

## **Exploring The Influence Of Social Media On The Stock Market- A Case Study On The State Of Odisha**

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### **Abstract**

In today's technologically-driven society, social media plays a multifaceted and significant role across various fields and sectors worldwide. One such domain where its impact is noteworthy is the stock markets, both in India and globally. The influence of social media on stock markets can be gauged by the number of individuals engaging with these platforms and their interest in stock market activities. The escalating use of the internet has further propelled the popularity of social media.

Social media serves as a crucial medium connecting people not only within India but across the entire world. The dynamics of the stock market have transcended geographical boundaries, making it a global marketplace accessible to investors worldwide. This interconnectedness is made possible through the widespread adoption and utilization of technology by a large portion of the global population. While numerous studies have explored the impact of social media on stock markets in India and globally, there is a noticeable gap in understanding its influence on the stock market in Odisha.

This study seeks to fill this gap by examining the impact of social media on the stock market in India and its potential influence on investors in Odisha. The research utilizes both primary and secondary data sources, with a structured questionnaire designed for primary data collection. Secondary data is obtained from various electronic journals, magazines, annual reports of companies, and reputable websites. Statistical tools such as percentage calculations, correlation, and chi-square tests are employed for analysis and interpretation.

The findings of the study affirm that social media plays a pivotal role in shaping and impacting the stock market. It emerges as a valuable tool aiding stock market participants and investors in navigating the complexities of the current market scenario.

**Keywords: Social Media, Stock Market, Internet, Technology, Potential Investors.**

### **Introduction**

With the rapid development of social networks and the emergence of Internet finance, investors are paying more attention to social media platforms. Financial social platforms have become an effective channel for investors to interact with others and gain insights into financial market trends. The massive amounts of social media data available today can confer huge commercial and academic value.

Social media helped in two ways to level the playing field for household investors. The first is through expedited news transmission with the popularity of Internet platforms like Facebook, Twitter in the western hemisphere and Weixin, Weibo in China. These availed household investors to financial information that was previously available only through dedicated financial channels. The second is through peer-to-peer social investing platforms that seek to disrupt the investment landscape by improving financial literacy.

Social media is the new communal gathering place for many Americans and others around the globe. Users rely on social media avenues to receive and share information about their communities, businesses, stock market, politics, lifestyles, and for pure entertainment. For example, the 2016 presidential election flooded Twitter, Facebook and Instagram. In fact, former President Barack Obama and President Donald Trump have used these social media outlets, particularly Twitter, to share updates on policies and upcoming events in the country. According to Pew Research Center, nearly two-thirds (65%) of American adults now use social networking sites (Perrin, 2015).

With social media being prevalent amongst the younger generation, stock market has refocused their organizational structure specifically on investing through social media. Social media websites and blogs reach about 80% of all Internet users in the United States (Emow, 2012). Social media websites and blogs reach about 60% of all Internet users in the India (Statista.com, Jun-2021). The user of social media in India will be cross about 70% by 2025 in India.

Social media has impacted the world extensively. It has reduced the communication barriers to a great extent. It represents a piece of information technology that can affect business both outside and inside a firm. Today, Facebook's daily number of active users is an incredible 1.3 billion worldwide. Social media is revolutionizing today's world.

## Review of Literature

An exclusive and extensive review of literature has been undertaken for the purpose of the study. Few of them have been portrayed as below:

Nofer, M (2014) in the dissertation entitled “The Value of Social Media for Predicting Stock Returns – Preconditions, Instruments and Performance Analysis” studied the value of social media for predicting stock returns with subject conditions regarding preconditions, instruments and performance analysis. Nofer concluded that the diversity opens possibilities for gaining access to different sources of knowledge and information, which fosters problem solving and overall performance. Further, differences in preferences or opinions among crowd members (e.g., caused by gender differences) ensure that collective errors will be reduced and estimates converge to the correct values.

Jiao, P., Veiga, A. and Walther, A. (2016), in their paper “Social media, news media and the stock market” studied the impact of traditional news media and social media coverage on stock market volatility and trading volume. They concluded that the evidence on news media is consistent with a model in which some investors are overconfident when interpreting news. The evidence on social media is inconsistent with rational markets.

Kaushik, B., Hemani, H. and Vigneswara (2017), in their paper “Social media usage vs. stock prices: an analysis of Indian firms” studied in detail the way top traded firms of India use social media (SM) and how it influences their stock prices. The purpose of this paper is to observe whether there exists any relationship between the SM usage and the company’s stock price. They concluded that with an assertion about the extent to which a firm should give importance to investing money in SM adoption strategies, SM marketing strategies, SM customer care strategies and so on.

