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A TRUE VISIONARY

*"You see things and you say **Why**? But I dream of things that never were and say **Why** not?"*

- George Bernard Shaw

Shri Jagannath Gupta

(1950 - 1980)

Also a true visionary...who dared to dream!
He lives no more but his dreams live on....and on!

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And more dreams to come!

Editor's Desk

Learnings from 2020: Covid 19

At the time when we are writing this editorial, the world is waiting for the vaccine of Covid-19 to be released and a lot of anxiety goes around with this. The governments around the world are now gearing up for the new challenge of getting maximum people vaccinated, this would be world's biggest logistics challenge along with definitely a medical benchmark. The year 2020 saw a tremendous shift in the business world, whether a business big or small have witnessed the negative effects of the pandemic, and some are still struggling to find the best way to move forward. But as the saying goes 'with all crises, there is an opportunity in the reckoning'. When the pandemic was at its peak, we organised a national seminar in which several senior leaders from corporate shared their learnings from the pandemic. At this instance let me share reflections from the leaders about their learnings from this pandemic. COVID-19 proves to be a learning lesson in the workplace. Companies that already have work from the home policy were doing fine. But, it took a pandemic for many to understand the benefits of a work from home policy. As a result, many employers have found themselves in an unfamiliar situation. They are trying hard to adapt and adjust to a new way of working. But, they have already accepted the fact that remote working is real and it is ok to be in. With life coming to a pause there was a lot of self-introspection that happened and most of the leaders echoed a common viewpoint that sometimes it's important to slow down before the speedup. It is critical to be aware of the many challenges our employees, co-workers and partners are facing in their lives. Everyone is dealing with the stresses of different nature, and it is essential to remember that almost everyone is surrounded by shadows we cannot see through Zoom or hear through a phone call. This is a time for extra compassion and patience.

A lot of business disappeared overnight for example travel, retail and hospitality sector suffered a lot. Through the pandemic, organizations learned to diversify further, because of the uncertainty of the business environment then we have seen a new wave of humanity coming out which cultivated a new genre of relationships. When it mattered most, these supporters showed up and said, "What do you need?" People started understanding that keeping a sense of community while working remotely is difficult. Zoom and Google Meet are great, but nothing replaces the human element. As a leader, finding creative ways to keep everyone feeling connected and part of a team has been the biggest challenge. People need to know that they are still part of a company that cares and is doing everything it can to protect and nurture them through the pandemic. The same thing can be said for communicating with clients. They need to know that business is still on, we can service them and are also keeping them and your employees safe. At this instance, the world needs thought leaders to focus on listening as much, then focus on speaking. As the need for innovation and out-of-the-box thinking rises, most are focused on how to use technology to drive change. But at the end of the day, culture is driven by humans, not computers. Our new world will be formed through innovation in empathy and the understanding of the people we work with now more than ever.

Happy learning…!!

(Ashok Sharma)

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PURSUANCE OF QUALITY OF WORK AND PERFORMANCE ON ORGANIZATIONAL COMMITMENT WITH THE IMPEDING EFFECT OF STRESS IN PROFESSIONALS

Shabnam* Garima Saini**

Purpose- The study is investigating the lower-order constructs (LOCs) quality of work and performance in conjunction with higher-order construct (HOCs) organizational commitment and impeding consequence of stress on the quality of work, performance-oriented and organizational commitment.

Design/methodology/approach- The study contributes in investigating the affinity between quality of work and organizational commitment; to discover the relationship between performance and organization commitment; and to study the impeding effect of stress on the quality of work, performance, and organizational commitment. A sample of 439 professionals from different public and private firms were taken. Partial Least Square (PLS) analysis with Smart PLS 3.3.2 software is used. Structural analysis was applied and indicates that direct positive effect of quality of work on organizational commitment.

Findings- Performance shows a positive impact on organizational commitment. Stress has an impeding role in the quality of work, performance, and organizational commitment and shows a negative relation with exogenous and endogenous variables.

Originality/value- Due to the foreseen vying environment in the organization, there is no other way rather than understanding the employees, colloquies and executives. Through the practice of organizational commitment, quality of work and performance, it would be better in realizing the professional's situations by being emphatic towards them in stressful situations. Theoretical and managerial implications are also provided in the study.

Keywords: Organizational Commitment, Quality of work, Performance, Stress.

JEL Classification: L0, L2

Organizational commitment is an attitude of the employee to be the part of particular organization; willingly exerting efforts in organization; and the acceptance in organization beliefs. (Luthans, 2011). Organizational commitment can be the psychological condition of the employee, which works on the criteria of his relationship and his decision to remain the part of the organization (Allen & Meyer, 1997). It is the need of an hour that the employees must be internally committed to the organization in this era of high competition and technological advancement, (Miller, 2003). Organizational commitment can be classified into normative commitment in which obligation is there in employee's feeling with the organization; continuance commitment in which employees are attached and they feel leaving is hurtful; and affective commitment in which employees are emotionally attached (Allen& Meyer, 1990).The organization faces this challenge of managing the commitment of the employees and ensuring sustainability for organizational growth. Various studies on organizational commitment state that low organizational commitment shows high turnover intentions and ultimately results in leaving the job (Allen & Meyer, 1996). A high turnover rate in the organization can leads to destruction in the organization. Studies show that employees with low organizational commitment are loafers and unproductive at work (Morrow, 1993). Lack of loyalty or organizational

commitment is the result of employee's unwillingness to relocate, theft, dissatisfaction at the job, absenteeism at work, and turnover (Cohen, 2006). Employee's psychological bond with the organization shows his organizational commitment in the form of loyalty, job involvement, and his belief in the value of the organization (O'Reilly & Chatman, 1989). Researches in the field of organizational behavior show that the quality of work is marked as a progressive indicator for the growth and sustainability of the organizations (Koonmee et al., 2010). In a Malaysian study, organizational commitment has been an important indicator in studying employee's behavior. Many studies have reported the importance of organizational commitment in their studies (Aizzat et al., 2001; Mutasim et al., 2004; Rohani et al., 2004). A significant positive relationship exists between the quality of work and organizational commitment (Normala & Dau, 2010). Quality of work is the quality consanguinity between the working environment and colloquies as the favorableness and propitiousness for the employees working in the organization. The term quality of work-life introduced by Davis and Albert in 1972 in the conference of International

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Labor Relations (Hain & Einstein, 1990). Quality of work is associated with increased labor management skills to improve and solve the problem of employee commitment and organizational performance. Quality of work is comprised of three factors namely personal behavioral factors, environmental factors, and organizational factors. To attract and retain employees, high quality of work-life is an important factor for organizations (Sandrick, 2003). Regardless of status and position, low quality lo work-life affects every employee. Many organizations work in this direction regardless but being a complicated problem, it is difficult and impossible to work and identify all the attributes, which significantly contribute to the quality of work (Walton, 2005). Quality of work is a catalyst and plays a crucial role in the wellbeing of an organization by determining the important aspects like job performance, labor turn over, job satisfaction, and labor-management relations (Hoque & Rahman, 1999). Quality of work has a significant impact on ethical behavior, which has a positive effect on job-related outcomes (Koonmee et al., 2010). Higher-order needs have a higher impact to influence the organizational commitment than lower-order needs; quality of work increase organizational commitment and job satisfaction and performance (Lee & Miller, 2001). Quality of work and organizational commitment is studied in the Isfahan Body training organization and a significant relationship is studied between two variables (Hosseini & Musavi, 2009). A meaningful and positive relationship is there in the quality of work-life and three dimensions of organizational commitment in a public organization (Freyedon et al., 2012).

I. Review of Literature

Organizational commitment correlates with quality of work (Farjad & Varnous, 2013). Affective organizational commitment shows consanguinity with employees turn over intention and quality of work (Kamel, 2013). Therefore, we can say that work-life qualityin the organization is higher, organizational commitment is higher too. Job performance can be defined, as work-life quality of work employee possess in the organization. Organizational communication in the organization contributes to high organizational commitment and job performance (Chen et al, 2006). The job performance of the employee can be evaluated as the performance of the industry directly (Caillier, 2010). Different extents; lower, middle and higher management levels are related to organizational performance (Kundu et al., 2019). A theoretical study stated that there exist a consanguinity among innovative work behavior, organizational citizenship behavior and performance of employee (Atatsiet al., 2019). There is a positive relationship between creative organizational climate, strategic human resource practices and organizational performance (Iqbal, 2019). Job performance is the work-related outcome that aims to attain goals and objectives of the organization, which are measured with the employee's performance (Sharma et al., 2009). An organization that keenly knows this fact has prioritized the factors, which increase the employee's performance. Scholars repeatedly work on the strong relationship between job performance and attributes of organizational behavior like job satisfaction and organizational commitment (Hira & Waqas, 2012; Spector, 2012). Several studies marked that job performance and organizational commitment are having a high consanguinity with each other (Huang et al., 2012; Fu & Despande, 2013). Performance is to be described problem by the mangers of the organization to recognize the expectation of the organization and fulfilling organizational goals. The higher the performance of the employee is related to the performance of the organization (Cascio, 2006). Social exchange theory (Blau, 1964) can help in understanding the behavior at the workplace by explaining the relationship among attributes like job performance, satisfaction, and organizational commitment (Cropanzano & Mitchell, 2005). This theory enlightens that if an employee feels obliged to the organization and reciprocate in high performance and organizational commitment (Andrews et al.,2003).A study on mid-level banking sector employees shows high consanguinity between job performance, satisfaction, and organizational commitment (Hira & Waqas,2012; Edwards et al.,2008). Adding to this, organizational commitment positively influences the performance of the employee (Jamal, 2011). In a comparative study between the sales and non-sales employees, a significant positive relation is found between organizational commitment and job performance in sales employees (Jaramillo et al., 2005). While studying the three dimensions of organizational commitment a positive significance is studied between job performance and organizational commitment (Khan et al., 2010). Normative & affective commitment are related to performance whereas continuance commitment is negatively related to job performance (Meyer & Allen, 1997). Stress has become a major issue with an immense challenge. Employees are precious for the organization but sometimes facing family problems and at the same time, concentrating on professional life reduces their efficiency. Nowadays, Job stress has become a major phenomenon in an organizational culture, which creates problems at both organizational and individual levels which impacts organizational commitment. Job stress highly affects organizational commitment. Job stress is the individual reaction towards the organization's environment, which can be threatening him physically and emotionally (Jamal, 1990). Immense workload and pressure to complete the task at a fixed amount of time is a major source of stress, which ultimately results in low organizational commitment (Baker et al., 2010). Job-related stress factors if more in the environment then the employees may have high stress at job.

If job-related stress factors are not resolved this might results in low organizational commitment (Ismail & Hong, 2011). Strategies are being formed by the management of the organization to satisfy the employees by reducing the level of stress at work, which will result in high organizational commitment (Bhagat et al., 2010). If unfavorable work is assigned to the employee which hinders their performance and doubts his/her career growth; stress arises with a decrease in organizational commitment (Kausar et al.,2006).If the employees are bombarded with extra working hours and unsatisfactory salary which arises stress in them; an increase in stress level decreases their organizational commitment (Bashir & Ramay, 2010). Based on this, the problem statement arises that does the quality of work and performance shows consanguinity with organizational commitment with the impeding effect of stress. This study is an attempt to investigate further in the field of organizational commitment and its contribution with constructs performance and quality of work. The consanguinity between organizational commitment, quality of work and employee's performance is studied in critical literature review in this field. In literature review the impact of stress on organizational commitment, performance and quality of work is critically analyzed. This study contributes a step further by building a theorical model and highlighting the impacts between the constructs and organizational commitment. It also adds in by focusing on the affinity of organizational commitment with quality of work, performance and stress by showing it impacts and suggesting the ways to improve the work quality and performance in the organization. The theoretical and managerial implications are discussed for the practical implementations.

II. Research Design and Methods

Objectives in the study
- To investigate the consanguinity between quality of work and organizational commitment.
- To discover the affinity between performance and organizational commitment.
- To study the impeding impact of stress on the quality of work, performance and organizational commitment.
- To suggest some measures which would increase the quality of work, performance, organizational commitment in the organization and reduce job stress.

Hypotheses of the study
H1- Quality of work shows a direct positive effect on organizational commitment.
H2- Performance shows a direct positive effect on organizational commitment.
H3- Stress is playing an impeding role in the quality of work, performance, and organizational commitment.

Research Instruments
Standardized tools on a 5- Point Likert-type scale measured measurement for dimensions of quality of work, performance, organization commitment, and stress. The instruments used for collecting the data are Leadership behavior scale (LBS); Asha Hingar (1984), Organizational commitment scale (OCS); Dr. Anukool M. Hyde and Rishu Roy (2006) and Depression, anxiety and stress scale (DASS); Lovibond & Lovibond (1995).

Sample design and Data collection
The current research concentrates on the affinity among quality of work, performance, organizational commitment, and study the impeding effect of stress. Purposive sampling is used by the survey method. The survey took place by face-to-face interaction with the professionals working in different public and private firms. 439 questionnaires were distributed to those who are willing to participate in the survey. The entire dataset has no missing values. Minimum sample adequacy is met with this sample size (Westland, 2010).

Data Analysis
Data is collected from the participants using self-reported questionnaires; and the data is analyzed. Psychological separation among the participants is maintained which assures the confidentiality and anonymity of responses. To analyze the research model, PLS-SEM analysis is used on reflective scale. Two-stage analytical procedures are reliability and validity and then the structural model is examined (Saestedt, 2013). The range of skewness statistics lies from -1.76 to 0.50 and range of kurtosis statistics lies from -0.06 to 1.04. The results are showing a value of less than 2 for skewness and less than 3 for kurtosis interprets that the data is normally distributed (Kline's, 2011).

III. Results and Discussion

Measurement model
PLS-SEM; hierarchical components model (HCM) includes higher-order constructs (HOCs) and lower-order constructs (LOCs) which reduces the complexity of the model (Lohmoller, 1989). Collinearity issues and problems with discriminant validity are reduced through a hierarchical component model (Hair et al. 2017). In this research reflective-reflective, hierarchical component model is used. Higher-order construct (HOCs) organizational commitment shows a relationship with its lower-order constructs (LOCs) quality of work and performance which are measured by reflective indicators (Wong, 2016). This model is designed concerning prior theories.

Convergent validity and Internal Consistency Reliability
In the measurement model, convergent validity is calculated. The data was assessed through the value of beta loadings,

average variance extracted and composite reliability. In the next step, discriminate validity, which ensures that one variable does not reflect the other variable and indicates low correlational value between variable and other constructs. Table 1 shows the values for composite reliability, which are .75, .84, and .88 for quality of work, performance, and organizational commitment respectively. The value of Cronbach's alpha for quality of work, performance, and organizational commitment are 0.74, .83, and 0.88 respectively. The value of 0.7 for composite reliability and Cronbach's alpha is justiciable (Hair et al., 2017). The indicator's variance in the model are studied through the convergent validity. Convergent validity is studied through Average Variance Extracted (AVE) (Fornell & Larcker, 1981). AVE value for the quality of work, performance, and organizational commitment are 0.52, 0.56 and 0.62 respectively. The value of 0.50 is acceptable (Bagozzi & Yi, 1988).

Table 1: Reliability; Validity of the higher order and lower order constructs.

Constructs	Composite Reliability	Average Variance Extracted (AVE)	Cronbach's Alpha
Quality of Work	0.75	0.52	0.74
Performance	0.84	0.56	0.83
Organizational Commitment	0.88	0.62	0.88

(Source: Data Processed)

Structural Model

PLS Path Model Estimation
Structural model can be assessed by looking at its R^2 and beta (β) values (Hair et. al. 2017). Loading relevance test states that the problematic items/indicators can be deleted only if the composite reliability and AVE tends to increase over 0.5 in the PLS model. First, we look at the relationship between the exogenous and endogenous constructs. Structural model is assessed through coefficient of determination(R^2). Organizational commitment is studied as the dependent variable. In structural model (Figure 1), the path diagram shows the value(R^2) is the stronger one. It depicts that two constructs quality of work and performance jointly explains 93.5% of variance of endogenous variable organizational commitment. This model indicates the direct strong effect of quality on organizational commitment (0.59) followed by performance (0.43) and quality of work shows relative effect on performance (0.756. The same model estimation states that R^2 value of .57 jointly explains the 57% variance of quality of work on performance in the PLS-SEM model.

