kurtosis. The mean and standard deviation of the respondents are in the ranges of 3.5633 to 4.0253 and 0.6109 to 0.88854 respectively, showing moderate dispersion. Likewise, skewness value ranges from -2 to +2 (Allua & Thompson, 2009) and all kurtosis measures fall between -4and +4, showing that the distribution is not too peaked.

Before examining the data, KMO and Bartlett's tests should be used to determine its applicability. The KMO value in our analysis is 0.723, which meets the 0.70 minimal criterion (Iskamto et al., 2020). Similarly, the data is significant since the value of Bartlett's Test is 0.000, which is less than 0.05, suggesting that it is significant. Likewise, Harman's single-factor test is used to determine if the first extracted component explains more than 50% of the variation in an EFA study (Aguirre-Urreta & Hu, 2019). The overall variation for a single element in this study is 22.492 percent, which is less than 50%, indicating that the study is free of common method bias.

Confirmatory Factor Analysis (CFA) and Measurement Model

Confirmatory factor analysis (CFA) investigates if a set of components affects responses in the anticipated way (Pett et al., 2011). The fitness indices CMN/DF, RMR, RMSEA, GFI, IFT, TLI, and CFI are used to assess if the model fit is excellent. This study has to excellent model fit as all the indicators lie under the criteria of model fit indices which shows that CMN/DF(3.297<5), RMR(0.056<0.08), RMSEA(0.079<0.08), GFI(0.874>0.80), IFI(0.957>0.90), TLI(0.948>0.90), and CFI(0.957>0.90).

To establish the one-dimensionality, reliability, and validity of the measures in this study, the researcher employed the measuring methodology provided below. Convergent and discriminant validity were used to analyze the construct validity of each measure. The data's reliability and validity were validated using convergence validity and discriminant validity. In order to check convergence validity, the data must meet the requirements CR>0.70 and AVE>0.50. Similarly, in order to be discriminately valid, the data must satisfy the requirements of AVE >MSE and square root of AVE >correlation. The study's findings suggest both convergence and discriminant validity since it fits the parameters indicated (see table 4 and 5).

Table 4: Reliability & Validity

Construct	Indicators	Factor Loading	Cronbach's Alpha	CR	AVE	MSV
Trade credential	TCS1	0.820	0.914	0.927	0.812	0.011
signals	TCS2	0.817				
	TCS4	0.738				
Risk signals	RS1	0.975	0.989	0.989	0.966	0.001
	RS2	0.963]			
	RS3	0.969	1			
Performance signals	PS3	0.585	0.898	0.899	0.747	0.194
	PS4	0.555]			
	PS5	0.573				
Volume signals	VS3	0.662	0.894	0.899	0.750	0.194
	VS4	0.664				
	VS5	0.651	1			
Online Trading	OT1	0.504	0.983	0.983	0.951	0.121
	OT3	0.519				
	OT4	0.513				
Investment	IB1	0.543	0.862	0.862	0.676	0.121
behavior	IB3	0.543				
	IB5	0.544				

Table 5: Latent Construct Correlation

	MSV	ОТ	TCS	RS	PS	VS	IB
OT	0.121	0.975					
TCS	0.011	-0.066	0.901				
RS	0.001	0.034	0.027	0.983			
PS	0.194	0.013	0.105	0.026	0.865		
VS	0.194	0.086	0.009	0.010	0.441	0.866	
IB	0.121	0.348	0.059	-0.004	0.110	0.210	0.822

Source: field survey

Test of Hypothesis

H1, H2, H3, H4, H5, H6 and H7 are all rejected as shown in table, indicating that there is no significant relationship. On the other hand, H8 is accepted, and H9 is accepted, implying that the variables in the respective hypothesis have no significant relationship.

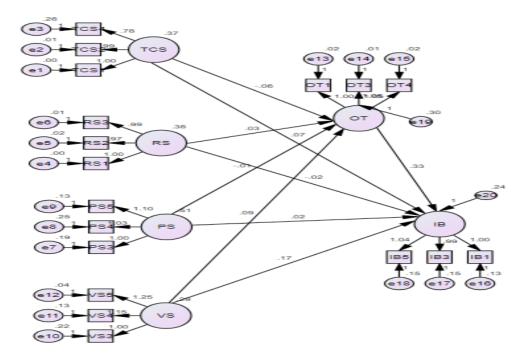


Figure 4: Structural Model

The regression analysis, variable analysis, and assessment of the normality pattern are all analyzed using SEM in the inferential stage of the study. Six factors are examined when latent variables are compared to observable variables. The model's fitness standards show that it is in good shape. The result reveals an X2/df (CMIN/DF) result of 2.257 (2.257<5). The findings showed that the p value for the meaningful association between latent variables and observable variables is less than 0.10. Because the meaning level of all the hypotheses (p-value) is less than 0.10, the hypotheses in this analysis are highly accepted. Thus, a result, all independent variables employed in this study have a substantial impact on all contingent factor hypotheses, as all hypotheses are dismissed. Figure 4 indicates the path analysis of latent constructs and observable variables.

