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सपादक

डॉ. बी.एल. भादानी

पूर्व विभागाध्यक्ष

इतिहास विभाग,

अलिगढ़ मुस्लिम विश्वविद्यालय, अलीगढ़

प्रबन्धक सपादक

श्याम महर्षि



मरुभूमि शोध संस्थान

संस्कृति भवन

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**A STUDY ON IMPACT OF SOCIAL MEDIA MARKETING ON CONSUMER BUYING  
DECISION OF HYGINE DISINFECTANT PRODUCTS (HAND SANITIZER/HAND  
WASH/MASK/VEGETABLE CLEANER) DURING COVID-19 IN PUNE**

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**Abstract**

The main purpose of this study is to understand the impact of social media marketing on Indian consumers' for buying of hygiene disinfectant products. As we know, Contrary to expectation, the risks of infection are growing rather than declining, even in everyday life. After all, who can make a distinction between cleanliness and hygiene? This situation is further compounded by the growing number of persons who are susceptible to infections. Because of COVID-19, people started realizing the importance of hygiene. Everybody wants to live disease-free and healthy. A quantitative survey was carried to investigate the degree of influence by the use of social media. A structured questionnaire is sent to the consumers in Pune. Descriptive statistics like mean, standard deviation, correlation is used in the study. Multiple regression models are used to evaluate the role of social media on buying behavior.

The result shows that consumer search products on social media and compares the alternative evaluation. The research was done among internet-savvy consumers in Pune, and data were considered for the consumers who were involved in the decision-making process for hygiene disinfectant products during the COVID -19.

**Keywords:** - "Marketing, social media, hygiene, disinfection, cleanliness, Social media marketing, consumers, decision-making process.

**Introduction:**

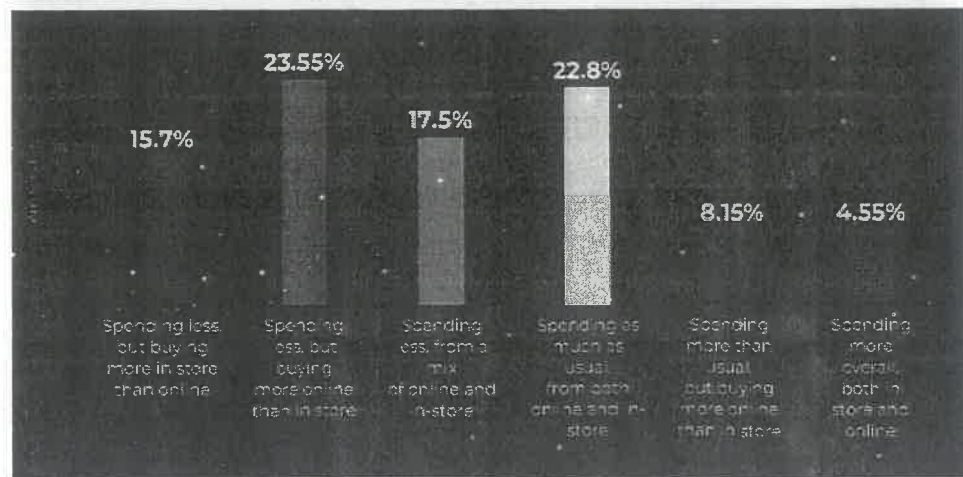
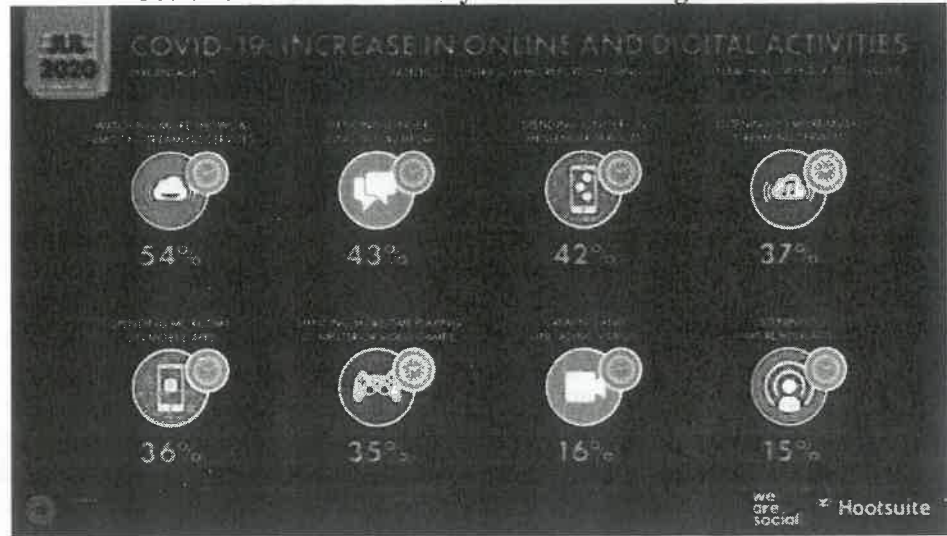
**Covid-19 and Social Media Marketing:**