Figure 1: PLS Path Model Estimation.
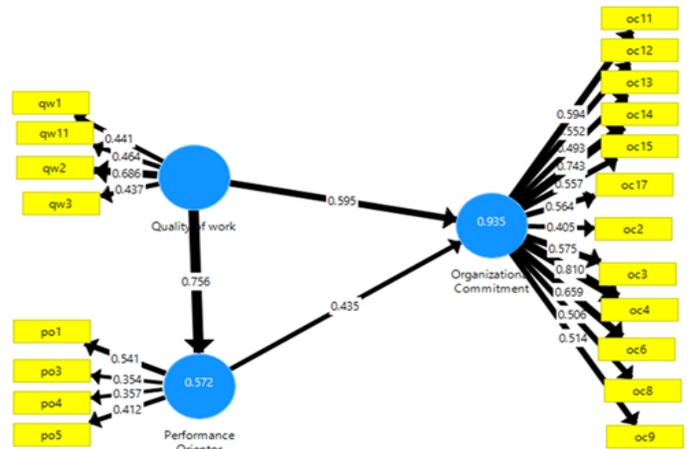
(Source: Data Processed)

Path Coefficient
The consanguinity of the constructs is studied by examining the values of path coefficients, t-values by using bootstrapping model. For the bootstrapping model, 2000 cases are used to test the hypothesis for the study. It can be seen by Table 2; the relationship of structural model is significant which conforms our hypothesis of the study. The t values for the constructs are obtained for the Smart PLS software and their p values are calculated in Excel using TDIST (x, degree of freedom, tails) command; example for quality of work → organizational commitment TDIST(7.460,1999,2). The model helps us to reach to the conclusion that quality of work has strong positive effect on organizational commitment (0.59);performance (0.43) and quality of work shows relative effect on performance (0.75) (Figure2).

Figure 2: Structural Modelling using Bootstrapping Technique.
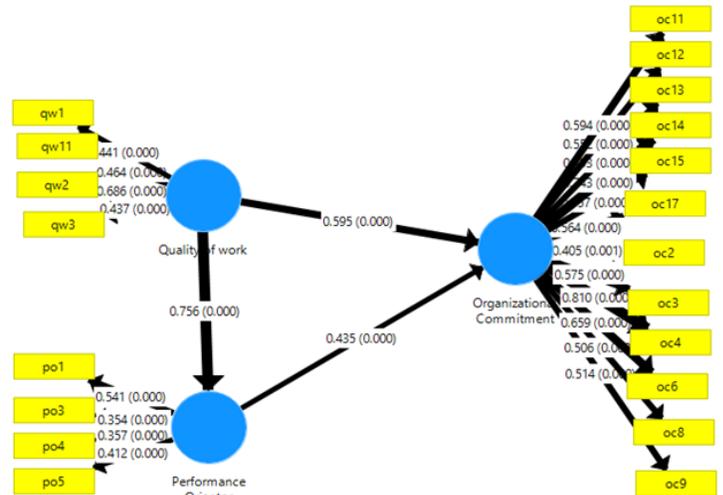
(Source: Data Processed)

Table 2: Path Coefficients results with hypotheses.

Hypothe sis	Path	Path Coefficie nt	T-valu e	P-valu e	Hypothe sis
H1	Quality of work→Organizati onal commitment	0.59	7.46	0.00	**Accepted**
H2	Performance → Organizational commitment	0.43	4.98	0.00	**Accepted**

(Source: Data Processed)

Structural PLS Path model to study the effect of stress

In the measurement model, the effect of stress is studied on quality of work, performance and organizational commitment; Table 3 shows the values for composite reliability, which are .86, .87, .72 and .89 for quality of work, performance, organizational commitment and stress respectively. The value of cronbach's alpha for quality of work, performance inter-organizational commitment and stress are 0.83, 0.86, 0.71 and 0.88 respectively. The value of 0.7 for composite reliability and cronbach's alpha is justiciable (Hair et al., 2013). The indicator's variance in the model are studied through the convergent validity. AVE value for quality of work, performance, organizational commitment and stress are 0.61, 0.64, 0.51 and 0.65 respectively (Bagozzi & Yi, 1988).

Table 3: Reliability and validity of constructs.

Constructs	Composite Reliability	Cronbach's Alpha	Average Variance Extracted (AVE)
Quality of Work	0.86	0.83	0.61
Performance	0.87	0.86	0.64
Organizational Commitment	0.72	0.712	0.510
Stress	0.89	0.88	0.65

(Source: Data Processed)

In structural model the coefficient of determination (R^2) is assessed. In this figure, effect of stress is studied on quality of work, performance and organizational commitment. In the path model diagram (Figure 3), stress is having a negative effect on organizational commitment (-.53), stress is also showing negative effect on variables quality of work (-0.76) and performance (-0.75). The same model estimation states that R^2 value of .28 explains the 28% variance of stress with organizational commitment, 0.58 that is 58% variance of stress with quality of work and 0.57 that is 57% of stress with performance in the PLS-SEM model.

**Figure 3: PLS Path Model Estimation to study effect of stress.**
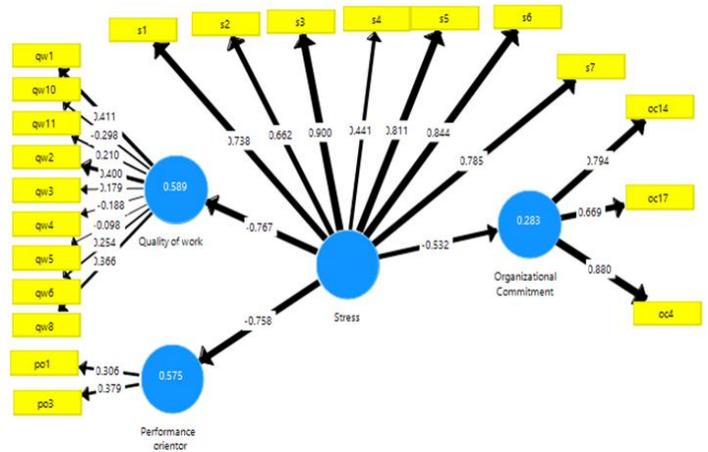
(Source: Data Processed)

Path Coefficient

The consanguinity of the constructs is studied by examining the values of path coefficients, t-values by using bootstrapping model. For the bootstrapping model, 2000 cases are used to test the hypothesis for the study. Table 4; the relationship of structural model is significant which conforms our hypothesis of the study. The t values for the constructs are obtained for the Smart PLS software and their p values are calculated in Excel using TDIST (x, degree of freedom, tails) command; example for Stress→quality of work TDIST(4.408,1999,2). The model helps us to reach to the conclusion that stress has strongest effect on quality of work (-0.76) followed by performance (-0.75) and organizational commitment (-0.53) using PLS-SEM (Figure-4).

Figure 4: Structural Modelling using Bootstrapping Technique; effect of stress.
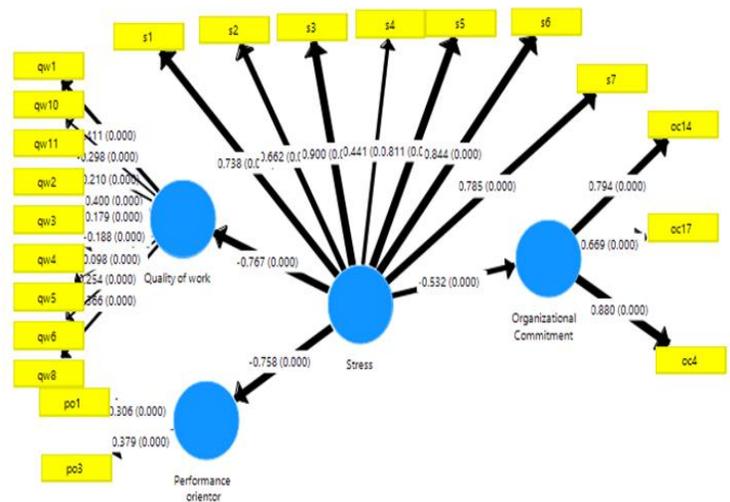
(Source: Data Processed)

Table 4: Significance Testing Results of the Path Coefficients

Hypothesis	Path	Path Coefficient	T-value	P-value	Hypothesis
H3	Stress→Organizational commitment	-0.53	3.99	0.00	**Accepted**
	Stress→ Quality of Work	-0.76	4.40	0.00	
	Stress→Performance	-0.75	4.39	0.00	

(Source: Data Processed)

Discussion and theoretical implications

This study contributes to the knowledge by its empirical support in the field of the quality of work, performance, and organizational commitment. The finding shows the impeding effect of stress on the quality of work, performance, and organizational commitment. The contemporary researches have highlighted the need to study the impact of the quality of work, performance on organizational commitment; and effect of stress on the endogenous and exogenous constructs. In this study, three hypotheses are developed; to study the effect of quality of work on organizational commitment; effect of performance on organizational commitment; and effect of stress on the quality of work, performance, and organizational commitment, which shows affinity and impact among variables. Analyzing the first hypothesis, quality of life has a direct effect on organizational commitment. The positive significant effect of quality of life on organizational commitment states that if the organization work towards increasing the quality of work this would affect in the commitment employees have towards the workplace. Therefore, the first hypothesis is accepted. Increasing the quality of work further increases the organizational commitment of employees in the workplace (Ghoddoosi-Nejad et al., 2015). Quality of work is a catalyst and plays a crucial role in the wellbeing of an organization by determining the important aspects like job performance, labor turnover, job-satisfaction, and labor-management relations. Taking into account the second hypothesis, studying the positive impact of performance on organizational commitment. We accept this hypothesis that performance shows a direct and significant effect on the organizational commitment. The performance of the employee is important for the organization; the committed and satisfied employee is likely to increase their job performance, which ultimately has a positive effect on the performance and growth of the organization. The job performance of the employee can be evaluated as the performance of the industry directly (Caillier, 2010). The organization, which keenly knows this fact, has prioritized the factors, which increase the employee's performance. Effective organizational commitment shows a

high relationship with occupational commitment and high job performance (Sungu et al., 2019).

Committed employees reflect more effort on behalf of the organization and work towards its growth. This led them to work and perform better towards their goals and the targets of the workplace. The third hypothesis is to study the impeding effect of stress on the quality of life, performance, and organizational commitment. So, this hypothesis is accepted as stress is showing a negative effect on the variables. This states that the increasing level of stress decreases the quality of work, performance, and organizational commitment in the workplace. The impeding effect of stress on the quality of work shows that stress has a negative effect of stress on the quality of work. Therefore, increasing the stress and lack of attention towards the quality of work tends to increase turnover intentions, absenteeism, and stress decrease employee's morale (Hadi et al., 2014). This study shows; effect of stress on job performance has negative effect, which states that high-stress levels decrease job performance. The job pressures and responsibilities at the workplace may expose employees towards stress intensively and frequently experiencing exhaustion and this exhaustion affects job performance in a negative manner. Immense workload and pressure to complete the task at a fixed amount of time is a major source of stress, which ultimately results in low organizational commitment and hinders the performance of the employee (Baker et al., 2010). The work stress and the employee's productivity and performance are significantly related (Ehsan & Ali, 2018). The result shows the negative impact of stress on organizational commitment. Job-related stress factors if not resolved this might result in low organizational commitment (Ismail & Hong, 2011). Employees with high organizational commitment possess emotions like responsibility, loyalty, and gratitude towards the organization; its negative effect explains that stress causes employees chronic and insensitive. When employees worry about meeting the goals and fulfilling these responsibilities arises the tensions, which result in stress. Employees increase the feeling that the loss they have if they have to leave the organization. As a result, there is an increase in stress, which affects employee's performance, satisfaction, quality of work, and commitment to the organization (Hoboubi et al., 2017; Pekersen, 2015). Employee's active behavior helps them to get rid of the imbalance stress arises; a contribution is provided which helps in reducing the stress levels and increasing the performance, quality and commitments in all the sectors of organizations.

Managerial implications of the study

If the organizations work on these constructs, it will help them increase organizational success, employee outcomes, and financial performance. The constructs used in the study

emphasizes on the factors, which improve the organizational outcomes in the form of higher productivity and profits: engagement in the organization increases work quality, job performance and organization commitment which results in higher productivity, which brings higher profit to the organization.

Figure 5: Framework of Variables and its Managerial implications.
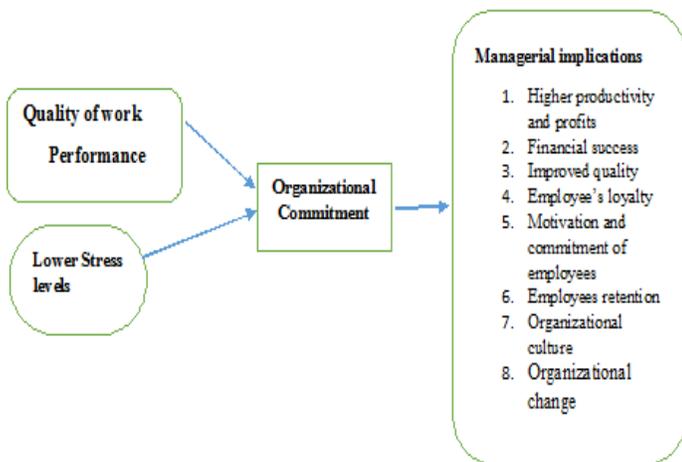
Financial success: the more the employees are engaged in the organization the higher their performance, quality of work is which increases their finical performance and organizational success; Improved quality and employees loyalty: if the organization works towards uplifting the conditions of the employees results in increasing the employee's loyalty, employees help in maintaining the improved quality which has a positive influence on customer satisfaction; Motivation and commitment of employees: work support employees take the initiative and learns the skills which improve the performance. Incentives and tokens given to employees increase their performance, commitment, and motivates them; Employee retention: studies show that happy employees will likely to stay in the organization. Retention policies help the organization to reduce the turnover intention of the employees and increase their commitment; Organizational culture, it is a significant driver as the culture organization has is the place where employees work and enhance their skills.

IV. Conclusion

This study is an attempt to see the impact of the quality of work, performance on organizational commitment with impeding effect of stress. The results indicated that the direct effect of quality of work and performance on organizational commitment. Organizational culture is a significant driver as the culture organization has is the place where employees

work and enhance their skills. Employees with high organizational commitment possess emotions like responsibility, loyalty, and gratitude towards the organization, which boosts their work quality and performance. Another variable, stress and its effect on the performance, work-quality and organizational commitment is analyzed. Stress has an impeding role on the constructs focusing that an increase in stress negatively affects employee's performance, satisfaction, quality of work, and commitment to the organization. The higher level of work quality, performance and lower stress levels impacts the organizational commitment which results in productivity and growth of the organization. Satisfactory and positive organizational culture improves the quality, satisfaction, performance, commitment and reduces the stress levels; Organizational change: employee's engagements and improvement initiative in the agility of organization and implementing change, new policies can help the organization to improve for its employees and to meet the demand of the changing markets.

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REACTION OF THE INDIAN STOCK MARKET TO CORONA PANDEMIC AND LOCKDOWN

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Purpose: The present paper tries to probe the COVID-19 breakout effect on the stock markets by drawing shreds of evidence from India.

