

An Analytical Framework In The Rise Of Online Stock Trading In India

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Abstract: *Though industrialized markets have experienced a significant rise in online transaction volumes, it appears that this is less prominent in emerging nations. This paper intends to research the topic of emerging markets and e-trading dynamics in the context of the small but potential Indian economy. This methodology consists of using an analytical framework that was established after reviewing the existing literature on e-trading adoption. "E-Comfortability" is a new word that describes a number of psychological characteristics that psychologically restrain a trader from participating in electronic trading. An in-depth analysis of the different factors of online trading has revealed a conceptual framework for electronic trading. Statistically significant and applicable findings resulted from this study. These findings could aid brokers in formulating and pursuing a specific course of action as well as generating new online trading volumes. Right now, in the current market, many believe that online brokers should unite in order to promote the value of online trading systems as a product, rather than spreading the word about them through separate brand identities.*

Keywords: *online trading, e-trading, online traders, emerging markets, brokers' attitude, brokers' perception, trading frequency.*

1. INTRODUCTION

Most stock indices have classified the Indian stock market as a developing market (Morgan & Stanley, MSCI, FTSE, etc.). One definition of emerging economies is "regions of the world where there is growing fractionalization, while remaining undeveloped." Emerging markets lie at the intersection of new user groups and communities that are receptive to new product technologies and platforms, as well as traditional user behaviors. In general, India is a fast-emerging market with considerable potential. under international standards (open outcry)

(Internet Trading). It is remarkable by any standard. Internet sellers and dealers in securities, middlemen, service providers, and investors are all getting involved in this activity. Customer connectivity over the internet should have a tremendous impact on equal access to customers throughout India, where distances are immense.

Many believe that the internet will disrupt the securities trading landscape profoundly, and it is just a matter of time until an online platform for trading stocks will be necessary. This research examines this idea in the context of a market like India that is about to emerge. The study aims to discover how the trading of Internet-based securities works in the Indian market. We want to gain a deeper understanding of the "e" economy's future course and implications.

2. STUDY RATIONALE

There has been a considerable increase in web traffic to online brokerage businesses due to an increase in traffic from financial markets including the United States and South Korea. Despite this, India's 10.58% of worldwide internet trading volumes constitute a small percentage of the global total. Online trade isn't a mainstream practise in the country, as this illustrates. While it holds a lot of promise for traders, adoption is lacking. This, therefore, is necessary for Indian merchants to identify all of the variables that hinder them from using the internet to conduct business. To date, there are few articles written on the global use of the internet in trading. However, there is no research available for the Indian markets. The study expands upon previous research by including e-brokers as part of the investigation.

3. AN EVALUATION OF PREVIOUSLY PUBLISHED RESEARCH

In several developing markets, there are large increases in internet trade. A great deal of research was done to uncover the various reasons why people may have a negative attitude toward using internet technology for their transactions in these specific sectors. Boundedrine and Achour (2000) discovered that the usage of online banking and online brokerage in Tunisia also encompasses conducting one's personal business and the running of a small business. Additionally, weak telecom infrastructure, inefficient brokerage efforts, and the high cost of internet connection were blamed for retailers' underutilization of online services. One of the many conclusions from a study done by the College of Staten Island/Scholarly and Research (2002) was that online trade in Taiwan suffered because of the following three primary causes: Investor resistance, minimal saving incentive for investors to use online trading, unwillingness of brokers to make the changeover from old business procedures, and network security issues are all barriers to widespread online trading adoption. A number of possible factors for China's lack of internet connectivity, as well as minimal online trade, were found in the study. This study assessed how broad band internet adoption was in Nigeria using data from Chiemeke, Evwiekpaefe, and Chete (2006). When it came to internet banking, poor security and inadequate telecom and power infrastructure were found to be serious impediments. Day-to-day price movements in some of the most volatile companies offer short-term financial gain. This will greatly affect day trading. The emergence of online trading did not cause an increase in the amount of short-term trading or last-hour trading, according to the authors, who conducted the study in 2002. There is a possibility that speculative trading on the web does not require the web as much as many people believe.