Table 6: Path Estimates for Structural Model

Hypothesis	Estimate	S.E.	C.R.	P	Significant
H1: - Trade Credential Signals	-0.060	0.051	-1.170	0.242	Insignificant
Online Trading					
H2: - Risk Signals	.032	.051	.621	.534	Insignificant
Online Trading					
H3: - Online Trading	012	.046	271	.787	Insignificant
Performance Signals					
H4: - Online Trading	.093	.059	1.562	.118	Insignificant
Volume signals					
H5: - Investment Behavior	.069	.050	1.382	.167	Insignificant
Trade credentials signals					
H6: - Investment Behavior	017	.049	343	.732	Insignificant
Risk signals					
H7: - Investment Behavior	.021	.045	.471	.638	Insignificant
Performance signals					
H8: - Investment Behavior	.168	.059	2.855	.004	Significant
Volume signals					
H9: - Investment Behavior	.329	.057	5.785	***	Significant
Online Trading					

Source: Field Survey

5. DISCUSSIONS

To develop and test the link between the variables, the reliability test and multiple linear correlation were utilized in this study. The importance trade credentials signals, performance signals, volume signals, risk signals, Investment behavior and online trading, in stock trading decision-making was studied.

Hypothesis 1, the rejected hypothesis states that general overview of the credentials of well-known dealers According to study, top traders are recognized for their drive, leadership motivation, honesty, integrity, self-confidence, cognitive capacity, and business expertise, but there is less evidence for traits like charm, creativity, and flexibility (Kirkpatick & Locke, 1991). NEPSE stock traders do not select the stock as a representation, availability, overconfidence, anchoring, or adjustment.

Hypothesis 2, the rejected hypothesis indicates that all investors considered other relevant information in relating to share market before entering the online share trading. The higher income people make the investment in shares via online trading, because that they knew the all kinds of information as well as facing their risk(Parvathi, 2019). The hypothesis 2 is insignificant. The relationship between online trading and

risk signals is insignificant. Investors are interested to take low risk as no one wants to suffer from losses, High risk will lead to high profit. Since at earlier stages due to lack of awareness or any other reasons investors don't make much investment (Bansal et al., 2018).

Hypothesis 8, the accepted hypothesis, Volume signals show the intensity or conviction behind price increases or losses for a stock, sector, or even the whole market. A bullish signal occurs when the price increases on increasing volume, and a bearish signal occurs when the price falls on increasing volume. The link between volume signals and investing behavior is favorable and strong. Volume signals and investing behavior have a good and strong link. Volume signals associated with "more" seem to be important to establish relationships; Research shows that information linkages and signals among traders are positively related to their trading volume (Colla & Mele, 2009). In the stock market, price signals lead option volumes, but for certain types of options, volume signals can also lead stock price changes (Easley, O'Hara, & Srinivas, 1998). The hypothesis is supported Nepalese traders picked the stock because of other traders' purchasing and selling decisions. Choose a stock to trade based on other traders' suggestions. Traders decide on stock volume to other traders. Traders rely heavily on information from friends, family, and coworkers.

Hypothesis 9, the accepted hypothesis, the stock market is one of the most powerful economic forces, and it has a substantial influence on the country's financial status. Investment satisfaction research is essential to the success of any organization. The goal of this study is to measure the level of satisfaction among online stock traders. According to the poll, investors have problems with mental strain, network connectivity, and personal information confidentiality. Online trading and investment behavior have a favorable and significant association with one another. Online trading and investment behavior have a favorable and significant association with one another. Personal characteristics seem to play an important role in investment trading, leading to different approaches. Kromidha and Li (2019) indicates that consistency in giving information in a virtual investing community is seen to be advantageous for making less hazardous and more lucrative decisions, however it is not satisfactory owing to members' herding behavior (Shang et al., 2013).

6. CONCLUSION

The current research examines the prospects of trade management system (TMS) in Nepalese stock market in the Kathmandu, Lalitpur, Bhaktapur district. Based on the literature examined in the preceding section, a theoretical framework was established that generalizes signaling theory and its relevance to the research area. The study's main goal was to determine the prospects of a trade management system in the

Nepalese stock market, as well as the challenges faced by traders and investors, to identify the main barriers to trading management system as perceived by the user groups, as well as examine the factors that influence stock trading decisions, identify stock trading problems, and advocate a management approach to ensure smooth stock trading. A systematic questionnaire was used to acquire the necessary information, and inferential statistical analysis was used to produce the study's results. Investors' perceptions of trade management system possibilities were examined, and it was discovered that online trading would emerge as a more reliable investment platform and will provide large-scale investment possibilities. Furthermore, net trading ensures that securities regulation objectives such as the formation of an efficient market to fulfill global criteria and investor protection are met.