Design/methodology/approach: Secondary data has been used and retrieved from the BSE and NSE portal in this study. The study covered the period July 1, 2019, to March 11, 2020, as "pre-COVID period" and March 12, 2020, to July 9, 2020, as "post-COVID period." Welch's t-test, popularly known as unequal variance t-test, and non-parametric Mann-Whitney U test are used to compare the opening, highest, lowest, and closing prices across the two periods of the major stock indices; Nifty 50, Nifty 500, Nifty 100, Nifty Midcap 150, S&P BSE Sensex, S&P BSE 500, S&P BSE Midcap, and S&P BSE All Cap. We further extended our study by employing a multiple regression model for the post-COVID period to identify the repercussions of the spread of the virus and lockdown on the stock indices' prices.

Findings: Both Welch's t-test and Mann-Whitney U-test indicated a significant (1% significance level) negative impact of the Covid-19 pandemic on the Indian stock market. Multiple regression model confirmed a significant (significant at 1%) positive effect of a rise in the COVID-19 cases on the stock market, and COVID-19 related deaths do not significantly impact even at 10% level. Furthermore, the results revealed a significant (at 1% level of significance) fall in the prices due to an increase in the lockdown days.

Originality/value: These outcomes contribute to the literature by looking at Coronavirus's economic consequences by drawing evidence from the Indian stock market. This study provides insights into the policymakers and corporates into the economic repercussions of COVID-19.

Keyword: COVID-19, Stock market, pandemic

JEL Classification: D53, I15

Coronavirus disease 2019, popularly called COVID-19, was first identified in Wuhan, China, during December 2019. The virus spread quickly to the other parts of China in early January 2020. On January 30, 2020, a novel coronavirus was recognized, and WHO broadcasted a global emergency. Undoubtedly, COVID-19 is turning out to be one of the most consequential health crises in the world's history. In the prevalent scenario (for the second week of June), the USA, India, Russia, and Brazil are among the countries that are reporting a skyrocketing growth in the COVID-19 cases. Thus, this pandemic is reflected as the most definitive worldwide health cataclysm of the century and the most extensive test humankind faced since World War II. As a result, there will be the steepest slowdown in the world economy since the Great Depression of 1930.

COVID-19 reached the shores of India on January 30, 2020. In India's context, it has tackled diseases such as smallpox, polio, etc., in the past. However, India has not confronted any highly contagious disease outbreak in history. Undeniably, the healthcare sector in India frail. India's health sector suffers from inadequate investment in the public sector and unregulated medical technology and education commercialization (Baru et al., 2010). In response to COVID-

19, India's government adopted a lockdown policy and imposed restrictions on international travel and internal mobility, the shutdown of institutions and public facilities. With social distancing norms being followed by the public and stringent lockdown measures being taken up by the government, it is evident that it will have a detrimental impact on the economy. The construction and transportation activities have come to a halt due to the migrant workers' mass exodus. Therefore, it is proper to say that the health crisis is turning out to be an economic crisis for the world economy. With a high unemployment rate and GDP shrinkage, it becomes difficult for policymakers to pave a path for a V-shaped recovery. It is imperative to note here that India had notably experienced a slowdown even before the COVID-19 strike. This pandemic has done aggravated the pernicious predicament. It appears that even after the announcement of the commercial package to ramp up the economic growth, it

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will take a long time for India to recoup, although lockdown has been lifted. Stock markets are often seen as an economic barometer of a country; a continuous healthy condition attracts domestic and foreign investments. These investments, in turn, increase the financial health of the country. In 2019, the Indian stock market was thriving. Both significant indices Sensex and Nifty 50 continued to have positive returns. In January, about 30 companies were close to filing Initial Public Offers (IPOs). Ever since the COVID-19 smash, the stock markets plummeted and loomed under economic uncertainty. Baker et al. (2020) also suggested forward-looking economic uncertainty measures are required to analyse the repercussions of coronavirus and identified stock markets as a fit measure for real-time COVID-19 analysis. Therefore, this paper views the stock market reaction due to the COVID-19 pandemic by drawing evidence from one of the fastest developing economies, India

I. Review of Literature

Broad and extensive literature are available on the stock market, ranging from the SARS outbreak to the financial crisis (2008) and now the COVID-19 pandemic. In the past, Chen and Siems (2004) and Abadie and Gardeazabal (2003) have immensely contributed to the literature by assessing stock markets' reaction to a specific event by developing advanced research methodology. Many extensive studies have also been carried out to observe and reckon the financial crisis. Reinhart and Rogoff (2009) have remarked that the crisis caused a sink in output by 9 percent and an average 86 percent swell in the public debt. In India's context, withdrawal by foreign portfolio investors of about USD 12 billion between September and December 2008 caused a decline in Sensex (Kumar, 2009). Bentolila et al. (2018), Stiglitz (2010), Bezemer (2011), Bagliano and Morana (2012), Mian and Sufi (2010), and Jagannathan et al. (2013) have contributed to the vast and extensive literature exploring the causes of the financial recession of 2008. So far, the SARS epidemic is investigated the most by thinkers and researchers. A vast literature is available on the repercussions of the SARS on the stock markets. Smith (2006) commented that the exponential proliferation of infectious disease does not necessarily significantly impact the economy; however, an outbreak can have considerable influence. Empirical estimates provided by Nippani and Washer (2004), Lee and McKibbin (2004), and Hai et al. (2004) revealed that the SARS outbreak's effect is massive on China and Hong Kong.

Hassan et al. (2020) point out that the Corona pandemic's repercussions can be examined by drawing up similarities between the SARS and the COVID-19 disease. However, Fernandes (2020) has a different perspective and remarks that to explore the repercussions of the global economy's

coronavirus outbreak, the comparison of the COVID-19 epidemic with SARS is not valid. It is so because of the uncertainty about the COVID-19 and the lack of enough data. Despite the similarities from the medical perspective, both the outbreaks' economic impact will tend to be different.

Many researchers have attempted to ascertain the pandemic's impact on the international economy and its challenges. Empirical estimates by Sumner et al. (2020) indicated that the coronavirus outbreak poses a threat to one of the ambitious goals of the UN to end poverty by 2030. Fernandes (2020) states that a global recession is inescapable. McKibbin and Fernando (2020) demonstrated that even if the virus continues to spread in a restrained manner, it will have a sizable malignant impact on the world economy in a short period. Ozili and Arun (2020) reported a negative effect of lockdown, international travel restrictions, and lockdown days on economic activities and the stock market. Interestingly, confirmed COVID-19 cases tend to have an insignificant impact on the economy but a positive impact on the stock market.

From an Indian perspective, Dev and Sengupta (2020) commented that the financial markets' sluggish performance in the pre-COVID period and high dependence of the economy on the labour from the informal sector, and the social distancing measures and lockdown make the recovery path difficult. Ray and Subramanian (2020) mention that COVID-19 will have a larger impact on India than just reducing GDP. Kumar (2020) commented that the Indian tourism sector faces unprecedented challenges. Garib and Kumar (2020) remark that the banking sector would witness huge setbacks on credit delivery and asset quality lending due to pressure on capital adequacy.

As of this study's data, studies investigating the consequences of the Corona pandemic on the stock markets are limited. Liu et al. (2020), Sansa (2020), Yan et al. (2020), and Ramelli and Wagner (2020) have contributed to the literature in this regard. Empirical results of He et al. (2020) have shown that COVID-19 hurts the stock markets in the short run. Huo and Qiu (2020) investigated the Chinese stock market's reaction to lockdown in China due to COVID-19 at the firm level and industry level and found positive cumulative abnormal returns (CARs). Zeren and Hizarci (2020) state that a rational investor should invest in gold rather than stock markets.

After searching the extensive literature available, no study was carried out to check the pandemic's economic repercussions on India's broad market indices. Therefore, we plan to inspect Coronavirus's effect on the Indian stock market by looking at the general market indices through this review.

Objective

India is amongst the world's fastest-growing economies and particularly in Asia. India emerged as the 5th largest economy in 2019. At present, India's economy is flattening. However, the US dollars 2.1 trillion stock market has been flourishing as the foreign investments heap in. Notably, the stock market was thriving before the strike of COVID-19. Still, as the COVID-19 strikes, the world situations have changed. Therefore, after the coronavirus entry, it becomes imperative to review the Indian stock market, which continues to be surrounded by the economic fickleness.

II. Research Design & Methods

To ascertain the effect induced by COVID-19 on India's stock markets, the following stock indices are chosen: Nifty 50, Nifty 500, Nifty 100, Nifty Midcap 150, S&P BSE Sensex, S&P BSE 500, S&P BSE Midcap, and S&P BSE All Cap. These stock indices elucidate India's stock market performance most accurately. In this paper, data for the opening, highest, lowest and closing prices of these indices was retrieved from the web portals of NSE India and BSE India. To derive the precise chronology of the occurrence and the eventual spread of COVID-19 in India, web portal wikipedia.com is examined. On January 30, 2020, first COVID-19 case was detected and thereafter, the number of confirmed cases started increasing exponentially. Early death from COVID-19 was reported on March 12, and in the same week, the confirmed cases reached a mark of 100. This compelled government to resort to lockdown policy and nationwide lockdown was imposed on March 24, 2020. This led to the closure of public institutions, offices, and universities and international and domestic travel restrictions. On April 14 the lockdown was extended, with conditional relaxation after April 20 in the regions where the coronavirus spread was minimal. On May 30, lockdown restrictions were lifted, but the lockdown was extended till June 30 in the areas severely affected by the range. From June 8, lockdown restrictions have been lifted nation-wide, and services are resuming in a phased manner. For gauging the impact of COVID-19, the entire period is divided into two sub-periods, and essential events about COVID-19 in India identify main time points. From March 12, 2020, to July 9, 2020, the period is defined as the "post-COVID period" and for comparison purposes period from January July 1, 2019, to March 11, 2020, is identified as "pre-COVID period". Though COVID-19 reached India's shores on January 30, 2020, the contagious virus caused havoc in March. Henceforth, the post-COVID period is being identified after March 12. The opening, highest, lowest and closing prices of these indices are compared across the post-COVID and pre-COVID period.

Welch's t-test and non-parametric Mann-Whitney U test is being conducted to test the abovementioned hypothesis.

Ruxton (2006) suggested to employ Welch's t-test in place of the students t-test or Mann-Whitney U test. It is widely believed that the t-test is suitable for comparing small sample sizes' central tendency measures. However, this is untrue. Barrett & Goldsmith (1976) assessed the coverage of t-test in three small sets and discovered good coverage for sample sizes of 40 or more.

Mcknight and Najab (2010) have also advocated in favour of Welch's t-test and Mann-Whitney U test. Nippani and Washer (2004) and He et al. (2020) have also conducted heteroscedastic t-tests and Mann-Whitney U tests to gauge the effect of SARS on the stock market daily returns of worst-hit countries.

Nachar (2008) stated that the null hypothesis stipulates that the two groups provided are homogenous, in other words they came from the same distribution. However, in case of one-tailed test the null hypothesis remains unchanged, but the alternate hypothesis stipulates the direction of change, negative or positive. Therefore, to attain the objective of this study, the alternate hypothesis stipulates that there is a negative impact of COVID-19 on the Indian stock market.

Kundu (2020) pointed out that lockdown was a useful measure to reduce the spread of contagious virus. Ray and Subramanian (2020) noted that the cost of attaining a reduction in death rates and COVID-19 cases is merely a reduction in the economic activities, coupled with relief packages for the developed nations such as Europe and America. But in the case of India, the cost for the same is far higher. Therefore, it becomes imperative to examine the impact of the virus's spread, the virus's deaths, and the nationwide lockdown on stock indices and multiple regression model has been constructed for this purpose. Thus, the regression model established in our study to derive the relationship is:

$$\text{Stock Index Price}_t = \beta_0 + \beta_1 \text{Log\_CC}_t + \beta_2 \text{LD}_t + \beta_3 \text{CD}_t$$

Where, β_0 is the intercept, Log_CC_t represents the natural log of number of confirmed COVID-19 cases on day t, LD is the dummy variable for nation-wide lockdown and CD represents confirmed deaths due to COVID-19 on day t. Stock Index price represents the daily opening, highest, lowest and closing price of the stock index. The data for opening, highest, lowest and closing price of the selected stock indices is collected for the post-COVID period, i.e. from 12 March 2020 to 9 July 2020, which amounts to 80 trading days. In this study, data for daily-confirmed cases and COVID-19 related deaths are fetched from "Oxford Covid-19 Government Response Tracker (OxCGRT) database". Furthermore, the graphical analysis of the selected indices is done and has been presented in the appendix.

III. Results and Discussion

The results of Welch's t-test are presented in table 1. Chen and Siems (2004) stated that the t-value reflects the significance of an event's economic effect has on the capital market. Panel A compares the opening prices of the indices of the post-COVID period with the pre-COVID period. The low p-values supports the rejection of the null hypothesis and acceptance of the alternate hypothesis. Therefore, it is concluded that the stock indices witnessed a significant (significance level of 1%) drop in the opening prices owing to COVID-19. Panel B compares the mean highest price of the index during post-COVID period. T-value indicates that there is significant fall in the highest price of the indices in the post-COVID period compared to the pre-COVID period. Panel C compares the mean lowest prices of the indices of the post-COVID period with the pre-COVID period. Consistent with panel A and panel B results, all the stock indices witnessed a fall in the lowest prices compared to the comparison period at 1% level of significance. The results for mean closing prices are shown in the panel D. Low p-value indicates rejection of the null hypothesis and a significant fall in the closing prices of the indices has been discovered. The results of t-test revealed a negative change in the prices of the stock indices owing to COVID-19 pandemic.

Table 1: Welch's t-test.
(Differences in Mean prices)

	Panel A: Opening Price		Panel B: Highest Price		Panel C: Lowest Price		Panel D: Closing Price	
Pre-COVID Period (173 trading days)								
Index	Mean and Standard Deviation	T-value	Mean and Standard Deviation	T-value	Mean and Standard Deviation	T-value	Mean and Standard Deviation	T-value
Nifty 50	11665.81 (481.92)		11716.26 (466.76)		11583.81 (500.23)		11646.24 (481.43)	
Nifty 500	9517.5 (397.88)		9557.58 (386.68)		9452.33 (411.56)		9501.59 (396.71)	
Nifty 100	11783.77 (481.47)		11834.66 (466.77)		23204.8 (2008.45)		23498.47 (1880.48)	
Nifty MidCap 150	6157.62 (333.16)		6188.04 (329.86)		6112.3 (337.77)		6148.2 (331.17)	
S&P BSE Sensex	39515.7 (1689.67)		39670.76 (1648.5)		23204.8 (2008.45)		39421.27 (1695.31)	
S&P BSE 500	15105.17 (634.74)		15162.42 (620.62)		14992.79 (659.91)		15068.72 (637.29)	
S&P BSE MidCap	14560.63 (751.5)		14628.97 (747.86)		14442.31 (770.82)		14527.37 (752.7)	
S&P BSE AllCap	4291.21 (179.18)		4307.43 (175.18)		4259.41 (186.38)		4280.78 (179.96)	
Post-COVID Period (80 trading days)								
Nifty 50	9460.07 (732.46)	-24.59*	9590.78 (677.28)	-25.42*	9314.02 (777.52)	-23.92*	9451.54 (736.26)	-24.36*
Nifty 500	7753.24 (610.57)	-23.63*	7851.15 (569.47)	-24.33*	7641.51 (643.05)	-23.09*	7745.47 (612.02)	-23.48*
Nifty 100	9622.28 (747.62)	-23.69*	9751.79 (689.76)	-24.54*	9479.32 (792.2)	-23.06*	9614.47 (748.81)	-23.53*
Nifty MidCap 150	5092.08 (424.41)	-19.81*	5148.39 (409.69)	-19.91*	5025.07 (438.27)	-19.65*	5086.06 (426.55)	-19.7*
S&P BSE Sensex	32236.89 (2349.89)	-24.89*	32670.15 (2195.48)	-25.4*	31698.33 (2548.42)	-23.89*	32175.71 (2403.87)	-24.31*
S&P BSE 500	12317.4 (949.21)	-23.91*	12459.45 (901.25)	-24.29*	12126.29 (1017.26)	-23.06*	12288.14 (968.42)	-23.44*
S&P BSE MidCap	11900.47 (915.92)	-22.69*	12020.16 (887.72)	-22.81*	11718.25 (965.68)	-22.17*	11718.25 (965.68)	-22.41*
S&P BSE AllCap	3494.68 (272.1)	-23.9*	3534.76 (258.65)	-24.27*	3440.74 (291.24)	-23.05*	3486.34 (277.54)	-23.43*

Note: * Significant at 1%, **Standard** Deviation is reported in parenthesis.