A study indicated that three-quarters of web trading occurs on low-balance trading accounts, which are predominantly used by younger traders and traders who traded frequently through phone previous to the web's inception. Perpetuating online trader misconceptions, online

traders' findings are typically correct. Because the internet is associated with greater cognitive demands, it is often viewed as a unique communication technology. Other communication devices, such as mobile phones, are not. The new medium is more difficult to understand, and as a result, using skills learned throughout childhood and utilised on a daily basis is now seen as standard. When a person is utilising a computer, there is nothing obvious about him or her, as stated by Kubicek (2000). Pew Internet poll findings from the year 2000 showed that 51% of participants felt they were not missing anything by not having internet access. This reveals that many people still look forward to receiving results. almost three-thousandths of the time spent responding to the questionnaire in Texas the same year indicated that they did not wish to use the internet (Strover 2000). Over 80% of non-internet users in a Japanese survey (Kubota et al., 2001) stated that they were not disadvantaged since they were not able to utilise the internet. adoption writing emphasises demographic trends and how new media usage patterns are related (Dutton et al., 1987; 11 Atkin & LaRose 1994). Adopters of computers, such as programmers, are just as narcissistic (Dickerson & Gentry 1983; 13 Lin 1998). According to this research, literature suggests that some components in literature can affect customers' adoption of online channels, but channel providers play relatively little roles. To further understand why there is a significant demand for online stock trading in India, this research studies this additional element.

4. E-COMFORTABILITY: THE CONSTRUCT

Researchers say those who gain less comfort from any action are less likely to repeat it in the future. It is possible that lack of comfort with technology and the Internet could be related to not using the internet or restricting internet use. Anxiety around privacy, security, computer infections, and protecting youngsters could be a source of discomfort for those unfamiliar with the new setting (Schauer 2002) 15. Concerns like these are unlikely to stop anyone from accessing the internet, but they may affect the extent to which they use it. People are apprehensive about using e-commerce because of privacy and security issues. CHIMEK, EVWIEKPAEF & CHETE (2006) By removing the barrier, only other barriers are left to be utilised. The internet places cognitive demands on users that are different from previous communication tools. (Kubicek 2000). Learning new technologies like the television or telephone is difficult since it is not as simple and direct as these traditional devices. As a result, many individuals think of the internet as a complicated technology that possesses nearly magical properties. In addition, using search, navigation, and interpretation of written information is a significant challenge for many people. As well as technological competence and mental comfort, it also incorporates several inhibiting factors for online usage, including elements such as E-comfortability, which was defined as: "the total of both technical competence and psychological comfort which leads to confidence in one's ability to organize and complete internet-based tasks. E-comfortability fosters pleasant feelings about using the internet for online business transactions, making online trading a successful endeavor. In efforts to reduce the digital divide that separates electronic traders from traditional traders, it is an important aspect. Being easy to navigate is not a measure of aptitude. According to a psychological notion, online trading decisions involve the influence of how trading channel hurdles are perceived, the amount of effort and tenacity applied when obstacles are encountered, and the degree of competence while trading online. In today's digital world, e-comfortability is a strong positive reinforcer for actions that have to do with using the internet. Security concerns, complexity, the lack of a human aspect in the system, the belief that technology will hinder rather than help them, their negative attitude towards change, and their

unwillingness to learn new strategies all hinder comfortability. The likelihood of opting for self-exclusion from online trading increases for people with low e-sensitivity. Conventionally, the effect of age on comfortability is considered to be mitigated by learning because cognitive research has shown that learning improves with age. Additional research has also demonstrated that younger internet users engage with the internet more than those who are older. The share of people in the 35 and younger age bracket, as stated in I-study Cube's report on internet use in India (Internet and Mobile Association of India 2008), is expanding dramatically. It is possible that this is because all the "sticky" applications developed now are targeted towards young people, who can quickly switch their use of technology and products as time progresses. Customers in the age bracket of senior citizens have less web-savviness than younger customers.

5. METHODOLOGY

Data was collected through a questionnaire-based survey. Several inquiries addressing the reasons for the lack of popularity of internet trade in India were devised after literature research. Two sets of respondents were handed these questions. Some of the questions had replies that were strikingly different between the two groups, while others differed considerably only within the two groups. The questionnaire's final structure comprised five significant factors. These theories were put to the test in order to better understand how e-trading has flourished in India. To assess the differences between the participants, we studied their trading frequency, age, and e-comfortability level. The test results yielded a rating of 82 percent, which corresponds to the instrument's dependability as determined by running reliability tests using SPSS. In order to weed out any subjectivity on the part of responders, the questions were straightforward, brief, and required plain English. 305 electronic stockbrokers on the NSE registered between March 2008 and the present were presented with the electronic questionnaire.

But the total responses were 138, and 95% with a confidence level of 6.15 have a margin of error of 138.

6. ANALYSIS AND DISCUSSION OF THE RESULTS

The surveys were categorized as they were received from respondents once they had been through the processing process. The data was put through a frequency table to strip out inconsistent responses. SPSS Version 14 was used for the analysis of the data. The following testable hypothesis was to be examined: there is a demand for online stock trading in India.