Xianjiao, Xiaolin, and et al. (2017) in their paper “The influence of social media on stock volatility” studied the influence of social media on stock volatility and builds a feature model with an intelligence algorithm using social media data from Xueqiu.com in China, Sina Finance and Economics, Sina Microblog, and Oriental Fortune. They concluded that the effect of social factors, such as increased attention to a stock’s volatility, is more significant than public sentiment. A prediction model is introduced based on social factors and public sentiment to predict stock volatility.

Gibson, Nya (2018), in the paper “An Analysis of the Impact of Social Media Marketing on Individuals’ Attitudes and Perceptions at NOVA Community College”, undertaken a study to provide an understanding of how consumers use social media as a communication platform and how businesses can use this understanding for effective marketing. Nya concluded that businesses that have a social media presence have the potential to essentially affect business revenue.

Eric, Tham (2018), in the paper “Social Media Impact on Household Investors and Their Stock Markets Participation”, studied the social media impact on household investors and their stock market participation. The report concluded that household participation in the stock markets depends on their trust on the social media but this is conditional on the prevailing economic fundamentals.

Daifeng, Yintian and et al. (2019) in their paper “Analyzing Stock Market Trends Using Social Media User Moods and Social Influence” studied the stock market trends using social media user moods and social influence. They concluded that Correlations between social media and stock markets have been widely studied, but the factors behind the correlations are seldom considered, especially in the case of high-frequency time series, which are of considerable importance in the era of big data. Classic financial theory cannot explain the fluctuations that frequently occur in stock markets. By contrast, behavioral financial theory provides a new, psychological perspective on the mechanism of short-term rises and falls in the stock market by analyzing investors’ irrational behaviors.

## Research Gap

Till now, a lot of study has been undertaken by various researchers, academicians, and scholars on the impact of social media on stock market in India as well as the whole World. But, no remarkable studies have been conducted on the impact of social media on stock market of Odisha. So, this is an attempt to study the impact of social media on stock market of India and potential investors of Odisha.

## Objectives of The Study

1. To study the impact of social media on stock market investors of Odisha.
2. To assess the impact of social media on stock market on the basis of investors of Odisha.

## Research Methodology

1. **Nature of Data:** The study is based on primary and secondary data.
2. **Sources of Data:** The primary data have been collected through well design questionnaire and indirect interviews through google form designed for this purpose. The secondary data have collected through a well-designed strategy, and

these have been collected from various e-journals, e-magazines, e-annual reports of companies, and various reputed websites.

**3. Sample Size:** The sample data consists of 100 respondents.

**4. Period of Sample Collection:** The sample data have been collected during March to June 2021 from Odisha State.

**5. Tools of Analysis:** There are various tools like percentage calculations; valid percentage calculation, chi-square test, and correlation have been used for analysis and interpretation of results.

### Research Hypothesis

1. There is no significant relationship between the social media and investors of stock market.
2. There is a significant relationship between the impact of social media and the stock market.

### Data Analysis and Interpretation

Profile	No. of Respondents	% of Total	Valid %	Test Statistics	Profile	No. of Respondents	% of Total	Valid %	Test Statistics
<b>Location</b>				$\chi^2=100$	<b>Gender</b>				$\chi^2=29.16$
Odisha	100	100	100	P= 3.814	Male	77	77	77	P= 3.814
Other states	0	0	0	df=1	Female	23	23	23	df=1
<b>Age</b>					<b>Education</b>				
Upto 25	35	35	35	$\chi^2=33.26$	Upto Matriculation	9	9	9	$\chi^2=98.06$
26-40	56	56	56	P= 5.991	Matric to Secondary	11	11	11	P= 5.991
Above 40	9	9	9	df=2	Above Secondary	80	80	80	df=2

No of Social Media Account				Time Spend once a week					
Upto 25	14	14	14	$\chi^2=30.32$	Upto 1 hour	33	33	33	$\chi^2=6.62$
2 to 3	28	28	28	P= 5.991	01-02 Hrs.	44	44	44	P= 5.991
Above 3	58	58	58	df=2	Above 03 hrs	23	23	23	df=2
Total Sample	100	100	100		Total Sample	100	100	100	

(Source: Collected and compiled from field study)

### Testing of Hypothesis

#### Hypothesis 1:

**H0:** There is no significant relationship between the social media and investors of stock market.

**H1:** There is a significant relationship between the social media and investors of stock market.

27	19	8	64	<b>3.36842</b>
89	81	8	64	<b>0.79012</b>
73	81	-8	64	<b>0.79012</b>
<b>200</b>	<b>200</b>	<b>0</b>		<b>8.31709</b>