Table 2 compares the opening, highest, lowest, and closing price of the post-COVID period with the pre-COVID period by employing the Mann-Whitney U test. Panel A compares the median opening prices of the indices during the post-COVID period with the pre-COVID period. As shown, the p-value (less than 1%) supports the rejection of the null hypothesis, and the alternate hypothesis has been accepted. Therefore, panel A shows that the stock indices' median opening prices of the indices in the post-COVID period witnessed a significant (significance level of 1%) plunge compared to the pre-COVID period. Panel B also reports a substantial fall in the median highest prices of the indices during post-COVID period. Consistent with panels A and B, panel C and D also indicate that there is enough evidence to reject the null hypothesis. Hence, it is concluded that the Covid-19 pandemic has a significant (even at 1% level of significance) negative impact on the median lowest prices and median closing prices during post-COVID period. Therefore, the results of Mann-Whitney U test suggested a negative change in prices of the indices owing to COVID-19.

Table 2: Non-parametric Mann-Whitney U test.
(Differences in median prices)

	Panel A: Opening Price		Panel B: Highest Price		Panel C: Lowest Price		Panel D: Closing Price	
Pre-COVID Period (173 trading days)								
Index	Median	W-value	Median	W-value	Median	W-value	Median	W-value
Nifty 50	11786.25		11883.05		11651.15		11786.85	
Nifty 500	9648.85		9673.7		9582.85		9622.7	
Nifty 100	11900.05		11974.75		11779.75		11904.05	
Nifty MidCap 150	6181		6200.4		6148		6169.8	
S&P BSE Sensex	39907.57		39947.8		39541.09		39816.48	
S&P BSE 500	15304.4		15357.78		15210.32		15256.99	
S&P BSE MidCap	14730.14		14805.68		14604.4		14679.94	
S&P BSE AllCap	4348.59		4361.4		4315.41		4333.58	
Post-COVID Period (80 trading days)								
Nifty 50	9370.95	28868*	9422.15	28879*	9225.375	28865*	9287.9	28868*
Nifty 500	7657.375	28865*	7720.075	28871*	7553.8	28851*	7609.175	28858*
Nifty 100	9522.9	28868*	9589.6	28870*	9394.45	28849*	9458.1	28861*
Nifty MidCap 150	4996.65	28582*	5039.425	28600.5*	4934.825	28563*	4980.625	28584*
S&P BSE Sensex	32035.82	28869*	32231.96	28876*	31495.57	28863*	31700.55	28859*
S&P BSE 500	12135.42	28869*	12256.72	28877*	11982.06	28850*	12078.41	28858*
S&P BSE MidCap	11744.42	28791*	11850	28796*	11534.48	28767*	11649.93	28787*
S&P BSE AllCap	3440.97	28869*	3476.19	28876*	3397.81	28853*	3426.165	28859*

Note: * Significant at 1%.

The results for the regression model are being reported in Table 3, 4, 5 and 6. Table 3 represents the results when independent variables are regressed against opening prices of the stock indices. Similarly, table 4, 5 and 6 shows the results when independent variables are regressed against the lowest, highest and closing prices of the stock indices.

<p style="text-align:center">Table 3: Opening prices of stock indices.</p>

OPEN	Nifty 50	Nifty 500	Nifty 100	Nifty MidCap 150	S&P BSE Sensex	S&P BSE MidCap	S&P BSE 500	S&P BSE AllCap
β1	8208.87* (39.7821)	6727.085* (40.7319)	8251.328* (40.0976)	4580.156* (42.9205)	28507.708* (40.6334)	10874.938* (43.6449)	10785.455* (41.4819)	3056.938* (41.3589)
Log_CC	139.435* (4.9027)	119.219* (5.2374)	154.116* (5.4337)	67.813* (4.6105)	410.865* (4.2489)	141.2* (4.1115)	181.547* (5.066)	51.915* (5.096)
LD	-544.141* (-3.7666)	-505.635* (-4.373)	-566.191* (-3.93)	-434.483* (-5.8156)	-1680.853* (-3.4221)	-958.26* (-5.4932)	-816.799* (-4.4872)	-235.03* (-4.5419)
CD	0.023 (1.4618)	0.017 (1.2871)	0.019 (1.2288)	0.013 (1.5422)	0.086 (1.5739)	0.025 (1.3022)	0.025 (1.2265)	0.007 (1.2519)
R-square	0.765	0.7834	0.7757	0.8128	0.7361	0.7809	0.7778	0.7815
Adjusted R-Square	0.7557	0.7748	0.7668	0.8054	0.7256	0.7722	0.7691	0.7729

<p style="text-align:center">Note: * Significant at 1%, T-statistic is reported in parenthesis.</p>

<p style="text-align:center">Table 4: Highest price of the stock indices.</p>

HIGH	Nifty 50	Nifty 500	Nifty 100	Nifty MidCap 150	S&P BSE Sensex	S&P BSE MidCap	S&P BSE 500	S&P BSE AllCap
β1	8669.378* (46.8687)	7088.985* (47.4479)	8719.432* (47.2693)	4787.395* (46.9934)	29973.385* (46.9049)	11220.568* (47.6627)	11257.783* (46.676)	3189.74* (46.4827)
Log_CC	111.188* (4.3612)	97.127* (4.7166)	125.356* (4.9305)	56.588* (4.0301)	324.719* (3.6868)	123.496* (3.806)	154.589* (4.6503)	44.3171* (4.6856)
LD	-598.721* (-4.6233)	-554.946* (-5.3054)	-623.898* (-4.831)	-477.247* (-6.6914)	-1886.197* (-4.2161)	-1012.98* (-6.1461)	-887.075* (-5.2534)	-254.474* (-5.2968)
CD	0.023 (1.6196)	0.016 (1.3799)	0.019 (1.3401)	0.011 (1.4433)	0.085 (1.7076)	0.024 (1.3048)	0.024 (1.2703)	0.007 (1.3022)
R-square	0.7791	0.7962	0.7882	0.8169	0.7492	0.7918	0.7879	0.7916
Adjusted R-Square	0.7704	0.7881	0.7799	0.8097	0.7393	0.7835	0.7796	0.7834

<p style="text-align:center">Note: * Significant at 1%, T-statistic is reported in parenthesis.</p>

<p style="text-align:center">Table 5: Lowest price of the stock indices.</p>

LOW	Nifty 50	Nifty 500	Nifty 100	Nifty MidCap 150	S&P BSE Sensex	S&P BSE MidCap	S&P BSE 500	S&P BSE AllCap
β1	7661.229* (39.6229)	6312.156* (40.5519)	7719.732* (40.0667)	4340.31* (42.6269)	26396.378* (39.4226)	10106.783* (43.3372)	10014.099* (40.6249)	2838.54* (40.5337)
Log_CC	170.039* (6.3805)	141.933* (6.6157)	183.018* (6.8918)	82.208* (5.8578)	536.6* (92.2873)	190.089* (5.9137)	227.098* (6.6842)	64.79* (6.7125)
LD	-444.462* (-3.2834)	-425.693* (-3.9063)	-462.666* (-3.4299)	-401.011* (-5.6254)	-1361.102* (-2.9035)	-848.933* (-5.1995)	-686.89* (-3.9802)	-197.767* (-4.0338)
CD	0.027 (1.8128)	0.02 (1.6215)	0.024 (1.5972)	0.013 (1.657)	0.097 (1.8695)	0.027 (1.4686)	0.029 (1.5285)	0.008 (1.5592)
R-square	0.8169	0.8265	0.8249	0.8402	0.7956	0.8273	0.8261	0.8288
Adjusted R-Square	0.8097	0.8197	0.8179	0.8339	0.7875	0.8205	0.8193	0.822

<p style="text-align:center">Note: * Significant at 1%, T-statistic is reported in parenthesis.</p>

Table 6: Closing price of the stock indices.

CLOSE	Nifty 50	Nifty 500	Nifty 100	Nifty MidCap 150	S&P BSE Sensex	S&P BSE MidCap	S&P BSE 500	S&P BSE AllCap
$\beta 1$	8161.743* (41.5929)	6696.761* (42.663)	8212.678* (42.1339)	4570.191* (44.4126)	28177.253* (41.6262)	10604.974* (44.9677)	10608.967* (42.5967)	3005.65* (42.4956)
Log_CC	140.212* (5.1842)	119.464* (5.5218)	154.034* (5.7335)	69.212* (4.8799)	426.192* (-3.4019)	160.787* (4.9465)	191.054* (5.5657)	54.665* (5.6075)
LD	-522.231* (-3.8013)	-491.89* (-4.476)	-542.284* (-3.9738)	-448.049* (-6.2192)	-1612.199* (1.8682)	-929.077* (-5.627)	-774.953* (-4.4444)	-222.39* (-4.4911)
CD	0.027 (1.7456)	0.019 (1.5311)	0.023 (1.5073)	0.012 (1.5436)	0.098 (1.8682)	0.026 (1.4191)	0.029 (1.4934)	0.008 (1.5264)
R-square	0.7897	0.8052	0.7994	0.8277	0.7652	0.8115	0.8042	0.8077
Adjusted R-Square	0.7814	0.7975	0.7914	0.8209	0.7559	0.8041	0.7964	0.8001

Note: * Significant at 1%, T-statistic is reported in parenthesis.

The regression models' results report that the variable Log_CC has a significant (at 1% significance level) positive coefficient. This indicates that confirmed COVID-19 cases positively affect the opening prices of all the stock indices. This result is similar to Ozili and Arun (2020), which stated a significant positive effect of increasing confirmed COVID-19 cases on the opening, highest, lowest and closing prices of leading indices of the UK, the USA, Japan and South Africa. Furthermore, Sansa (2020) studied the effect of confirmed COVID-19 cases on the leading indices of the USA and China and reported significant positive relationship between the two. The variable LD has a significant (at 1% level of significance) negative impact on the opening, highest, lowest, and closing prices of the stock indices. It is so because a nationwide lockdown distorts the demand and supply chains and adversely affects national productivity. India has also reported a negative growth rate in the eight core industries in March, April, and May. Office of Economic Advisor reported a growth rate of eight core industries -9% in March, -37% in April, and -23.4% in May. The closure of factories and industries due to the imposition of nationwide lockdown led to a sharp decline in production. This created a pessimist atmosphere for foreign and domestic investors, which has a malignant effect on the stock market.

However, the impact of confirmed deaths from COVID-19 is insignificant at a 5% level of significance. Ray and Subramanian (2020) advocated COVID-19 pandemic as a relatively "low fatality-highly contagious" disease who have an adverse impact on old-age, i.e., 60 years plus population, which accounts for a relatively small portion in developing nations such as India, unlike in developed nations such as America. Thus, it is natural that COVID-19 related deaths tend to collate to a nugatory impact on the Indian stock market.

The time-series graph (refer appendix) represents the fall in the prices of the stock indices especially in the month of March. Though COVID-19 was observed in December 2019 and spread rapidly during January 2020, but the Indian stock market did not experience downfall. However, in the month of march with the imposition of lockdown on the nation and social distancing norms followed by the public, Indian stock market got enveloped in the clouds of economic uncertainty. This caused a fall of the Indian stock market. Interestingly, in early June stock indices has witnessed a surge, even though the COVID-19 cases are rising exponentially. This implies that the graphical presentation of the stock indices prices is consistent with the results of the regression analysis. In other words, the true reason for the downfall of the Indian stock market in the post-COVID era is the nationwide lockdown and not the spread of the virus.

IV. Conclusion

This paper tried to evaluate the Indian stock market under the vicinity of the COVID-19. Using Welch's t-tests, Mann-Whitney U tests, and linear regression models, an empirical analysis is done based on the opening, highest, lowest, and closing prices of the eight major stock indices represent the Indian stock market selected in this study. The results of Welch's t-tests and Mann-Whitney U test revealed that the COVID-19 pandemic has a significant negative impact on the Indian stock market, and the prices of selected stock indices have witnessed a plunge since the onset of COVID-19. By utilizing a linear regression model to empirically appraise the Indian stock market's reaction to the spread of the contagious virus and nationwide lockdown. The results of the model so constructed revealed that the spread of COVID-19 (confirmed cases) tend to have a significant positive effect on eight selected stock indices and COVID-19 related deaths have an

insignificant impact. Furthermore, a nationwide lockdown had a significant negative impact on the stock markets. Our study concluded that the Indian stock market, like other stock markets, witnessed a downfall. The prices of the Indian stock indices fell significantly. The major stock indices, i.e., Nifty 50 and Sensex, were thriving before the entry of Coronavirus, and about 30 companies were close to filing Initial Public Offers (IPOs) in January. However, this downfall's real reason is the nationwide lockdown, not the spread of viruses or deaths. COVID-19 has created a pessimistic atmosphere for investors. It is apt to say that COVID-19 is a "black-swan event" due to its unexpected extreme impact on the Indian stock market. The stock market has a history of crash and recovery. Harshad Mehta Scam (1992), Asian Crisis (1996), Tech Bubble (2000), and Lehman Crisis (2008) are few to enlist. It might be foolish to expect a rapid recovery of the stock market, and the economist cannot predict the endgame of the crisis as of now. The effectiveness of the public health system and the government's policy choices can define the path to recovery. It is apt to say that following the lifting of lockdown and normalcy returning to business, the Indian stock market is heading towards the route to recovery.

Notably, in the pre-pandemic period, India was already witnessing an economic slowdown. The nationwide lockdown has caused significant damage to the Indian stock market and the economy. Disruption in the supply chains, especially in the agriculture sector and the decline in India's industrial productivity, is the lockdown's consequences. The government has taken steps to boost the economy and incentivize the corporate sector. "Atma Nirbhar package" brought significant corporate tax reforms to reduce pressure on already stressed corporates. These steps help to create a positive atmosphere for the investors in these tough times. However, these steps to needs to be accompanied by other measures as well. As there is no room for an increase in the GST collections, this is the apt time to re-look subsidies. India has been taking drastic steps to crack down on the shadow economy and improving the ease of doing business.

India has also successfully gained international confidence amidst the US-China trade war, Brexit, Hong Kong episodes, just a few to name. This is a golden opportunity for India to ramp up its economic progress. However, the country continues to suffer from deficient infrastructure in the manufacturing sector and complex labour laws, thereby fails to attract big opportunities. There is a need to attract more foreign and domestic investments to build sound infrastructure and simplify complex labour laws. Furthermore, Indian consumers are cutting back on spending. Therefore, attempts shall be made to channelize domestic and foreign savings to the stock market. This can be done by issuing

bonds in the local currency; this will help build confidence in Indian rupees.

These outcomes contribute to the literature by looking at Coronavirus's economic consequences by drawing evidence from the Indian stock market and providing insights to the managers to develop new strategies during these tough times. COVID-19 has posed challenges to the managers. It is vital for them to comprehend the impact of COVID-19 on the economy to come up with innovative solutions for the obstacles. Loss of manpower and deploying work-from-home policy at speed being the major short-term obstacles for the managers. Policy formulations for the business to ensure sustainability and growth remain long-term obstacles. However, one constraint of this study is the limitation is the short period of analysis. Also, there might be spill over to other sectors as the virus continues to spread exponentially in the future. Further studies need to be carried out on more extended periods to capture the effect of COVID-19.