With regard to online trading, the only things that matter are the age, frequency, and ease of use of the trader. In addition, it is not tied to whether or not brokers have positive attitudes about e-trading and the effect it has on the markets and their company.

Chi tests, T-tests, and Somers'd tests were used to gather statistical information to fulfil this specific purpose. The results in Table 1 are based on the information gathered from the Indian population. The data shows that the average age of traders is 45 to 55 years. This t-value of 56 was determined when determining the average age of traders in the sample. 0.57 and [almost] 95 percent certainty that the result is correct (0.41, 0.74). When a t-test was run to find out if the mean difference between the test value (45-55) and the observed value (55-45) was statistically significant, the t-statistic (.t 56) returned a value of zero, which showed that the mean difference was not significant at a =.05. Table 1 revealed that, while the mean difference between test values and observed values was not significant at a 95% significance level, there was, however, a significant difference for day traders.

Table 1
t-Tests Results

Variable	Test Value	Mean		
		difference	t	Sig.
Age group of traders	2 (45-55 Years)	.05	.56	.57
Frequency of trading	4 (daily)	-.05	-.67	.50
Internet Usage for Trading	2 (1-2%)	-.19	-1.49	.14
E-comfortability Scale	2 (low)	.09	1.82	.07
Brokers' attitude	1 (negative)	.10	1.34	.18
Brokers' perception of market impact	1 (negative)	-.12	1.61	.11

In India, the majority of the population engaged in day trading, and according to the t-value of $-.67$ and p-value of $.50$, the prevalence of day trading in India was calculated to be around 67 percent. The test for average online volume yielded a t-value of 1.49 and a p-value of $.14$. It was found that the mean difference was not significant when comparing test values and observed values of online trading volume. E-brokers average registration percentages are on the order of 1 to 2 percent of their total trading activity. A relatively small number of traditional trading accounts for a brokerage business make up 98-99% of overall trading volume. T-value of 1.82 , together with a p-value of $.07$, for brokers who recognised their customers' comfortability level of 70% was found in the e-comfortability test. At the 95% significance level, the test findings were significant because the mean difference between the observed value and the test value (which is the lowest amount of difference possible) was not significant. The results of this study indicate that internet dealers in India are much less elegant than phone-based traders. The findings of the test reveal that brokers' attitude on the usage of the internet for trading is generally negative. A third-party analysis found that the results of the study suggested that sentiment among brokers and about the influence of internet trading on markets and their own businesses were both negative. The mean difference between the observed value (which they perceived as positive) and the test value (which they perceived as negative) was not significant because the difference was too small. The experiments described in Table 2 were performed using weight scales with graduated loads (referred to as "somers' scales" in this case).

In the first part of the above passage, we said that all the dependent variables in Table 2 had p values of 0.00 , suggesting that the association between all of them was significant at $= 0.05$. The derived value of customers' age in Table 2 was not consistent with the variables of customers' e-comfortability and age. E-Comfortability was shown to be a better dependent variable. Additionally, a score of $-.80$ showed that the reliance was statistically significant and negative. This suggests that as age groups increase, e-comforts diminish. As well, somers'd- $.82$ and $.69$ showed a strong relationship between the customers' e-comfortability and their trading frequency as well as with brokers' attitudes towards e-trading. However, the reliance in the former situation was negative, but it was discovered to be positive in the latter case. In addition to client e-comfortability with a somers'd value of $.99$, Internet usage for trading was found to be highly dependent ($p = .00$) on two variables: customer attitude toward e-trading with a value of $.60$, and the ease of using the Internet for trading with a value of $.99$. Indicating good values, it was shown to be dependent on TABLE 2

Table 2: Results of Somer's d Tests

Variables	Somers' d	Value	Sig.
E-Comf * Age Group of traders	Symmetric	-.59	.00
	E-comfortability Score Dependent	-.80	.00
	Age group for traders Dependent	-.47	.00
E-comf * Frequency of trading activity	Symmetric	-.63	.00
	E-comfortability Scale Dependent	-.82	.00
	Frequency of trading activity Dependent	-.52	.00
Internet usage for trading * E-comf	Symmetric	.85	.00
	Internet Usage for Trading Dependent E-comfortability Score Dependent	.99	.00
	E-comfortability Score Dependent	.74	.00
Internet usage for trading * Brokers' Attitude	Symmetric	.57	.00
	Internet Usage for Trading Dependent Brokers' attitude Dependent	.60 .53	.00 .00
Internet usage for trading * Brokers' Perception	Symmetric	.57	.00
	Internet Usage for Trading Dependent	.56	.00
	Brokers' perception of market impact Dependent	.59	.00
E-Comf * Brokers' Attitude	Symmetric	.57	.00
	E-comfortability Score Dependent	.69	.00
	Brokers' attitude of market impact Dependent	.49	.00
Brokers' Attitude * Brokers' Perception	Symmetric	.55	.00
	Brokers' attitude Dependent	.58	.00
	Brokers' perception of market impact Dependent		
		.54	.00