- Social media marketing puts consumers back to the center of the business world and provides marketers with a new set of tools to interact with consumers and to integrate them into the brands through innovative ways
- At this time, when no other ways available to cure or manage COVID other than quarantine and social distancing. Social media become a strong platform for spreading public health awareness and advocacy regarding public health issues, hygiene products. Some nations do have Twitter and Facebook accounts for these purposes.
- consumer behavior and satisfaction have become an important asset for any organization to attain its position in the market and to increase its profitability.
- The social media environment is very easy to apply and to reach the customer. These benefits give persons convenience to achieve what they are looking for.
- Facebook, for example, reported having 2.38 billion monthly active users and 1.56 billion daily active users as of March 31, 2019 (Facebook 2019). Globally, the total number of social media users is estimated to grow to 3.29 billion users in 2022, which will be 42.3% of the world's population (e Marketer 2018).
- More than half of the world now uses social media. 4.57 billion people around the world now use the internet, of those users, 346 million new users have come online within the last 12 months. 5.15 billion unique mobile users.

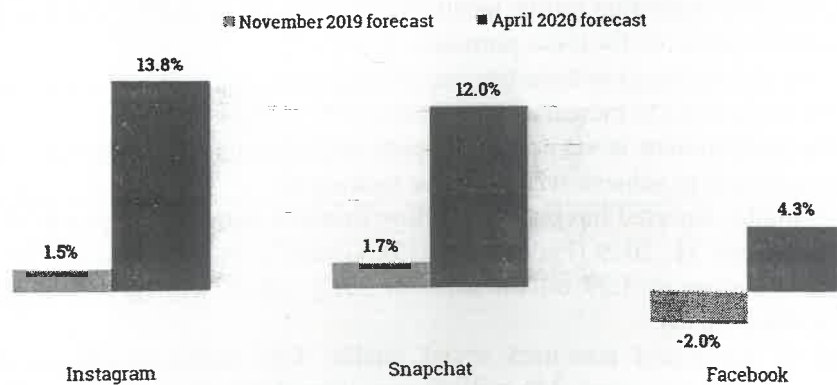
- During this study, it was important to consider the future of social media in the context of consumer behavior and marketing, since social media has become a vital marketing and communications channel for businesses, organizations.

In the COVID-19 situation, consumers are more aware of their health and hygiene. Hand sanitizer, wash, Mask became the most essential things during this pandemic.

**Use of Social Media to Buy Products during Covid-19:**



**Use of social media in April 2020:**



**Literature review**

- Regarding Forbes & Vespoli, 2013, The influence of social media on buying behavior can be in any services or products. *Quality, brand, advertising or price could affect consumer decision-making*. The results of this research present that consumers are buying either inexpensive or expensive items, and are doing so based on recommendations from social media by their contacts or friends on social media.
- The good image of the brand or product can lead the consumer to decide on their purchases. When a *consumer's friend on social media shares or recommends services or products on their social media, it affects brand attitude and influences their decision-making*. Yet, advertising on social media, which is provided by commercial sources affects both consumer brand attitudes and purchasing intention (Yang, 2012).
- Nowadays social media becomes part of a person's life. *Social media such as Facebook, Twitter, Instagram or LinkedIn has a numeral number of the user and keeps growing every day*. It is estimated that over 500 million people are interacting with social media (Ostrow, 2010).
- The number of social media users growing has attracted marketers. Marketers have recognized that social media marketing as an important part of their marketing communication strategies. social media helps organizations to communicate with their customers. Key business factors of *social media allow consumers to estimate products, make recommendations to contact or friends, and share any of the purchases through their social media*. Communication through social media has found the impact on consumer decision-making and marketing strategies. (Perumal Prasath and Archchana Yoga Nathen- (July 2018)