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Nifty 50

S&P BSE Sensex

Nifty 500

S&P BSE 500

Nifty 100

S&P BSE MidCap

Nifty MidCap 150

S&P BSE AllCap
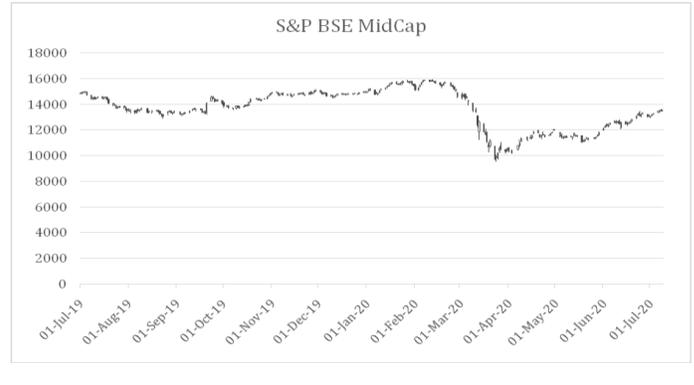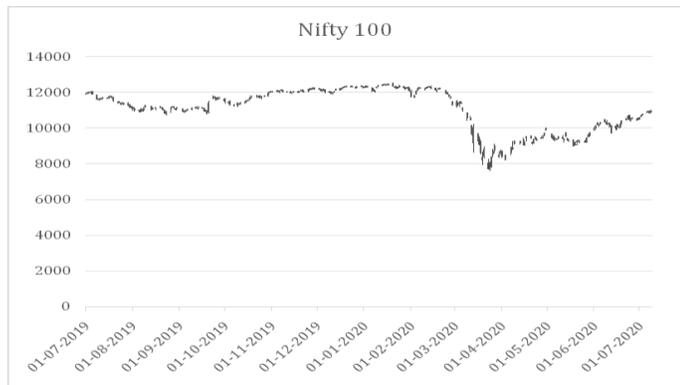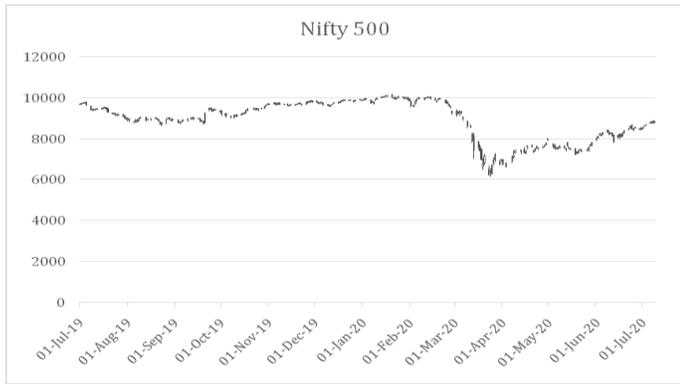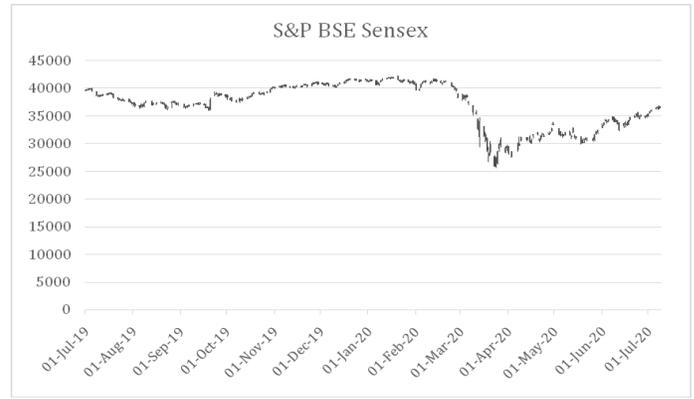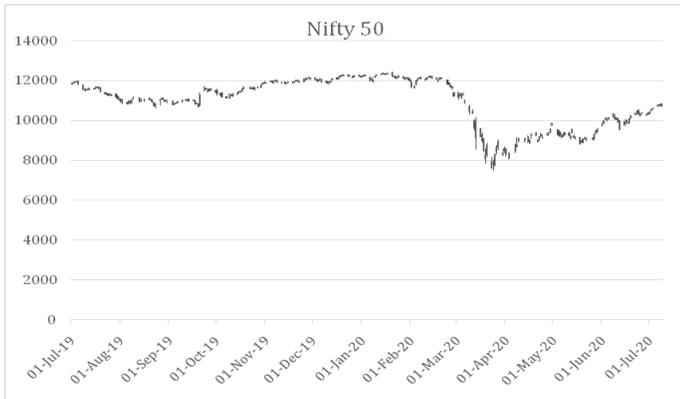
INFLUENCE OF SOCIALIZATION AGENTS ON INDIVIDUAL SOCIAL MEDIA BEHAVIOUR

Ajay Bansal* Rahul Gupta**

Purpose: This study tries to review the good empirical work done, by examining the present state of research on socialization agents and their influence on social media behavior. It also builds up on theoretical aspects of behavioral approaches related to social media usage by individuals from the diverse backgrounds. Efforts have been made to present things related to socialization agents in a more pragmatic way. The researchers in their studies have found that maximum use of social media is for seeking information, for trading, and for social purposes. Few studies also point towards use of social media due to emotional and reinforcement reasons. This study is an attempt to check how various socialization agents influence these kind of information seeking etc behaviors.

Design/methodology/approach: Exploratory and causal research employed to understand then in-depth elements associated to socialization agents followed by field study consisting of a validated sample of 384 regular online users undertaken by a structured questionnaire.

Findings: The analysis of research study delivered the following results. First, information seeking behavior is influenced by all the four socialization agents considered in the study. The use of social media for social purpose is influenced by majority of the socialization agents considered here. Secondly, sellers should be in synchronization with most users who use social networks for commercial purposes."

Originality/value: The study is original and the results of the work presented in this paper give new opportunities for research as well as suggestions for socialization agents management issues for social media providers and users.

Keywords: Socialization agents, Social media behaviour, information seeking behavior, trading behavior.

JEL Classification: M31.

Socialization agents are one of "the essential factors that encourage people to take actions in everyday life. In research, the strategies of socialization agents for individual learning have been developed and examined in the business world. The ways in which socialization agents influence the user of social media in purchasing goods or services were examined. Various use of social media like information seeking, trading, getting social with other users has been the reasons as per past studies (Yuksel, M., Milne, G. R., & Miller, E. G. 2016; Yamakanith, P. 2014; Osama, M. 2015; Naidu, G., & Agrawal, S. 2013; Shim, 1996). In "behavioral science, research on socializing agents has been conducted primarily to understand people's behaviors when seeking information through social media (Gul, M. S., Shahzad, H., & Imran, M. (2014). Religion is an affective factor that allows people to start, continue and end the search for information. Reinforcement of behaviors is based on the degree to which the social media information search and the results which stimulate the person in a cognitive or affective way (Duffett, R. G. (2015)." Socialization agents were seen as a key element that "affects the effectiveness of individual behavior on social media. Socialization agents will not only increase individual awareness of social values and goals, but will also influence for a pattern of behavior on social media. "Socialization agents motivate people for a particular type of

behavior on social media, which may be getting social (Fotis, 2015). This exceptional individual behavior has been called social groups and denotes an individual's perceptions of the attractiveness or importance due to the purpose or social contribution of social groups. Given the alleged potential of social media interactions to trigger passion, dedication and diligence, the question raises how formal and informal organizations can increase behavioral appeal and create culture-based behaviors for business (Lau, W. W., & Yuen, A. H. 2013)."

Research on the topic indicates that socialization agents motivate, information seeking needs of an individual on social media (Safko & Brake, 2012). These socialmedia platforms allow people to share their feelings, data, decisions, inclination, and products reviews with others in their virtual boundaries and groups (Hazli, M.N. 2013; Ioanăs, E., &Stoica, I. 2014). Even corporate have started to perceive the significance of evaluating the different web-based social

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networking platforms as basic parts in their strategic techniques (Waters, R. D., Burnett, E., Lamm, A., & Lucas, J. 2009). Web-based social media platforms have opened doors for learning and intuitiveness. Because of the recent start of the use of digital technology, organizations are not just thinking in terms of business and money but user's perception and sentiments involved. For doing so, organizations have started capturing social media behaviours. Users exhibit social media behaviour through their reactions, contributions, remarks and likes. In this way, their behaviour determines the engagement and cooperation with different individuals. Thus, firms need to urge their executives to effectively understand social media behaviour such that they facilitate customer relationships for better business (Baird & Parasnis, 2011). Hence this agent denoted as 'work and peers' in this study needs to be further explored (Men, L. R., & Muralidharan, S. 2017).Social media behavioral practices are a consequence of such motivational drivers too (Throuvala, M. A., Griffiths, M. D., Rennoldson, M., & Kuss, D. J. 2019). The concept of social media behaviour has been examined in many fields, including psychology education and administration. The current focus is on social media behaviour being influenced by socialization agents (Senthil Kumar, S., & Ramachandran, T. 2011). Users develop social media behaviour through various experiences while using social media. Patterns of these behavior incorporate associations with socialization agents. Researchers perceive that there are different agents of socialization, including religious offerings, family orientation exercises, legislative structure and media (Barber, N. A. 2013). Together, the influence of these agents constitute the social media behavior of the user. Social media behaviour is intuitive and must be legitimately comprehended through an examination of each of these socialization agent and their influence (Ekström, K. M. (2010).; Ekstrom, K. M., Tansuhaj, P. S., & Foxman, E. R. 1987). The political decisions and various laws such as privacy has also been affecting social media behaviours (Fagan, J., & Tyler, T. R. 2005). The trust for trading, the belief for privacy of information etc. have been major factors influencing behaviors on social media (Feng, Y., & Xie, W. 2014). Thus, 'Law and government' is another socialization agent which is relevant for this study. This article highlights socialization agents primarily from an individual perspective, influencing the use of social media (Barber, N. A. 2013; Wang, X., Yu, C., & Wei, Y. 2012)."

I. Review of Literature

Socialization agents are "increasingly becoming a factor which cannot be ignored for consumer decision making, as well as an important tool for the development and maintenance" of the brand-customer relationship online, allowing an unprecedented impact on user decisions related to their personality (Correa, Hinsley and Zúñiga, 2010). Most

existing marketing studies define the behavior on social media "with socializing agents as a psychological state that emerges in the process of user interactions with socializing agents during user experiences (Arnon, S., Shamai, S., &Ilatov, Z. 2008). While all views on social media behavior recognize its multidimensional nature, researchers differ in the functioning and measurement of social media behavior due to differences in conceptual approaches (Heinonen, K. (2011). "Specifically, studies emphasizing the information seeking element character of social engagement identify utilitarian, hedonic, social, self-esteem, stimulation, community, temporal, and enjoyment components of the construct."

Alternatively, there are "family elements i.e. Parents, siblings, relatives and upbringing, focusing more on the psychological state emerging foruser's social media activity. Researchers propose that constituent aspects of social media behaviour include cognitive information processing, emotional affection, and social media activeness (Hsu, M. H., & Lin, H. C. (2017). These differences in conceptualizing the social media behaviour construct can be attributed to the nascent character of the behavioral research stream and to the relative novelty of the social media phenomenon, which is still evolving in the domains of online behavioral studies and social media research (Durukan, T., Bozaci, I., & Hamsioglu, A. B. (2012). While both approaches offer an insight into the psychological domain of the user- social media engagement phenomenon by emphasizing (a) informational states of mind and (b) emotional and mental processes taking place during and after the engagement actions, they fall short of describing and classifying the actual actions undertaken by social media users as a demonstration of their motivational, mental, and emotional engagement (Fotis, 2015). Yet another approach views social media behaviour not as a psychological state but as reinforced behaviors exhibited by users as they interact with others through online transactions with influence of socialization agents. This perspective is more in line with the behavioral analytics metrics used to measure online transactions and offers more actionable insights (Dinev & Hart, 2006). Although several attempts have been made to address engagement behaviors in previous research, these behaviors have not been fully identified, characterized or classified." For example, distinguishing between sharing, learning, joint development, defense and socialization of the 'threads of commitment' manifested by members of a social media community (Casey, G., & Evans, T. 2011). Although several research studies have previously checked socialization agents for behavioral theories, "those studies (a) are generally limited by the context of a particular offline platform, (b) are based primarily on the theoretical approach to generic uses and benefits, and (c) rarely includes the participation of the pre-existing user. The researchers found that the code of conduct and social security, as well as religious and

information influence are positively related to participation in social networks (Amrullah, H. F., Ali, M. N. S., & Sukimi, M. F. 2020). The researchers found that user decisions characterized by greater cultural trust, greater emotional identification, greater commitment to their community and greater intentions to continue participation were more likely to strengthen brand messages (Dessart, L., Veloutsou, C., & Morgan-Thomas, A. (2015). Studies conducted in the context of socialization have suggested that religious evangelization (i.e., defending and strengthening religion), social recognition by other members of the community, as well as recognition by the family, intensifies the creativity of the user in decision making (Carlson, J., Wyllie, J., Rahman, M. M., & Voola, R. 2019). The context of the socialization agents has identified the religious institutions, beliefs, spirituality, social interactions, educational institutions, and social status and reference groups that most guide social media interactions and has found that stimuli such as the search for information, socialization and empowerment, stimulate higher levels of user-related activities in social media (Millen, D. R., & Patterson, J. F. 2002).

Table 1: Systematic summary of the articles review based on the subject with the names of the authors.

Authors	Variables	Research objectives	Statistical tool	Findings
(Hazli, 2013)	Emotional trust, Perceived usefulness, Intention to buy	Do social media in social networking sites affect the user's emotional trust, Perceived usefulness, Intention to buy?	Structural equation model	Consumers have social interactions through social media such as online forums, communities ratings, reviews and recommendations. These developments have introduced a new stream in e-commerce, called social commerce, which empowers consumers to generate content and influence others. These interactions provide different values for both business and consumers. The present study borrows constructs from the technology acceptance model, and integrates them with trust and social media concepts to propose a model to examine the role of social media in e-commerce and social commerce adoption.
(Gul, Shahzad, & Imran, 2014)	Consumer Purchase behavior, Information seeking consciousness	Is there a strong relationship between Social Media and Consumer's purchase behavior and information seeking consciousness?	Pie and bar charts	There is significant positive relationship between social media and consumer buying behavior. The age group affected the result considerably and it was found that young population between 22yrs to 27 yrs. was most influenced. Social Media has significant positive relationship with Fashion Consciousness. There is no significant link between amount spent per shopping trip and no. of trips.
(Ioanăs & Stoica, 2014)	Demographic profile, payment methods	Measuring the degree of consumer confidence in purchasing products online. Consumer attitudes study toward other consumer feedback from online. Defining the categories of products that consumers buy online. Identifying the maximum amount that consumers are willing to pay online.	Graphs & Tables	Internet and virtual communities have transformed consumers, societies, and corporations with wide spread access to information, better social networking and enhanced communication abilities. Blogs, YouTube, MySpace, Facebook are examples of social media that are popular among all level of consumers. . Users are using several online formats to communicate, (e.g., blogs, podcasts, social networks, bulletin boards, and wikis) to share ideas about a given product, service, or brand and contact other consumers, who are seen as more objective information sources. Young consumers (25 to 29) buy more. Mostly females. Two most common reasons for online purchase are Convenience and home delivery.
(Naidu & Agrawal, 2013,)	Buying behavior on social media, Customer feedback on social media	To check awareness about social media. Whether people are using social media only for communication but or for collecting information regarding product too Which is the most used platform in social media? How decision making is influenced by social media directly and indirectly.	Pie Charts	Now days in 21st century buying behavior decision making is influenced by social media directly and indirectly. In today's competitive environment and in 21st century social media became very useful technique for marketing promotional strategy.
(Yamakanith, 2014)	Frequency of usage of social networking sites, Interpersonal relationships with family and friends	To engage in a Sociological analysis of the concept of "interpersonal relationship" with a special focus as the changing nature of inter-personal relationships. Q2. To analyze the growth in the number and the pattern of impact of Social Networking Sites on college going students, particularly on their changing interpersonal relationships.	ANOVA	The usage of SNS brought lots of changes in interpersonal relationships between these students and members of family and it also helped students to have more communication with their family members and friends. Facebook is most used platform followed by YOU tube.