A considerable positive influence was observed on the ability of brokers to analyse the impact of e-trading on the markets and the organization's work was found to considerably (p = .00) and favourably impact e-trading on the markets. The percentage of clients that viewed internet use in trade to be significant was found to be linked to their evaluations of that impact at 95 percent. The dependability that somers'd (.59) suggested was confirmed by the dependability itself being solid and valuable.

Stepwise An in-depth regression analysis (forward) was performed to estimate how much internet usage will be needed to trade efficiently, as well as to deal with problems such as specification bias and collinearity. Several variables greatly increased the regression sum of squares, which caused the sum of squares of the model to grow dramatically. R² and fewest variables were utilised as model selection criterion. The following summarises the model: This model had three variables: customer e-comfortability, frequency of trades, and brokers' opinions on the influence of trading on the internet.

The formula explained a large percentage of the variation in trade utilisation. The model explained R², which is the fraction of the fluctuation. We employed three independent variables and calculated an R-squared of .94 in order to assess the variance in internet trading utilisation. The model accounted for 5.8% of the variability specifically. For values of R² where the estimate is between 94% and 100%, an accurate estimate is between 94% and 100%.

For 94% of the variance in internet usage for trading, the three predictors in the regression model contributed to the prediction. The R² score, which was a large figure, proved that the model accurately represented the data.

Table 4 presents the findings of the analysis of variance. At a value of 726.7, there was a statistically significant difference with a p-value of .00, indicating significance with a significance level of $\alpha=.05$. When applying regression, this model compensated for the variance in online trading activity by way of the regression sum of squares being larger than the residual sum of squares.

Table 3
Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.97	.94	.94	.36

Table 4
Regression Model: Analysis of Variance Result

	Sum of Squares	df	Mean Square	F	Sig.
Regression	283.66	3	94.55	726.7	.00
Residual	17.44	134	.13		
Total	301.10	137			

Note: Predictors: (Constant), E-comfortability level, Frequency of trading, Brokers' perception

The coefficients in the regression model were all different from zero, and it can be noted in Table 5 that internet trading usage was characterized by the model as being significant. The study offered more support for this result using an analysis of t-ratios, which produced a of 0.5. The T-ratio = 6.62, indicating a low p-value. The P-value for the trading frequency was-6.85, with which the scale t-ratio for brokers' perceptions (also known as the scale total variance) was 4.27. The p-values both hovered around 0.05 to 0.06. It was observed in the investigation of the coefficients that clients' and brokers' perceptions about the effects of e-trading on the markets helped affect the use of the internet for trading. Even while the frequency of client trading reduced earnings, it was affected to a negative degree by it. The numbers for Internet usage for trading are 1.87+.40 brokers' estimates of the effects of e-trading on the markets, followed by-0.62 customers' use of the service and finally, +.98 for e-comfort for customers.

Table 5
Regression Model: Coefficients of the Model

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.87	.46		4.06	.00
E-comfortability level	.98	.15	.42	6.62	.00
Frequency of trading activity	-.62	.09	-.40	-6.85	.00
Brokers' perception	.40	.09	.23	4.27	.00

Note: Dependent Variable: Internet Usage for Trading

The estimates of the coefficients have low correlation with the eigenvalues of the estimated model, which indicates that modest changes in the data will not yield big changes in the estimates of the coefficients. There were no possible difficulties with collinearity in the calculated model, as the condition index produced was smaller than 15.

The figure closely resembled the normal curve. The calculated model was judged to be appropriate for the data because of this. This model's theoretical basis is based on the idea that customers' satisfaction with e-comforts determine their trading channel of choice. As stated above, e-comfortability is, to some extent, dependent on age groups and the amount of commerce. The 35+ clients aren't extremely tech-savvy and use the internet at home, making them more comfortable. Additionally, an exceptionally frequent customer (day trader), even while equipped with a computer, may not trust electronic infrastructure that would significantly reduce his ease of trading. The more uncomfortable the customers are, the less likely they are to use the internet medium to do transactions. This would lead to a decline in the amount of trading activity online, and hence will significantly hurt e-brokers, who have put a lot of effort into online trading systems. This will lead to their perceptions regarding online trading's impact on their lives being negative or non-positive. Due to the bad image of brokers, they will hold a negative attitude towards internet trading and market promotion. Without any promotion, clients will have a difficult time appreciating the e-comfortability of the product. It is also important for e-comfortable clients to comprehend the importance of online trade. Including high volumes routed through the internet means that the benefits of internet operations are open to everyone.