**Probing research questions:**

- How often does the consumer use a social media service?
- Which type of social media is most used?
- Did the recommender influence the consumer's purchase (i.e., the recommender's status as a friend/stranger)?

**Objectives of the study:**

- 1. To study the relevance of social media marketing on buying decision of hand wash, sanitizer, mask, vegetable cleaner in the present COVID-19 situation.
- 2. To study the relationship between personal characteristics of social media users and impact of social media on their purchase decision
- 3. To study the effectiveness of online digital communication as a medium for marketing concerning the hand wash, sanitizer, mask, vegetable cleaner.
- 4. To study the impact of social media advertising on buying of hand wash, sanitizer, mask, vegetable cleaner

**Significance of the Study**

This study is of significance and interest to various stakeholders. The study mainly affects the below **Scholars and Academicians, Companies and Organizations, Online Consumers**

**Methodology of the Study**

To carry out the prospect result and information a qualitative research system was decided for this study. The qualitative research does not concentrate on numbers, but rather on perceptions and the substance. qualitative research is typically focused on the micro-level of social interaction that composes everyday life, whereas quantitative research typically focuses on macro-level trends and phenomena. The qualitative research method has been selected because it allows them to investigate the meanings people attribute to their behavior, actions, and interactions with others.

**Data collection method**

**Primary Method of Data Collection:  
Questionnaires**

- The data was collected through self-administered questionnaires which were posted online platform to the end consumers of Pune region.

**Secondary Method of Data Collection**

- The secondary data was collected from: Books, reports, newspaper article, e- journals, journals, research papers, websites, and publications- periodicals.

**Scope of the Study**

The research focuses on the behaviour of end consumers (individuals) and particularly within the hygiene disinfectants products (Hand Sanitizer/Hand Wash/Mask/Vegetable Cleaner) only.

**Sample size:**

- **Population:** End consumers in Pune District.  
Exploratory research is used to provide insights into an influence of social media on purchase decision and usage pattern of social networking sites.
- **Sampling technique:** As a sampling technique, we used the convenience sampling technique which implies a non-probability

**Sampling**

- **Sample size:**

In this study total 133 End consumers were studied

**The data was gathered by sending out questionnaire to individuals in Pune, July-August 2020**

**Hypothesis:**

H0\_1: There is no significant relationship between gender of social media users and impact of social media on their purchase process.

H0\_2: There is no significant difference of the income of the respondents and search of information of brands of hygiene disinfectant products

**Data analysis and Interpretation:**

**Objective 1:-To assess the impact of social media on purchase decision of Indian consumers**

1. Respondent access of Social Media

**Table1: Frequency of access Social Media**

Variables	No of respondents	Percentage
Multiple times in a day	27	19.1%
Weekly 4 to 6 times	38	28.2%
Once in a week	68	52.7%
Total	133	100%

Source: Field Survey

**Interpretation:** About 53% people have frequently used social media for information regarding their purchases. This indicates the growing popularity of social media as information tool

2. Precautions taken during covid-19

**Table2: Precaution taken by respondents during Corona Virus**

Variables	Frequency	Percentage
Use of handwash and sanitizer	125	95.4% / 100 %
Daily cleaning of surface	77	57.9% / 100%
Use of disinfectant wipes	44	33.1% / 100%
Use of face mask	109	82% / 100%
Washing vegetables with vegetable cleaner	76	57.1%/100%