Table 1: Continued.

Authors	Variables	Research objectives	Statistical tool	Findings
(Lazarevic, 2012)	Social behaviour, Brand Equity, Online brand-Socialization agents relationship,	Socialization agents efforts create a brand image which is assessed by generation Y consumers to determine if it reflects their values. Socialization agents is used to convey a consistent social media behaviour and build up brand equity	Descriptive Research	Paper presents a view that existing marketing tools such as integrated marketing communications and branding can be used in new ways to increase the perceived congruence between the generation Y consumer and the brand. They are more involved with their purchases than previous generations because they are more aware of the social consequences of the wrong purchase (Fernandez, 2009; Darley, 1999)
(Duffett, 2015)	Cognitive attitude, Emotional social media behaviour, Social groups	What effect does Facebook advertising have on the cognitive attitudinal component of Generation Y in an emerging country such as SA? How do various Facebook usage characteristics influence Generation Y's awareness and knowledge perceptions of advertising on Facebook in SA? Do various demographic factors have an impact on Generation Y's cognitive attitudes towards Facebook advertising in SA?	One-sample bi-nominal standardized test and Pearson's correlation coefficient, GLM ANOVA	Consumers who were exposed to both paid and earned social media could assist organizations with increased brand awareness. advertising on Facebook also resulted in increased levels knowl- edge amid Generation Y. Internet consumers' primary reason why they followed companies and brands on SNS was to keep up-to-date with the latest information. SNA was most effective when young adults spent two of more hours logged on to Facebook, which is logical, since they would have more time to notice the advertisements. However, Generation Y tend to multi-task and use their mobile devices while on the move to access the Internet, SNS and to communicate, so do not spend long periods on Facebook at one time.
(Kansra, 2014)	Buying behavior, Online trading Individual values	To examine the factors affecting the preference towards branded clothes among young consumers. To examine the association of age, income, occupation, marital status, education and gender with buying branded clothes	Percentages, factor analysis and Chi- square	It is found that product design, reliability and trust, social influence and discounts, brand name and fashion and status symbol and uniqueness are the main factors influencing the buying behavior of branded clothes. Those who do not buy branded clothes have varied reasons like cost, inaccessibility and preference of quantity to quality. The results show that there is an association between age, marital status, occupation, and income and buying of branded clothes, whereas there is no association between gender, and education and buying of branded clothes
(OSAMA, 2015)	Use of social media, Reinforcement, Personality, behavior	To estimate the changing behavior of the youths due to excess usage of Social Networking Sites (SNS). To find out the reasons behind the changing personality of our youths while interacting with his/her parents/Teachers	Descriptive Research	. Most of the teens are interested to make new friends whether they know each other personally or not. It is very common that Teens always eager to make friends of opposite gender. There are so many pages can be found which contains inappropriate content and the users are free to see all of them which leave the bad impression on youth minds. Teenagers take a lot of food/fast food during surfing. Due to excess use of SNS user become freakish and boring.
(Khare & Varshneya, 2017)	Peer influence, Green knowledge, purchase behavior, past experience	Does past environment-friendly behaviour influence Indian youths' organic clothing purchase behaviour? Does peer influence in the green context affect Indian youths' organic clothing purchase behaviour? Does organic clothing knowledge influence Indian youths 'organic clothing purchase behaviour?	Confirmatory Factor Analysis, Chi Square, Structural equation model	The results of the study indicated that peers, friends and family did not influence organic clothing purchase decision of youth. This implies that a decision to purchase organic clothing was related to one's pro-environmental values and past experience with green products. Since, youths are interested in latest fashion and trends, then they might perceive organic clothing as "premium" and "unique". The "uniqueness" of organic clothing should be promoted so that it gels with the individual's commitment towards green values

II. Research Design & Methods

Objectives of the study
The reason "for this examination is to explore the influence of socialization agents for behavioral implications. A number of behavioral elements are taken into consideration. Socialization agents could conceivably have distinctive implications on different individuals. This examination chose few social media behavioral elements. Thus proposes and examines the following questions": Which socialization agents "motivates social media users to share information and social support with anonymous others?" In what way are "the socialization agents for social media behaviour correlated with one another?" To what extent are the socialization agents' impacts different behavioral elements of a social media user?

Research design: In order to have a systematic approach for identifying key elements and concepts of the behavior of social media and socialization agents, the author followed the exploratory research design method followed by an informal research process to understand the influence.

Sampling technique: "A random sampling technique for the purpose of the research is used with regular online users from the region of the national capital of India as respondents. A structured questionnaire was prepared for data collection and distributed."

The "the sample size was calculated with the formula"

$$\text{Sample Size} = \frac{Z2 * (p) * (1-p)}{c2}$$

Where: Z = Z value (e.g. 1.96 for 95% confidence level), p = Population, c = confidence interval i.e. 0.05Thus sample size=384 (5% tolerance with a 95% possibility was taken into consideration. The questionnaire "prepared in this context was delivered to 400 respondents using the basic random sampling

method. In this method, there is a possibility that each entity in the sample is chosen, so this method is an appropriate population for a probabilistic sample. It can be said that the number of respondents used for research (400) is adequate because it is greater than 384, which is calculated using the formula used for the sample size of the participants, 58.5 percent are men and 41.5 percent are women."

Data Collection

A structured questionnaire was used for primary data collection. "The questionnaire was prepared using previous established studies (Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. 2014; Bochenek and Blil, 2013; Tsimonis and Dimitriadis, 2014; Shim, 1996; Treemand Leonardi, 2012) and adapted the knowledge gathered from the exploratory research project. In the first part of the questionnaire there are questions on demographic information and multiple choice questions on the use of the Internet and social networks; In the second part, a Likert scale containing five elements is used (1=Totally disagree,2=Disagree, 3=Neutral, 4=Agree, 5=Totally agree)."

III. Results and Discussion

Hypothesis development & testing: In "the analysis of the data collected from the questionnaire, the SAS University edition was used for statistical analysis. Cronbach's alpha test was done for the reliability check and the value of 0.693 was found. This calculated value confirms the reliability. To facilitate understanding and interpretation of the relationship between a wide ranges of parameters established in the questionnaire that are believed to have relationships and to reduce the factors to a more basic dimension, a factorial analysis was used." For "the feasibility test of the data factor analysis, the Kaiser-Meyer-Olkin (KMO) test and the Bartlett test were done. The Bartlett test value found was $p = .000 < .05$, so the Bartlett test result is significant. The KMO test value is calculated as 0.862. Therefore, there are high correlations between the parameters. In other words, the dataset is appropriate for factor analysis. In the factorial analysis, the Varimax method, was implemented and four factors were found. These four factors represent 76.514 percent of the total variance."

Table 2: Author compilation for Factor analysis.

	Measurement Scales				Confirmatory Factor Analysis		
Factors	**Number of Items**	**Research Studies Followed**	**Scale Examples***	**Reliability (α)**	**Factor Loadings**	**Eigen value**	**% Variance**
Religion	10	Amrullah, H. F., Ali, M. N. S., & Sukimi, M F(2020); Lau, W. W., & Yuen, A. H. (2013),	Beliefs, Values, Background, Spirituality, Customs, Meaning of Life, Religious institutions, Spiritual gurus, Religion, Cultural norms	0.81	0.78–0.90	4.303	0.3193
Family and Social groups	10	Casey, G., & Evans, T. (2011); Barber, N. A. (2013) (Yamakanith, 2014)	Family orientation, Parents, Language, Siblings, Social interaction, Relatives, Educational institutions, Social status, Upbringing, Reference groups	0.73	0.74–0.85	3.754	0.2135
Work and Peers	5	Men, L. R., & Muralidharan, S. (2017) (Kaplan & Haenlein, 2010), (Treem & Leonardi, 2012)	Office rules, Salary, Official role, Peers, Official environment	0.75	0.71–0.77	2.174	0.1231
Law and Government	5	Fagan, J., & Tyler, T. R. (2005); Feng, Y., & Xie, W. (2014)	Code of conduct, Sense of security, Governance, Party in rule, Judiciary	0.77	0.74–0.88	1.044	0.1092
					Cumulative = 0.7651		

The factors relating to socialization agents with behavior in social media and "the values of the factors are shown in Table 2. The first of the factors can be called 'Religion' and consists of ten parameters. Explains 31.93 percent of the total variance. The second factor is "Family and social groups", comprises ten parameters, and represents 21.352 percent of the total variance. The third factor can be called 'Work and peers' and is made up of five parameters and includes 12.31

percent of the total variance. The fourth factor is 'Law and Government' and includes five parameters. This factor is 10.927 percent of the total variance. The averages and standard deviations of the four factors are shown in table 2. Although participants are not concerned about religion with respect to social media behavior (2.77), their attitudes towards searching for information with social media are neither positive nor negative (3.39). They accept that their use of

social media for commercial purposes (3.70) is better for their relationships with their peers in the workplace (3.51). In the end, participants are influenced by the internet and social networks neither too much nor too little (3.14)." Religion of a user is closely connected to social media behaviour that can impact user decisions. Hence, the author proposes:

H1A: Religious insights have a positive relationship with users' information seeking behaviour of social media users.

H2A: Religious insights have a positive relationship with users' trading behaviour of social media users.
H3A: Religious insights have a positive relationship with users' socialization behaviour of social media users.
H4A: Religious insights have a positive relationship with users' emotional behaviour of social media users.
H5A: Religious insights have a positive relationship with users' reinforcement behaviour of social media users.

Figure 1: Proposed conceptual model for the study.
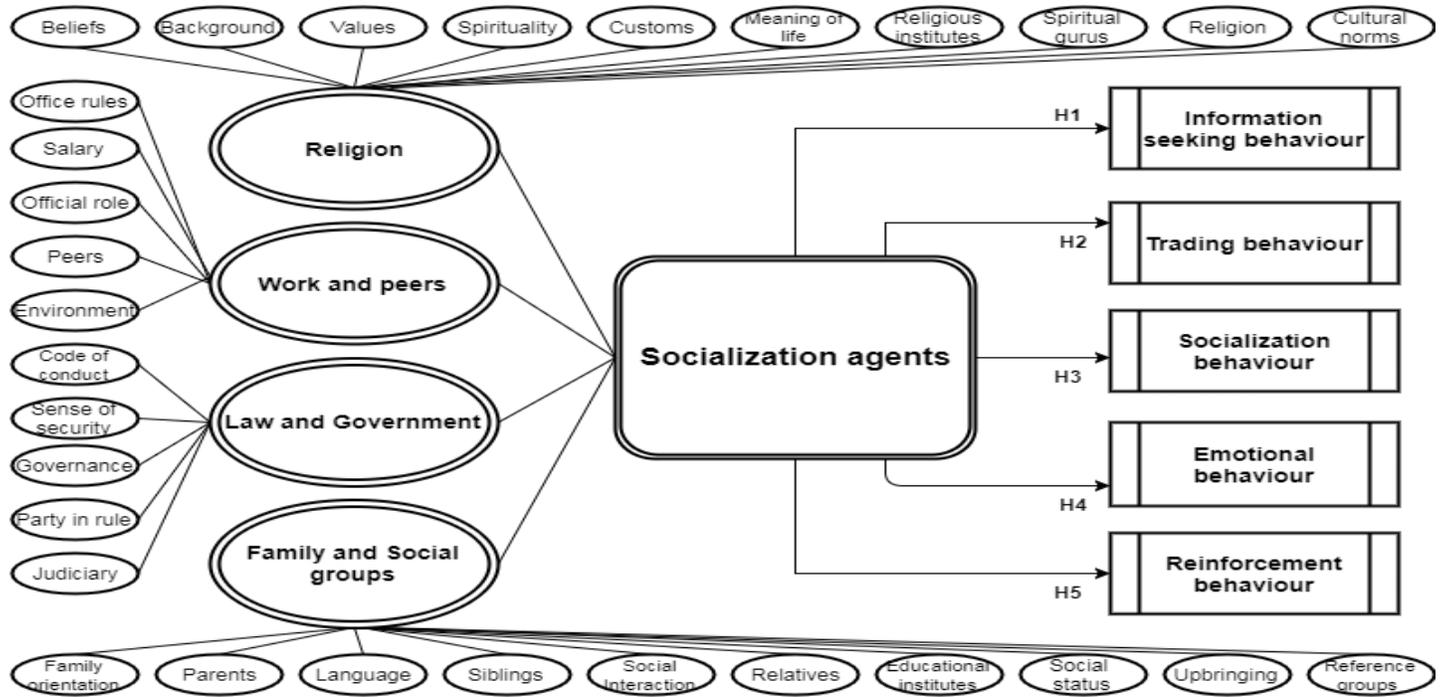
Work and peers of a user is closely connected to social media behaviour that can impact user decisions. Hence, the author proposes. Social media behaviour of a user on social media sites is closely connected to socialization agents that can impact his decisions. Hence, the author proposes:

H1B: "Work and peers have a positive relationship with users' information seeking behaviour of social media users."
H2B: "Work and peers have a positive relationship with users' trading behaviour of social media users."
H3B: "Work and peers have a positive relationship with users' socialization behaviour of social media users."
H4B: "Work and peers have a positive relationship with users' emotional behaviour of social media users."
H5B: "Work and peers have a positive relationship with users' reinforcement behaviour of social media users."

Law and Government is closely connected to social media behaviour that can impact user decisions. Hence, the author proposes:

H1C: "Law and Govt. have a positive relationship with users' information seeking behaviour of social media users."
H2C: "Law and Govt. have a positive relationship with users' trading behaviour of social media users."
H3C: "Law and Govt. have a positive relationship with users' socialization behaviour of social media users."
H4C: "Law and Govt. have a positive relationship with users' emotional behaviour of social media users."
H5C: "Law and Govt. have a positive relationship with users' reinforcement behaviour of social media users."

Family and Social groups is closely connected to social media behaviour that can impact user decisions. Hence, the author proposes:
H1D: "Family and Social groups have a positive relationship with users' information seeking behaviour of social media users."
H2D: "Family and Social groups have a positive relationship with users' trading behaviour of social media users.

H3D: "Family and Social groups have a positive relationship with users' socialization behaviour of social media users."

H4D: "Family and Social groups have a positive relationship with users' emotional behaviour of social media users."

H5D: "Family and Social groups have a positive relationship with users' reinforcement behaviour of social media users."

Model A: "A series of multiple linear regressions was conducted to evaluate the relationship between Religions (socialization agent) and identified the elements that the behavior of users on social networks passes daily using the Internet. The hypothetical Religion model of a user for the behavior of social networks is represented in Table 3, the p-values for the information search behavior, negotiation behavior, socialization behavior in the table are less than 0.05, so which is acceptable, therefore, the estimated coefficients are statistically significant and the p values for emotional behavior," the reinforcing behavior is less than 0.05, which is unacceptable, therefore the estimated coefficients are statistically insignificant.

Table 3: Results for Various elements of Social media behaviour and Religion.

Dependent variable	Mean	Standard Mean	Standard Error	F statistic	p- value	Hypothesis
Information seeking behaviour	2.76	1.562	0.39727	3.65	0.0003	Supported
Trading behaviour	2.89	1.572	0.09293	-6.19	<.0001	Supported
Socialization behaviour	2.90	1.623	0.12204	-0.15	<.0001	Supported
Emotional behaviour	3.10	1.321	0.06266	-0.29	0.7713	Rejected
Reinforcement behaviour	2.30	1.513	0.39727	3.65	0.0603	Rejected

Model B: "A series of multiple linear regressions was conducted to evaluate the relationship between work and peers (socialization agent) and the identified elements that the behavior of users on social networks passes daily using the Internet. The hypothetical work model and colleagues of a user for the behavior of social networks is represented in Table 4, the p-values for the information search behavior, the reinforcement behavior, the socialization behavior in the table are less than 0, 05, which is acceptable, therefore, the estimated coefficients are statistically significant and the p-values for emotional behavior, commercial behavior are less than 0.05, which is unacceptable, therefore the estimated coefficients are statistically insignificant."