The advantages of online operations will be discovered by e-brokers and supported by their promotion of online transactions, thanks to the volume of high-volume internet routed through them. Awareness and betterment of e-comfortability will occur as a result of this. We can assume that the increase in volume will translate into an improvement in e-satisfaction. The concept diagram of e-trading in India is shown below.

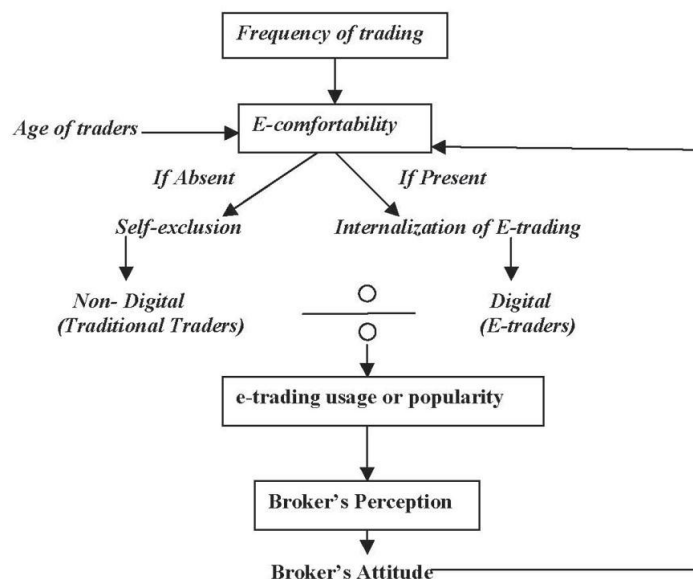


Fig 1: Online trading phenomenon can be explained using a theoretical framework.

7. INVESTING IMPLICATIONS FOR THE BROKER

A distinct way of thinking about online trading is required in order for e-brokers to be productive. The company must put together a strategy that attracts clients, but one that does not require a large quantity of customers. An advantage of online brokers, in addition to their use of 128-bit encryption, TTP certification, creating consumer confidence, and delivering customised services for various classes of customers, is that they can obtain an edge over the competition by utilising modern security methods like these. More obvious incentives and imaginative approaches to such rewards should be used for clients. The country's policymakers must examine the e-finance approach once again. The biggest impediment to customers using online platforms to buy and sell things is the lack of a secure infrastructure. In general, the primary goal of policymakers is to strengthen the enabling environment so that future resource shortages may be overcome. Identify and allow designated e-trading industries to operate broadly. It will be the foundation for e-trading to be online and available all the time, which will give traders the opportunity to decide if e-trading is suitable for securing higher returns. In contrast, their roles expand beyond just that of the environment, providing an opportunity for new advancements. It also includes establishing the frameworks necessary to implement these policies and standards. It is now time for Congress to approve comprehensive cyber security legislation. In order to promote electronic brokering, increasing online trading volumes is necessary.

8. CONCLUSION

On the whole, most traders are between the ages of 45 and 55, and for these traders, keeping a position open for only a day or two is neither unusual nor difficult. Inversely, low levels of e-satisfaction are associated with it. The findings discovered that people's perceived ease when on the internet affects their ability to embrace and internalize online trading. Traders in India are often not allowed to use the online trading platform because of their dislike of technology. The poor turnover of online e-brokers is a result of this. The founders of e-brokers claim to see no significant return on their investments, despite spending a lot of money to purchase a

sophisticated trading system. This implies that they are not putting effort into it because they are not investing any of their time, energy, or money into its promotion. For brokerages that want to expand their market share by bringing traditional trading online, they will have to handle new responsibilities over and above what they presently do. They will have to get personally involved in promoting their clients' internet trading solutions. Online trading facilities should not be exclusively advertised by a broker. Promoting the use and benefits of such a system while also pointing out the concern and cautious measures users should take when using it should also be considered. The best way to allay traditional traders' fears about the usage of online systems is to stress the benefits of the new system and its popularity with investors. As a result, many investors want internet brokerages to collaborate in order to market their systems as a product, rather than branding them with a well-known name.

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