Source: Field Survey

3. Respondents' usage of Social Media for Hygiene Disinfectant Products

**Table3: usage of Social Media for Hygiene Disinfectant Products**

Variables	N	Min	Max	Mean	Std. Deviation
Search information of brands of hand Sanitizer/wash/Mask/vegetable cleaner]	133	1	5	3.865	0.952
Learn from people who share product reviews, information, experience	133	1	5	4.113	0.794
Search information for Offers or promotions	133	1	5	3.805	1.011
Seek advice, recommendations and tips of hygiene products]	133	1	5	4.120	0.708
Highly rely on the information and reviews on social media]	133	1	5	3.744	0.967
Search information product or service-will solve my problems	133	1	5	3.820	0.976
Compare brands of hygiene products	133	1	5	4.068	0.906
Learn how to use hygiene products	133	1	5	3.962	0.874
Most likely I buy the hygiene products posted by friends and family	133	1	5	3.684	1.047

4. Frequency of respondents on clicked Ads on social media of disinfectant products like (hand Sanitizer /wash/Mask/vegetable cleaner)

**Table4: Clicked Ads on social media of disinfectant products**

Dimensions	No of respondents	Percentage
Extremely often	14	10.7%
Quite often	11	7.6%
often	27	20.6%
Slightly often	35	26.7%
Not at all	45	34.4%
Total	133	100%

Source: Field Survey

5. Respondents' behavior on social media sites for hygiene disinfectant products (hand Sanitizer /wash/Mask/vegetable cleaner)

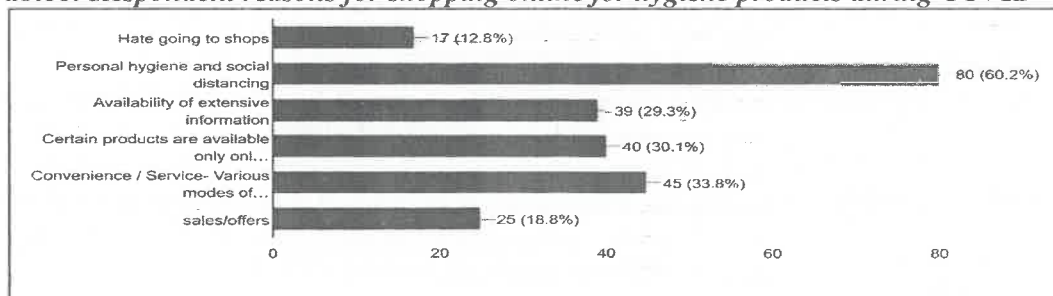
**Table5: Respondent behaviour on social media of disinfectant products**

Elements	Respondents	Percentage
I only search products before they buy	80	59.8
I use to browse new items	38	28.8
I also purchase from snapchat, Facebook, Pinterest	9	6.1
Other	5	5.5
TOTAL	132	100

Source: Field Survey

6. Respondents reasons for shopping online for hygiene products during COVID -19

**Table6: Respondent reasons for shopping online for hygiene products during COVID -19**



Source: Field Survey

**Objective 2:-To study the relationship between personal characteristics of social media users and impact of social media on their purchase decision**

H0: There is no significant relationship between gender of social media users and impact of social media on their purchase process.

**Table 7 T test: Relationship between impacts of social media between genders of Respondents**

Elements	df	t	P-value	Significance Level
Search information of brands of hand wash and hand sanitizer	df1 63 df2 67	-0.41	.3401	result is not significant at p > .05
Learn from people who share product reviews, information, experience	df1 63 df2 67	0.06	.476387	result is not significant at p > .05.
Search information for Offers or promotions	df1 63 df2 67	0.33	.3716	result is not significant at p > .05.
Seek advice, recommendations and tips of hygiene products]	df1 63 df2 67	0.06	.476205	result is not significant at p > .05.
Highly rely on the information and reviews on social media]	df1 63 df2 67	0.61	.272851	result is not significant at p > .05.
Search information product or service will solve my problems	df1 63 df2 67	-0.94	.175345	result is not significant at p > .05.
Compare brands of hygiene products	df1 63 df2 67	0.35	.361726	result is not significant at p > .05.
Learn how to use hygiene products	df1 63 df2 67	0.901 23	.184566	result is not significant at p > .05.
Most likely I buy the hygiene products posted by friends and family	df1 63 df2 67	0.937 73	.175061	result is not significant at p > .05.