Table 4: Results for Various elements of Social media behaviour and Work and Peers.

Dependent variable	Mean	Standard Mean	Standard Error	F statistic	p- value	Hypothesis
Information seeking behaviour	2.58	1.231	0.24356	2.53	<.0001	Supported
Trading behaviour	2.67	1.744	0.01283	4.54	0.3452	Rejected
Socialization behaviour	3.21	1.432	0.42312	-0.23	<.0001	Supported
Emotional behaviour	2.10	1.432	0.04225	-6.23	0.4313	Rejected
Reinforcement behaviour	3.19	1.123	0.39332	-3.65	<.0001	Supported

Model C: "A series of multiple linear regressions was carried out to evaluate the relationship between the Law and the Government (socialization agent) and the identified elements that the behavior of users on social networks passes daily using the Internet. The hypothetical model of law and government of a user for the behavior of social networks is represented in Table 5, the p-values for information search behavior, commercial behavior, in the table are less than 0.05, which is acceptable, therefore, the estimated coefficients are statistically significant and the p values for emotional behavior, reinforcement behavior, socialization behavior are less than 0.05, which is unacceptable, therefore the estimated coefficients are statistically insignificant."

Table 5: Results for Various elements of Social media behaviour and Law and Govt.

Dependent variable	Mean	Standard Mean	Standard Error	F statistic	p- value	Hypothesis
Information seeking behaviour	2.76	1.562	0.39727	3.65	<.0001	Supported
Trading behaviour	2.89	1.572	0.09293	-6.19	<.0001	Supported
Socialization behaviour	2.90	1.623	0.12204	-0.15	0.2342	Rejected
Emotional behaviour	3.10	1.321	0.06266	-0.29	0.7713	Rejected
Reinforcement behaviour	2.30	1.513	0.39727	3.65	0.0603	Rejected

Model D: "A series of multiple linear regressions was conducted to evaluate the relationship between family and social groups (socialization agent) and the identified elements that the behavior of users on social networks passes daily using the Internet. The hypothetical model of Family and social groups of a user for the behavior of social networks is represented in Table 6, the p-values for the information search behavior, the emotional behavior, the socialization behavior in the table are less than 0.05, which is acceptable, therefore, the estimated coefficients are statistically significant and the p-values for the reinforcement behavior. The commercial behavior is less than 0.05, which is unacceptable; therefore the estimated coefficients are statistically insignificant."

Table 6: Results for Various elements of Social media behaviour and family.

Dependent variable	Mean	Standard Mean	Standard Error	F statistic	p- value	Hypothesis
Information seeking behaviour	2.76	1.562	0.39727	3.65	<.0001	Supported
Trading behaviour	2.89	1.572	0.09293	-6.19	0.3421	Rejected
Socialization behaviour	2.90	1.623	0.12204	-0.15	<.0001	Supported
Emotional behaviour	3.10	1.321	0.06266	-0.29	<.0001	Supported
Reinforcement behaviour	2.30	1.513	0.39727	3.65	0.0543	Rejected

IV. Conclusion

The four main socialization agents had different impact on the behaviours of users on social media. The 'religion' as socialization agent was observed to influence information seeking behaviour, trading behaviour and socialization behaviour on the social media, but had no impact on emotional behaviour and reinforcement behaviour. On the other hand, socialization agent 'work and peers' was observed to be influence information seeking behaviour, socialization behaviour and reinforcement behaviour on the social media, but had no impact on emotional behaviour and trading behaviour. The third agent 'Law and Government' had influence on information seeking behaviour, and trading behaviour on the social media, but had no impact on emotional behaviour, socialization behaviour and reinforcement behaviour. The fourth socialization agent 'family and social groups' impacted information seeking behaviour, socialization behaviour and emotional behaviour on the social media, but had no impact on trading behaviour and reinforcement behaviour. Marketers and managers need to note that all four agents were found to be affecting information seeking behaviour. Three agents influenced socialization behaviour, whereas most of them had no impact on emotional behaviour.

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AN EMPIRICAL STUDY ON MANAGERS' PERSPECTIVE ON GREEN SUSTAINABLE BANKING; AN ANECDOTE FROM SELECT INDIAN BANKS

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Purpose: Sustainable development is one of the important parameters for the survival in future. "It has emerged as a new paradigm of development in response to the current disclosure of development that exploits the natural resources for economic prosperity. (Sahoo & Nayak, 2007)". The study aims to develop a theoretical model to find out determinants of sustainability with respect to green banking on the basis of perspective of managers of 4 banks (2 public sector and 2 private sector) banks.
Design/methodology/approach: The data was collected from Delhi & NCR with the help of a questionnaire using convenience sampling. The present study is quantitative in nature. Total 150 questionnaires were distributed to bank managers to collect the data. The study is designed to seek information with respect to green banking practices and its impact on sustainability from managers' perspective, which will enhance the utility of the research outcome.
Findings: The findings reveal that Spirit of Ethical and high yield savings (SE), External Green Practices (EGP), Employee Involvement (EI), Competitors Pressure (CP), and Energy Efficiency (EE) have impact on Sustainability. There is no significant difference between the perception of managers of public sector and private sector banks.
Originality/Value: In the present paper green banking and sustainability has been discussed in detail. The paper also highlights on the stage, initiatives, benefits and future of green banking in Indian context. This paper compiles the concept of Green Banking and also explains various strategies adopted by Indian banks. It explains in a very lucid style the various possibilities that exist in the banking arena to increase energy efficiency and reduce the usage of natural resources. This paper touches on various and simple methods, which could be adopted by any bank for educating customers on technology-based transactions, saving energy etc. Also, highlight the steps taken by RBI to motivate banks to take initiative to contribute in sustainable development of country.

There is a difference in the concept of green banking as compared with conventional or traditional banking. In case of traditional banking, the focus was on security and profitability. Green banking is a modern concept, which considers the investments with social and environment friendly. United Nations Environmental Program (UNEP, 2014) defines green economy as "one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities." In the second phase in 1970 an independent agency named "Environmental Protection Agency (EPA)" was setup "with the aim to protect the natural resources, human health and to preserve the quality of the environment. Since then, several international and domestic organizations are formed which are working towards environmental management like IFC, UNFCC, UNEP FI, Bank Tract, USGBC, Indian Green Banking Council, CERES, CERE, CEE, etc. In other words green economy is resource efficient, low carbon and socially inclusive". Green banking is defined as "promoting environmental-friendly practices and reducing the carbon footprint from banking activities" (Saho, D. B. P., & Singh, A, 2015). Green banking is not only beneficial for the environment but also for organizations in many ways.

In the area of green banking limited researched, have been done though the area is very important, as the role of banking industry in well-being of environment is remarkable. (Ahmad et al., 2013; Ahuja, 2015; Chew et al., 2016). There is a lack of relevant information with banks to adopt proper green banking. This provides an opportunity to work in the area and provide information based on research so that banks can adopt

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the green banking system (IFC, 2015; Masud et al., 2018; Oyegunle & Weber, 2015; Shaumya & Arulrajah, 2017; Thi et al., 2017). In the present study an attempt has been made to develop a conceptual model on the basis of managers' perception towards green banking. The banks selected for the purpose are State Bank of India, Bank of Baroda, HDFC and ICICI. The sample of banks was selected to represent both private and public sector. The data was collected from Delhi and NCR region.

I. Review of Literature

The growing dominance of the banking sector worldwide has also morphed banks to adopt a more sustainable and ecological culture. The sustainable approach of the banks has been termed as the green banking. Green Banking is the diversion from the conventional way of banking towards the adoption of strategies that entail more environmental benefits and bring more efficiency in their operations

Sahoo and Nayak (2008) - This study analyzed importance of the Green Banking and cited international experience in this regard. The researchers found that banks in India have not undertaken sufficient initiatives in this direction. In view of this, policy measures are urgently needed to promote Green Banking in India. It was revealed that none of the Indian banks adopted the equator principle and are not a signatory to UNEP financial initiative statement. The study highlighted the need for Indian banks to use environmental criteria for funding various projects.

Goyal and Joshi (2011) - This study emphasized the role of social and ethical issues such as social, ethical, rural and green banking which assist in the attainment of sustainable development in banking. They concluded that banks can work as socially and ethically familiarized organizations by paying loans solely to the businesses that have green concerns.

Rajput et al. (2013) - The study attempted to comprehend how Indian banks respond to environmental changes and the actions undertaken in respect to the Green Banking. The study found that only a small group of banks in India led in resolving issues about the environment. Under the United Nation's Environment Program Finance Initiative, there is a dearth of Indian participants. Using factor analysis, it was established that the risk of failure of business to peers and the lack of RBI mandates are the major impediments in moving towards sustainability.

Singhal et al. (2014) – According to this study, titled as Green Banking 'An Overview Study, How Banks Can Go Greener' banking industries and financial institutions have a significant role to play in earth's sustenance. Green banking conserves energy and the environment alike. Presently, many banks offer green products like ATM, Green credit cards, green CDs, electronic fund transfer, use of solar and wind energy and more, but the task is still not complete.

Gandhi (2016) in his study focused on green finance provided by the banks leading to sustainable environment. Emphasis was placed on the green products, which can ultimately reduce the internal and external carbon footprints.

Giridhar and Sudhakar (2017) examined the issues and challenges of green banking in Indian context. As per this study, Green banking serves the commercial objective of the bank as well as the Corporate Social Responsibility. Thus, it is important that Indian Banks should comprehend their responsibilities towards the environment as well as the society in order to compete and survive in the global market.

Ghosh (2018) investigated the current scenario of the Green Banking practices in Indian sub-continent and to disclose how central bank's direct regulatory policy strengthens mandatory Green Banking practice and reporting in a country. This study is mainly a descriptive one based on review of different published literature. Relevant information has been collected from different off-line and online sources.

Review of Literature (International Context)

Hollen (USA) (2009) introduced the idea of Green Banking wherein his chief motive was to decrease the use of paper work. In March 2009, Congressman Chris Van Hollen of USA introduced a Green Bank Act with the aim of establishing a green bank under the ownership of the US government. After introduce the Green Banking initial decision was to minimize the paper use in banking works because to make all kinds of papers need to cutting trees as raw materials (its minimize the green forestation) and for this reason naturally its reduce the Oxygen and increase the carbon dioxide in airspace/ globe.

Chang and Fong (2010) stated that the green image is established when banks are able to provide credible and innovative products to meet the expectations of the customers. Consumers respond to these green innovative strategies through satisfaction, perceived corporate benefits, product evaluations, purchase intentions and brand equity. Studies revealed that green initiatives by banks can attract more customers.

Lekakos et al. (2011): The main objective of this paper is to empirically examine the tension between functional and sustainability attributes in a novel context, namely that of Green Information System in the context of e-banking services. The results of this study indicate that the positive effect of CSR on users' attitudes towards green e -banking

services is moderated by two primarily utilitarian IS factors – namely perceived ease of use and perceived usefulness and an important utilitarian individual difference variable – namely perceived self-efficacy with technology.

Maraye et al. (2017) examine the consciousness of the customers on the green banking products offered by commercial banks in Mauritius. The data was gathered through questionnaire and was analysed using SPSS software. The study concluded that consumers respond favourably to the green projects or CSR offered by commercial banks of Mauritius.

Sachs (2019): In 2017, global investment in renewables and energy efficiency declined by 3% and there is a risk that it will slow further; clearly, fossil fuels still dominate energy investment. The main objective of this study is to explore what special role financial sector can play in sustainable development. Finance is the engine of development of infrastructure projects, including energy projects.

Constructs used in the study
Spirit of Ethical and high yield (SE)
Green banking is essentially the method of supporting environmentally sustainable operations and reducing the carbon footprint of the internal and external activities of the bank. The method of leading banking operations in a way that benefits the overall reduction of external carbon emissions and internal carbon footprints is Green Banking (Ethical Banking/ Sustainable Banking). Alice Mani (2011) noted that banks have a major role and duty as Socially Responsible Corporate Citizens (SRCC) in supplementing government efforts to substantially reduce carbon emissions.

External Green Practices (EGP)
In the banking sector, green banking means ensuring environmentally sustainable activities and thereby reducing internal and external carbon footprints. The banking sector is normally not viewed as a polluting industry. In general, the practices of green banking are divided into 02 sections, i.e. internal green practices and external green practices. Green banking is described as the promotion of environmentally friendly banking practices and the reduction of carbon emissions from banking activities. Shayana Bhardwaj and Malhotra's (2014) research linked the bank 's success with the adoption of green banking. They also found a positive correlation between the implementation of green banking and the profitability of banks.

Energy Efficiency (EE)
Green banking relates to the banking operation carried out in these regions and in such a way that it helps to minimize global carbon emissions and the internal carbon footprint as a whole. Banks should fund renewable energy and pollution-cutting initiatives in order to further reduce external carbon emissions. Although banking is never considered a polluting field, the current size of banking operations has dramatically increased banks' carbon footprint due to their vast use of energy (e.g. lighting, air-conditioning, electronic/electrical equipment, IT, etc.), high waste of paper, lack of green buildings, etc. Banks should also implement innovations, processes and goods that have the effect of substantially reducing their carbon footprint and creating a sustainable business. In developed economies, the role of banks in saving energy and cutting emissions is well known, but it is still in its infancy in India. Indian banks are not taking a large environmental initiative, and they really have a significant role to play (Prasad, 2011).

Employee Involvement (EI)
Inspired by the sustainability slogan of Unilever, "Small acts can make a big difference." The sense of employee engagement is all about the resources you offer your employees to help make their workplace choices. The role of employees in the process of green banking is very important with regard to the principle of green banking. As per HDFC Bank (2013), the bank encourages its workers to stop any inefficient use of natural resources and greenhouse gas emissions. As Per Canara Bank (2013), in order to minimise the paperwork, the bank introduced e-governance for HRM feature and many other administrative areas.

Competitors' Pressure (CP)
The pressure of Competitor is a scenario in which a corporation usually faces pressure because of its rivals. It can usually be seen in all kinds of companies. Competitive pressures have been shown to be positively linked to the implementation of green practice by Lee et al . (2013), such as the achievement of green Lin & Sheu certifications (2012), environmental innovation (Yalabik & Fairchild, 2011) and green supply chain management by Hoejmose et al . (2014) The rivals of the company are the key source of mimetic pressure. Competitor pressure is generated when the rivals of a business implement new methods or innovations in environmental management and the business must re-evaluate or boost its own environmental performance in order to equal or exceed competitor Weng et al. (2015). Barreto & Baden-Fuller, (2006) faces heavy mimetic pressures in the banking industry.

Sustainability (S)-Sustainability focuses on satisfying the needs of the present without undermining the ability of future generations to fulfil their needs (Panigrahi A. K. & Jena N., 2010). The definition of sustainability consists of three pillars: economic, environmental and social. Sustainability is one of the key driving factors for the implementation of techniques

that not only facilitate industry, but also help to cope with environmental harm. A survey conducted by Hayward (2013) found that 67 percent of the 1000 CEOs surveyed worldwide agree that the global economy is not on the right path to meet the demands of the rising population and resolve the challenges of global sustainability.

Objectives
This study attempts to develop a conceptual model showing the impact of Spirit of Ethical and high yield savings (SE), External Green Practices (EGP), Employee Involvement (EI), Competitors Pressure (CP), and Energy Efficiency (EE) on managers' perspective on Sustainability.