Similarly, most respondents believed that technological factors contributed to online trading problems. Many investors believe the NEPSE should oversee finding a solution to the online trading system problem. Various literature, theoretical concepts, and policies were evaluated and studied, and a conceptual framework was developed, which comprises a trading platform, difficulties, management solutions, and expectations. The study was organized based on the conceptual framework, variables were identified, and questionnaires were created to collect the necessary data. The data was evaluated using descriptive statistics, an awareness index, and inferential statistics.

References

- Aguirre-Urreta, M. I., & Hu, J. (2019). Detecting common method bias: Performance of the Harman's single-factor test. *Data Base for Advances in Information Systems*, 50(2), 45–70. https://doi.org/10.1145/3330472.3330477
- Ahlers, G. K. C., Cumming, D., Günther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship: Theory and Practice*, 39(4), 955–980. https://doi.org/10.1111/etap.12157
- Allua, S., & Thompson, C. B. (2009). Inferential statistics. *Air Medical Journal*, 28(4), 168–171. https://doi.org/10.1016/j.amj.2009.04.013
- Amabile, T. M., Schatzel, E. A., Moneta, G. B., & Kramer, S. J. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *Leadership Quarterly*, *15*(1), 5–32. https://doi.org/10.1016/j.leaqua.2003.12.003
- Bansal, A., Kashyap, N., Mehta, P., & Raina, K. K. (2018). A study on problems and prospects of online stock trading in Solan town of Himachal Pradesh. *International Journal of Economic Plants*, 5(4), 184–191. https://doi.org/10.23910/ijep/2018.5.4.0273

- Biais, B., Hilton, D., Mazurier, K., & Pouget, S. (2005). Judgemental overconfidence, self-monitoring, and trading performance in an experimental financial market. *Review of Economic Studies*, 72(2), 287–312. https://doi.org/10.1111/j.1467-937X.2005.00333.x
- Biradar, D. J. (2019). Investors Perception towards online trading with reference to Karvy Stock Broking Company Ltd., at Raichur. *International Journal of Business and Management Invention (IJBMI)*, 8(4), 1-7.
- Boateng, S. L. (2019). Online relationship marketing and customer loyalty: A signaling theory perspective. *International Journal of Bank Marketing*, 37(1), 226–240. https://doi.org/10.1108/IJBM-01-2018-0009
- Chauhan, R., Nistor, M. S., Bein, D., Pickl, S., & Bein, W. (2022). Stock Backtesting Engine Using Pairs Trading. In *ITNG 2022 19th International Conference on Information Technology-New Generations* (pp. 245-253). Springer, Cham.
- Devkota, N., & Phuyal, R. K. (2017). An analysis of nepalese youth understanding level on climate change. *Asian Journal of Economic Modelling*, 5(3), 342-353.
- Devkota, N., Budhathoki, A., Paudel, U. R., Adhikari, D. B., Bhandari, U., & Parajuli, S. (2021). Online trading effectiveness in Nepal share market: Investors awareness, challenges and managerial solution. *Asian Journal of Economics, Business and Accounting*, 21(5), 90-98. https://doi.org/10.9734/ajeba/2021/v21i530385
- Dhungana, A. (2010). *Trend analysis of Nepalese stock market* (Doctoral dissertation, Shanker Dev Campus).
- El-Wassal, K. A. (2013). The development of stock markets: In search of a theory. *International Journal of Economics and Financial Issues*, 3(3), 607–624.
- Gebashe, F. C., Naidoo, D., Amoo, S. O., & Masondo, N. A. (2022). Cosmeceuticals: A newly expanding industry in South Africa. *Cosmetics*, 9(4), 77.
- Glaser, F., & Risius, M. (2018). Effects of transparency: Analyzing social biases on trader performance in social trading. *Journal of Information Technology*, 33(1), 19–30. https://doi.org/10.1057/s41265-016-0028-0
- Goethner, M., Luettig, S., & Regner, T. (2021). Crowdinvesting in entrepreneurial projects: disentangling patterns of investor behavior. *Small Business Economics*, 57(2), 905–926. https://doi.org/10.1007/s11187-020-00332-0
- Gulati, R., & Higgins, M. C. (2003). Which ties matter when? The contingent effects of interorganizational partnerships on IPO success. *Strategic Management Journal*, 24(2), 127–144. https://doi.org/10.1002/smj.287