**Source: Field Survey**

T test result shows that information search between the gender Search information of brands of hand wash and hand sanitizer [t= -0.41, P value is .3401 which is more than 0.05(p>0.05)] relationship is insignificant, Learn from people who share product reviews, information, experience [t=0.06, P value is.476387 which is more than 0.05(p>0.05)] relationship is insignificant, Search information for Offers or promotions [t=0.33, P value is .3716 , which is more than 0.05(p>0.05)] relationship is insignificant, similarly for other elements result is insignificant hence

**Conclusion of Hypothesis:** Hence it can be concluded that there is no difference of gender respondents on impact of social media on their purchase process.

Since *the p value is greater than 0.05* the null hypothesis is accepted.

Therefore, there is no significant relationship between gender of social media users and impact of social media on their purchase process.

**Objective 2:-To study the relationship between personal characteristics of social media users and impact of social media on their purchase decision**

H0: There is no significant difference of the income of the respondents and search of information of brands of hygiene disinfectant products.

**Table8: ANOVA: Relationship between income of the respondents and Search information of brands of hand Sanitizer/wash/Mask/vegetable cleaner**

Source	Sum of Squares	df	Mean Square		Significance
Between-treatments	8.0658	4	2.6886	F = 3.11065	The p-value is .028706. The result is significant at p < .05
Within-treatments	111.4981	129	0.8643		
Total	119.5639	133			

**Source: Field Survey**

**Conclusion of Hypothesis:**

ANOVA result shows that information search between the age group of respondents [F (4, 129) = 3.11065, p value is .028706, which is less than 0.05(p<0.05)] relationship is significant. Hence it can

be concluded that there is difference of income of respondents on information search of social media. Since the *p value is less than 0.05* the null hypothesis is accepted.

### Findings

- According to this study most of the respondents are between the age group 20-35. who are influenced by the idea of social media. All Most half of the people of this survey 55.5% use social media to search product like hand wash, hand sanitizer, mask, vegetable cleaner online.
- Social media Marketing is incredibly accessible since there is no physical limit to advancement. Due to COVID-19 60.2% of the people are using social media sites to search and buy products because of convenience, personal hygiene and offers.
- People use social media sites to get information about different hygiene products.
- 37.9% people prefer social media ads because they are more interactive.
- This is in light of the fact that Social Media Marketing faces basically nothing key blocks, and can likely contact the entire masses.
- The improvement of social media marketing is unavoidable.
- The social media advertising industry will encounter exponential advancement. Social media advertising really helps companies to generate maximum revenue and to change the buying decision of consumers.
- Due to COVID-19 people are more aware about personal hygiene. So, to get the proper hygiene information and products information social media is in boom.
- Almost 60% people are using social media to get information about this pro

### Suggestions

While doing the study, there are some suggestions. The suggestions are given below:

- To do this kind of research, more time should be considered so that the result can be more accurate.
- To win the social media market they are, Good social media marketing planning requires also in-depth knowledge of its organization and a solid plan of how it can be used to achieve business goals.
- Before attempting to promote their business on the various networks, think about social media marketing not as a temporary solution that will get marketers traffic now. And second one is They don't want to risk losing visitors and potential customers, make sure they have a very specific social media marketing schedule that you stick to no matter what.
- The study is totally based on Pune region. To have a perfect idea in the context, it should be done in all over the country.
- Due to the COVID-19 pandemic everyone is at their home. Everyone wants to stay safe and healthy. So, this is the chance for hygiene companies to interact with people through social media. Make their presence online, and keep more focus on information and advertising.

### Conclusion

1. Social media marketing can have a positive effect on consumer buying decision making.
2. The social media users seem to trust reviews on social media and surprisingly, reviews from strangers and friends are almost equally trusted. Thus, firms could use discounts or incentives to have consumers recommend their product via social media.
3. The increasing use of social media helps companies to promote their products online. People are using social media platforms to explore different products and to get information regarding products.
4. 37.1% Consumers are liking social media advertisements as they are more interactive than traditional advertisements. A consumer buying decision depends on the availability of products and their information.

5. 34.8% people highly rely on sales, offers and different modes of payments. So, this study shows that social media impacts on consumer buying decision to buy hygiene products.