(Source: Author's Calculation on the basis of field study)

The above table no 4 shows that the calculated

**Table No. 2** Data for Hypothesis 1 arranged in 2x2 Contingency Table

Situations	No of investors instock market	No of investor other thanstock market	Total
Investorsnot using Social Media	11	27	38
Investors using SocialMedia	89	73	162
<b>Total</b>	<b>100</b>	<b>100</b>	<b>200</b>

(Source: Collected and compiled from field study)

The table no. 2 shows the collected hypothesisdata arranged in 2x2 Contingency Table.

**Table No. 3 Calculation of Expected Frequencies**

19	19	38
81	81	162
<b>100</b>	<b>100</b>	<b>200</b>

(Source: Author’s Calculation on the basis of field study)

This table no.3 shows the Calculation of Expected Frequencies on the basis of Table No. 2.

**Table No. 4 Computation of Chi-Square ( $\chi^2$ )**

value of  $\chi^2$ . = 8.32 (approx), and the degree of freedom is given by

**Degree of Freedom** (d.f.) =(2-1)(2-1)=1

Thus, with reference to the 1 degree of freedomat 5% level of significance, the critical value of the  $\chi^2$  is obtained at  $\chi^2_{0.05} = 3.841$ .

### Decision

A comparison between the calculated value i.e. 8.32 and the critical value i.e. 3.841 of the  $\chi^2$  reveals that the calculated value of  $\chi^2$  is more than its criticalvalue. Hence decision is that Reject  $H_0$  i.e. there is no significant relationship between the social media and investors of stock market and Accept  $H_1$  i.e. there is a significant relationship between the social media and investors of stock market. Thus, the research hypothesis concluded that there is a significant relationship between the social media and investors of stock market. So, it may concluded that social media has impact on the investors in stock market.

### Hypothesis 2

**H<sub>0</sub>**: There is a significant relationship between the impact of social media and the stock market.

**H<sub>1</sub>**: There is no significant relationship between the impact of social media and the stock market.

**Table No. 5 Data for Hypothesis 2**

O	E	O-E	(O-E) <sup>2</sup>	(O-E) <sup>2</sup> /E
11	19	-8	64	3.36842

Name of SocialMedias	Investors (%)	No of Social Media
Facebook	61	1

Facebook, Twitter	67	2
Facebook, Twitter, YouTube	73	3

Facebook, Twitter, YouTube, Instagram	79	4
Facebook, Twitter, YouTube, Instagram and other	85	5

(Source: Collected and compiled from field study)

The table no. 5 shows the data collected and compiled from field study for Hypothesis 2.

**Table No. 6 Computation of Correlation for Hypothesis 2**

	Investors (%)	No of Social Media
Investors (%)	1	
No of Social Media	1	1

(Source: Author's Calculation on the basis of field study)

The table no. 6 shows that the Correlation between No. of Investors (%) and No of Social Media is +1 which shows the perfect positive correlation.

### Decision on Hypothesis 2

Hence the decision of 2nd research hypothesis is that

Accept H<sub>0</sub> i.e. there is a significant relationship between the impact of social media and the stock market and

Reject H<sub>1</sub> i.e. there is no significant relationship between the impact of social media and the stock market.

Thus, the research hypothesis concluded that the social media significantly affect to the investors of stock market in study area.

### Key Findings

- The social media has a vital impact on the investors in stock market.
- The social media significantly affect to the investors of stock market in study area.
- There is a significant relationship between the social media and investors of stock market.
- There is a significant relationship between the impact of social media and the stock market in the study area.

### Conclusions

It can now be asserted that although Social Media has sometimes proven to be very crucial in the changes occurring to stock prices, the firms should not worry too much about how they are handling their Social Media accounts on Facebook, Twitter, LinkedIn and YouTube. They should only carry out the mandatory practices, essential awareness and marketing schemes that nowadays every firm does. The probability is slight that the firm investing a large portion of its money into Social Media will get a spike in its stock prices because of its sole Social Media effort.

The social media has vital role and impact on stock market. The social media is also helping stock market and investors in their trading in the current market scenario.

### Limitation of The Study and Scope for Further Study

1. The Study is based on data collected from 100 no of investors. The results of the study will more appropriate and accurate if the no of sample will be in increase number.
2. The present study is limited to limited area of Odisha State. If the locations of are geographically will be extending up to whole of the state, the result may be more accurate and appropriate.

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