- Iskamto, D., Ghazali, P. L., Aftanorhan, A., Jenita, Sukono, & Bon, A. T. (2020). Exploratory factor analysis (EFA) to measure entrepreneur satisfaction. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 1(1), 2585–2593.
- Isobe, T., Makino, S., & Montgomery, D. B. (2000). Resource commitment, entry timing, and market performance of foreign direct investments in emerging economies: The case of Japanese international joint ventures in China. *Academy of Management Journal*, 43(3), 468–484. https://doi.org/10.2307/1556405
- Kharouf, H., Lund, D. J., Krallman, A., & Pullig, C. (2020). A signaling theory approach to relationship recovery. *European Journal of Marketing*, 54(9), 2139–2170. https://doi.org/10.1108/EJM-10-2019-0751
- Kromidha, E., & Li, M. C. (2019). Determinants of leadership in online social trading: A signaling theory perspective. *Journal of Business Research*, 97(1), 184–197. https://doi.org/10.1016/j.jbusres.2019.01.004
- Kwon, S. W., Rondi, E., Levin, D. Z., De Massis, A., & Brass, D. J. (2020). Network brokerage: An integrative review and future research agenda. *Journal of Management*, 46(6), 1092-1120.
- Luo, Y., Salman, M., & Lu, Z. (2021). Heterogeneous impacts of environmental regulations and foreign direct investment on green innovation across different regions in China. *Science of the total environment*, 759, 143744.
- Maelane, L. G. (2010). A study of criteria and success factors in the private equity and venture capital investment process and a comparison to the South African PE/VC Market (Master's thesis, University of Cape Town).
- Mavlanova, T., Benbunan-Fich, R., Koufaris, M., & Lang, G. (2015). The effect of positive and negative signals on perceived deceptiveness of websites in online markets. *Journal of Theoretical and Applied Electronic Commerce Research*, 10(1), 19–34. https://doi.org/10.4067/S0718-18762015000100003
- Paudel, U. R., Devkota, N., Ghale, B. A., & Adhikari, K. (2018). Communication and gender in bachelor's degree students' adjustment process: A study in Kathmandu, Nepal. *Journal of Education, Society and Behavioural Science*, 27(4), 1-9.
- Parvathi, A. L. (2019). A study on investors satisfaction towards online share trading. *JRAR-International Journal of Research and Analytical Reviews (IJRAR)*, 6(2), 357–362.
- Reed, M. S., Ferré, M., Martin-Ortega, J., Blanche, R., Lawford-Rolfe, R., Dallimer, M., & Holden, J. (2021). Evaluating impact from research: A methodological framework. *Research Policy*, 50(4). https://doi.org/10.1016/j.respol.2020.104147

- Roca, J. C., García, J. J., & de la Vega, J. J. (2009). The importance of perceived trust, security and privacy in online trading systems. *Information Management and Computer Security*, 17(2), 96–113. https://doi.org/10.1108/09685220910963983
- Sabir, F. S., Maqsood, Z., Tariq, W., & Devkota, N. (2019). Does happiness at work lead to organisation citizenship behaviour with mediating role of organisation learning capacity? A gender perspective study of educational institutes in Sialkot, Pakistan. *International Journal of Work Organisation and Emotion*, 10(4), 281-296.
- Sitzmann, T., Kraiger, K., Stewart, D., & Wisher, R. (2006). The comparative effectiveness of web-based and classroom instruction: A meta-analysis. *Personnel psychology*, 59(3), 623-664.
- Stapleton, C. D. (1997). Basic concepts in exploratory factor analysis (EFA) as a tool to evaluate score validity: A right-brained approach. *Southwest Educational Research Association*, 1(1), 1–8.
- Subash, R. (2012). Role of behavioral finance in portfolio investment decisions: Evidence from India.
- Taherdoost, H. (2016). Sampling methods in research methodology: How to choose a sampling technique for research. *International Journal of Academic Research in Management (IJARM)*, 5(2), 18–27.
- Toms, J. S. (2002). Firm resources, quality signals and the determinants of corporate environmental reputation: Some UK evidence. *British Accounting Review*, 34(3), 257–282. https://doi.org/10.1006/bare.2002.0211
- Trivedi, S. R. (2022). A volatile mind? Experimental evidence on dealers' biases and market volatility. *Review of Behavioral Finance*.
- Urban, M. A., Pažitka, V., Ioannou, S., & Wójcik, D. (2021). The Financial Geography of Resilience: A Case Study of Goldman Sachs. *Annals of the American Association of Geographers*, 1(1), 1-21.
- Vaidya, R. (2021). Opinions of investors on Nepal Stock Exchange Limited (NEPSE) online trading system. *Prithvi Academic Journal*, *4*, 56-65.
- Zahra, S. A. (2021). International entrepreneurship in the post Covid world. *Journal of World Business*, 56(1), 101143.