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**Discounted Cash Flow Valuation using three statement model for Tata Consultancy services: An empirical analysis**

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**Abstract**

**Purpose-** The purpose of this paper is to report the future movement of stock prices, it will protect the hard earned capital of the investors and create more investment opportunities thus felicitating the requirements of each stakeholder i.e the investor, the financial industry and the economy on findings of fundamental analysis of the intrinsic value of stock of Tata Consultancy Services Ltd.

**Design/methodology/approach-** This study was performed using point values systematic spreadsheets. Secondary data from annual reports have been scrutinized to arrive at the results. A Three Statement Model of Discounted cash flow valuation was applied on the basis of 4 years' data to predict the intrinsic value of stock of Tata Consultancy Services Ltd of the future four years dating from the year 2015-2024. The intrinsic stock value was arrived upon by analysis of the Income statement, Balance sheet, Cash flow statement using mathematical calculations such as **Free Cash Flow to the Firm, Weighted Average Cost of Capital, Market Value of Equity, Cost of Equity, After Tax Cost of Debt, Present value of Explicit Forecast Period, Present Value of Terminal Value etc.**

**Findings-** As per fundamental analysis, the intrinsic value of stock of TCS was found to be higher than the present market share price by using Discounted Cash Flow Method. It is clear from the results that present market share price Tata Consultancy Services (TCS) is Under Valued considering the intrinsic value.

**Originality/value-** The paper offers to substantiate the financial performance of TCS for a period between 2015 to 2024. Investors can use these insights to study the operation of similar organisations prevalent in the IT industry.

**Keywords:** Financial modeling, discounted cash flows, three statement model

**Introduction**

Corporate finance comprises of a number of techniques which help in identifying and analyzing the financial health of companies by judging their investment composition, supply of financial aid and the achievements made by bureaucrats of respective businesses in attaining superior earnings. Financial modeling is a technique that embraces an arithmetical model which assists in anticipating the prospective monetary earnings of the organization in the near future. The use of MS-Excel is done in order to build a model that is made using a lot of assumptions, permutations and combinations to reach at a particular value or share price.

The process of financial modeling is often addressed as number crunching by non-experts. Hypothetical assumptions are decoded to arrive at certain conclusions regarding the predictive behavior of the market for the said organization. Financial modeling differs from company to company on the basis of software, spreadsheets and model they adopt. Although a lot of critics have spoken about financial modeling in a negative sense, it is also a popular concept with analysts who take interest in assessing the business health through these methods to predict a Fair share price and has been gaining admiration in recent times. The three statement model combines an analysis of the balance sheet, income statement and cash flow statement for the purpose of analyzing the financial health of the business. The discounted cash flow technique is an addition to the basic technique that formulates more significant and realistic results for both

**Research Questions:**

1. What is the intrinsic value of Tata Consultancy services ltd?
2. How does the current market price differ from the intrinsic value?

**Methodology**

The researchers have used an excel based spreadsheet to calculate the intrinsic value of TCS ltd using discounted cash flow method. This study was performed using point values. Secondary data from annual reports have been scrutinized to arrive at the results. A Three Statement Model of Discounted cash flow valuation was applied on the basis of 4 years' data to predict the intrinsic value of stock of Tata Consultancy Services Ltd of the future four years dating from the year 2015-2024. The intrinsic stock value was arrived upon by analysis of the Income statement, Balance sheet, Cash flow statement using mathematical calculations such as Free Cash Flow to the Firm, Weighted Average Cost of Capital, Market Value of Equity, Cost of Equity, After Tax Cost of Debt, Present value of Explicit Forecast Period, Present Value of Terminal Value etc.

**The three statement model**

This model is an effective technique used for the simplification of the financial decision making process. The net income is arrived upon by simply calculating the difference between Sales revenue and SG&A, Depreciation, Interest and tax expenses.

**The discounted cash flow technique of valuation**

This method helps to arrive at an expected value of an investment by taking future cash flow into consideration.

**1. Free Cash Flow to the Firm (FCFF):**

FCFF is essentially a measurement of a company's profitability after all expenses and reinvestments.

$$FCFF = NI + NCC + Int \times (1 - Tax\ rate) + Preferred\ stock\ dividends - FCInv - WCInv$$

**2. Weighted Average Cost of Capital (WACC):**

WACC is the rate that a company is expected to pay on average to all its security holders to finance its assets.

$$WACC = \frac{E}{D + E} (r_e) + \frac{D}{D + E} (r_d)(1 - t)$$

Where:

E = market value of equity

D = market value of debt

$r_e$  = cost of equity

$r_d$  = cost of debt

t = corporate tax rate

**3. Market Value of Equity:**

Market value of equity is calculated by multiplying the number of shares outstanding by the current share price.

**4. Cost of Equity: (Used CAPM model)**

The cost of equity is the return (often expressed as a rate of return) a firm theoretically pays to its equity investors, i.e., shareholders, to compensate for the risk they undertake by investing their capital.

Cost of Equity = Risk Free Rate of Return + (Beta \* Equity Risk Premium) Where,

Risk Free Rate of Return = The RBI Treasury Bond Rate

Equity Risk Premium = Country specific default spreads and risk premium Beta value = 0.99 (approx.)

**5. After Tax Cost of Debt:**

Company's cost of debt before taking taxes into account.

After Tax Cost of Debt = Pre Tax Cost of Debt \* (1 - Tax Rate)

6. Total Present Value of Explicit Forecast Period: Present value of Explicit Forecast Period  
= FCFE \* Present Value Factor

$$PV = \frac{C_1}{(1+r)^n}$$

*C<sub>1</sub>* = Cash flow at period 1  
*r* = rate of return  
*n* = number of periods

7. Terminal Value:  
Terminal Period FCFF = FCFF of Terminal Year \* (1+Terminal Growth Rate) TV =  
(FCF<sub>n</sub> x (1 + g)) / (WACC - g)  
Where,  
TV = terminal value FCF = free cash flow  
g = perpetual growth rate of FCF  
WACC = weighted average cost of capital
8. Present Value of Terminal Value = Terminal Value \* Present Value Factor of Terminal Year
9. Total Present Value of Firm = Present value of Explicit Forecast Period + Present Value of Terminal Value
10. Value of Equity: Value of Equity = Total Present Value of the Firm (Enterprise Value) + Cash and Cash Equivalents - Value of Debt - Minority Interest
11. Value per Share = Value of Equity / No. of Shares Outstanding

#### Literature Review:

In a study Jansen and Wang (2006) assumed the association between equity and bond yield of the American stock price index and tried to create a forecasting model that predicted financial movement. Lundholm and O'Keefe (2001) compared the discounted cash flow and residual income model and tried to arrive at an estimated equity stock price. The study also shows the two models have equivalent results if implemented in the right manner and these models could really help in forecasting the realistic calculations as to the share price. Fernandez, P. (2017) compared both the DCF as well as RI model in terms of predicting calculations and uses Economic value added, weighted average cost of capital and economic profit. The study concluded that both DCF and RI modeling methods have similar results.

#### Results & Discussions:

The fundamental analysis is done to know the intrinsic value of TCS. The Intrinsic Value is calculated by using Discounted Cash Flow. The Results of **Table 1** shows the fundamental analysis the value of stock of TCS is **Rs. 2,916.85 per share**. The value is derived by using **Discounted Cash Flow (DCF) analysis**, and Market value of stock as on March 11, 2019 is **Rs. 2,016.15 per share**. As per the DCF technique, it is said that the current share price of Tata Consultancy Services (TCS) is **Under Valued** considering the market value of Rs. 2,016.15 per share and this may be due to rise of its fundamentals i.e. revenue, earnings, growth projections, balance sheet, etc. Investors should invest in TCS Ltd either by buying the company's stocks or hold them if already purchased.

#### Theoretical & Managerial Implications

Unpredicted risks and unfavorable situations can be averted through proper implementation of the technique. Through this method, managers and accountants can accomplish complex tasks related to decision-making and business growth.

Businesses can use this technique to fulfill their managerial objectives and can be informed well in advance about any financial failures that may occur in the future. It can act as a constant reminder to reframe strategies for financial success.

Financial growth of industries and individual investors will lead to a highly prosperous economy. A prosperous economy boasts of a society which will include superior infrastructure, a good GDP and promote new industries.

Financial techniques like these can be a window of opportunity for bridging the void between theoretical concepts and their practical implementation.

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