Hypothesis of the study

- ✓ H1: Spirit of Ethical and high yield savings (SE) has a positive impact on Sustainability.
- ✓ H2: External Green Practices (EGP) has a positive impact on Sustainability.
- ✓ H3: Employee Involvement (EI) has a positive impact on Sustainability.
- ✓ H4: Competitors Pressure (CP) has a positive impact on Sustainability.
- ✓ H5: Energy Efficiency (EE) has a positive impact on Sustainability.

Green Banking Dimensions from Managers' Perspective
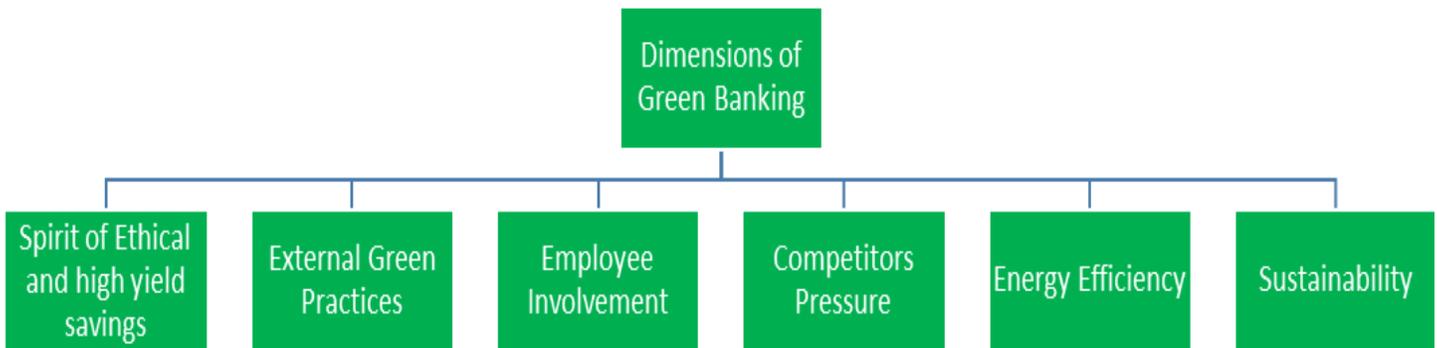
II. Research Design & Methods

This section discuss about the methodology used in the study. The data was collected with the help of a questionnaire containing questions on 7point Likert scale. The survey was done on primary data collection method through managers of selected public and private sector banks. A proposed model is presented for the study and tested structure modeling. Questions were asked with the help of self-administered questionnaire to quantify the managers' perspective on various dimensions of green banking initiatives and its overall impact on sustainability. The questionnaire was constructed incorporating inputs from bankers, policy makers, academicians, government officials and literature available including journals, magazines etc. The questionnaire was distributed to the target bankers of managers and above rank. Total 150 questionnaires were distributed out of which 142 were received and only 120 were included in the study as 22 questionnaires were incomplete and not found appropriate at the time of data cleaning. The study is designed to seek information with respect to green banking practices and its impact on sustainability from managers' perspective, which

will enhance the utility of the research outcome. This study is stipulated on four banks namely HDFC Bank, ICICI Bank, Bank of Baroda (BOB) and State bank of India (SBI) situated in Delhi and NCR. After survey with questionnaire, data was prepared in a systematic manner, by counting the frequency of responses of each question contained in the questionnaire.

The Hypotheses had been formulated and tested and the results had been arrived at. This study scrutinizes the cause and effect relationship between various strategies from managers' perspective of green banking initiatives and its impact on sustainable development. The statistical techniques like descriptive, "Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), Structural Equation Modeling (SEM)" has been used in the present study to fulfill the objectives of the study.

III. Results and Discussion

In this section, analysis of data has been done and interpretation of the results has been derived. The analysis is based on data collected through questionnaire.

Table 1: Summary of constructs and its variables.

Spirit	External Green Practices	Employee Involvement	Competitor Pressure	Energy Efficient	Sustainability
(IGP1) Less carbon emission.	(EGP1) Social Responsibility	(EI1) Do you give training for reduction in carbon footprints and issues relating to climate change	(CP1) Our bank will face a competitive disadvantage if green banking practices will not be incorporated in business.	(EE1) Habit of less paper consumption.	(S1) Do you agree with the statement that adoption of green banking practices and sustainable development has direct impact on financial performance of the banks?
(IGP2) Usage of space and power efficient servers	(EGP2) Environmental benefits	(EI2) Do you applaud the special contribution made by the employees regarding sustainability	(CP2) The competition among banks is near perfect for providing green banking services.	(EE2) Usage of renewable energy.	(S2) Do you agree with the statement that adoption of green banking practices and sustainable development has improved earnings per share of the banks?
(IGP3) Better deposit rates on online bookings.	(EGP3) Rise in Eco-Centric Consumers	(EI3) Is the information relating to climate change available	(CP3) Customer shifting is very easy in banking industry if services are not provided.	(EE3) Eco-friendly technology with multi-functionality.	(S3) Do you agree with the statement that adoption of green banking practices and sustainable development has significantly reduced the overall cost?
(IGP4) Lower maintenance fees and transaction charges for online dealings.	(EGP4) Government Regulations	(EI4) Is your organization taking initiatives relating to reduction in carbon footprints	(CP4) Customers are aware with the services provided by other banks.	(EE4) Is it mandatory by Audit team and executive bodies?	(S4) Do you agree with the statement that adoption of green banking practices and sustainable development has contributed significantly towards the corporate reputation?
(IGP5) Maintaining high degree of self-discipline.	(EGP5) Popular movements/ Pressure groups in the society	(EI5) I want to use green banking for handling all my banking activities			

On the basis of extensive literature review, a conceptual model was developed which elucidates the relationship with features of green banking initiatives and managers' perspective towards sustainability is proposed. The analysis starts with development of the measurement scale including the entire construct measured in the study. The measurement model is examined for the internal consistency reliability and the presence of necessary convergent and discriminant validity in the scale.

The confirmatory factor analysis (CFA) is applied in order to examine the construct validity of the developed measurement scale. The results of these statistical methods are reported and discussed in the following sections. The most required and basic elements of any instrument are reliability. The reliability of the instrument is further required to ensure the presence of scale validity. The presence of reliability of an instrument indicates that the instrument provides the stable and consistent scores from a test. Internal consistency reliability of an instrument can be examined with the help of Cronbach's alpha.

The threshold value of Cronbach's Alpha > 0.7 is acceptable, greater than 0.8 are considered good, and more than 0.9 are considered to reflect extraordinary internal consistency (Cronbach, 1951).The model used in the study is recursive with sample size 120.The summary of variables used in the study is as follows: total no of variables used in the model are 66, observed variables are 27, no of unobserved variables are 39, no of exogenous variables are 33, number of endogenous variables are 33.

Reliability

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.892	27

For the set of 27 variables the value of Cronbach's Alpha was 0.892 which was good enough to interpret the reliability of scale.

Sampling Adequacy Test

Table 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.778
Bartlett's Test of Sphericity	Approx. Chi-Square	3385.922
	df	351
	Sig.	.000

KMO tests the sampling adequacy and the value more than 0.6 is assumed to be good for number of responses. In the present analysis the value of KMO is 0.778 which is very good with respect to number of responses. The sign value of Bartlett's Test of Sphericity is 0.000 which rejects the null hypothesis of no correlation among statements. Presence of correlation among statements is the pre-requisite for exploratory factor analysis.

Table 4: Total Variance Explained and Number of Factors extracted.

Total Variance Explained									
Compon ent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulat ive %	Total	% of Varianc e	Cumul ative %	Total	% of Variance	Cumulati ve %
1	8.524	31.569	31.569	8.524	31.569	31.569	4.167	15.432	15.432
2	4.441	16.447	48.016	4.441	16.447	48.016	3.965	14.687	30.119
3	3.184	11.791	59.807	3.184	11.791	59.807	3.929	14.553	44.673
4	2.356	8.725	68.533	2.356	8.725	68.533	3.548	13.141	57.814
5	1.998	7.401	75.934	1.998	7.401	75.934	3.543	13.122	70.936
6	1.722	6.377	82.310	1.722	6.377	82.310	3.071	11.374	82.310
7	.562	2.081	84.391						
8	.530	1.962	86.353						
9	.499	1.847	88.200						
10	.465	1.721	89.920						
11	.394	1.457	91.378						
12	.326	1.208	92.586						
13	.308	1.139	93.726						
14	.260	.963	94.688						
15	.235	.869	95.557						
16	.179	.662	96.220						
17	.175	.648	96.867						
18	.142	.526	97.393						
19	.130	.482	97.875						
20	.112	.414	98.289						
21	.103	.382	98.672						
22	.091	.337	99.008						
23	.080	.295	99.303						
24	.069	.254	99.557						
25	.043	.159	99.716						
26	.039	.146	99.862						
27	.037	.138	100.000						
Extraction Method: Principal Component Analysis.									

Table 5: Rotated Component Matrix[a].

	Component					
	1	2	3	4	5	6
Government Regulations	.922					
Rise in Eco-Centric Consumers	.874					
Environmental benefits	.859					
Popular movements/ Pressure groups in the society	.840					
Social Responsibility	.788					
Better deposit rates on online bookings.		.902				
Lower maintenance fees and transaction charges for online dealings.		.867				
Usage of space and power efficient servers		.859				
Less carbon emission.		.797				
Maintaining high degree of self discipline.		.745				
Do you applaud the special contribution made by the employees regarding sustainability			.860			
I want to use green banking for handling all my banking activities			.846			
Is your organization taking initiatives relating to reduction in carbon footprints			.828			
Do you give training for reduction in carbon footprints and issues relating to climate change			.815			
Is the information relating to climate change available			.809			
The competition among banks is near perfect for providing green banking services.				.912		
Customers are aware with the services provided by other banks.				.890		
Customer shifting is very easy in banking industry if services are not provided.				.890		
Our bank will face a competitive disadvantage if green banking practices will not be incorporated in business.				.889		
Eco-friendly technology with multi-functionality.					.927	
Is it mandatory by Audit team and executive bodies.					.917	
Usage of renewable energy.					.915	
Habit of less paper consumption.					.883	
Do you agree with the statement that adoption of green banking practices and sustainable development has contributed significantly towards the corporate reputation?						.893
Do you agree with the statement that adoption of green banking practices and sustainable development has direct impact on financial performance of the banks?						.856
Do you agree with the statement that adoption of green banking practices and sustainable development has significantly reduced the overall cost?						.836
Do you agree with the statement that adoption of green banking practices and sustainable development has improved earnings per share of the banks?						.819

On meeting, the requirement of reliability and sampling adequacy Exploratory Factor Analysis was applied to reduce the dimensions of the variables and to clearly understand the relationship between variables.

The Coefficient of Correlation between a variable and factor score and is known as Factor Loading and are used to calculate communalities and Eigen Values for each factor and of each variable. The factor loading matrix is rotated for the interpretation of factors,. There are various methods of rotations and here Varimax Method is used. Therefore, the variables attached to a factor with a loading of 0.5 and above are used for naming a factor.

Confirmatory Factor Analysis

Once Exploratory factor analysis was done, there are defined variables are available, but these results are tentative in nature. To enter into a confirmed framework, Confirmatory Factor Analysis and followed by Structural equation Modeling was conducted to find the factors determining the sustainability from managers' perspective.

Figure 1: Measurement Model of Green Banking.
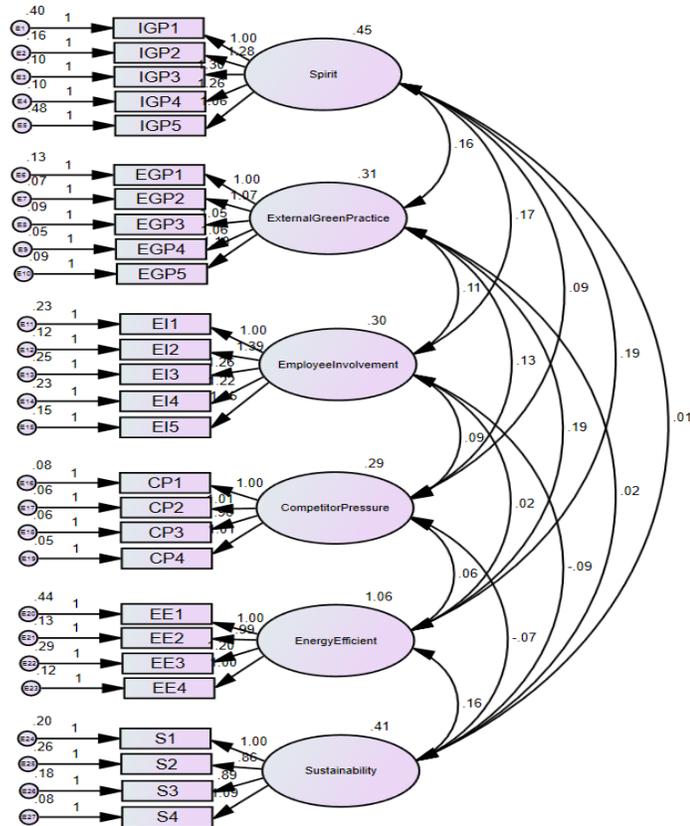
Table 6: Regression Weights.

			Estimate	S.E.	C.R.	P
IGP1	<---	Spirit	1.000			
IGP2	<---	Spirit	1.277	.126	10.167	***
IGP3	<---	Spirit	1.296	.123	10.527	***
IGP4	<---	Spirit	1.262	.120	10.524	***
IGP5	<---	Spirit	1.059	.134	7.896	***
EGP1	<---	External Green Practice	1.000			
EGP2	<---	External Green Practice	1.069	.079	13.456	***
EGP3	<---	External Green Practice	1.050	.081	12.955	***
EGP4	<---	External Green Practice	1.064	.075	14.208	***
EGP5	<---	External Green Practice	1.097	.084	13.088	***
EI1	<---	Employee Involvement	1.000			
EI2	<---	Employee Involvement	1.390	.132	10.563	***
EI3	<---	Employee Involvement	1.264	.137	9.260	***
EI4	<---	Employee Involvement	1.216	.132	9.243	***
EI5	<---	Employee Involvement	1.455	.139	10.433	***
CP1	<---	Competitor Pressure	1.000			
CP2	<---	Competitor Pressure	1.006	.066	15.264	***
CP3	<---	Competitor Pressure	.956	.064	14.930	***
CP4	<---	Competitor Pressure	1.014	.064	15.935	***
EE1	<---	Energy Efficient	1.000			
EE2	<---	Energy Efficient	.986	.069	14.386	***
EE3	<---	Energy Efficient	1.204	.088	13.615	***
EE4	<---	Energy Efficient	1.000	.069	14.491	***
S1	<---	Sustainability	1.000			
S2	<---	Sustainability	.859	.098	8.782	***
S3	<---	Sustainability	.894	.089	9.994	***
S4	<---	Sustainability	1.093	.092	11.858	***

Table 7: Validity Analysis.

	CR	AVE	MSV	ASV	CP	IGP	EGP	EI	S	EE
CP	.950	.825	.185	.079	.908					
IGP	.929	.727	.213	.106	.245	.853				
EGP	.953	.803	.185	.125	.430	.429	.896			
EI	.922	.705	.213	.103	.303	.462	.377	.839		
S	.892	.676	.066	.035	-0.216	.016	.060	-0.256	.822	
EE	.953	.834	.111	.051	.111	.268	.333	.031	.243	.913

No Validity Concerns - Wahoo!

As per the stats tools package developed by Gaskin in 2012 and results drawn from that tool presented in table 7, it is very clear that there is no validity concern.

Table 8: Model Fit Index.

Model Fit Index	Chi Square/df	CFI	GFI	NFI	TLI	RMSEA
Estimates	2.355	.915	.928	.903	.928	.107

Structural Model

In order to examine the hypothesized conceptual research model, the test of the structural model was performed using SEM.

Figure 2: Structural Model.
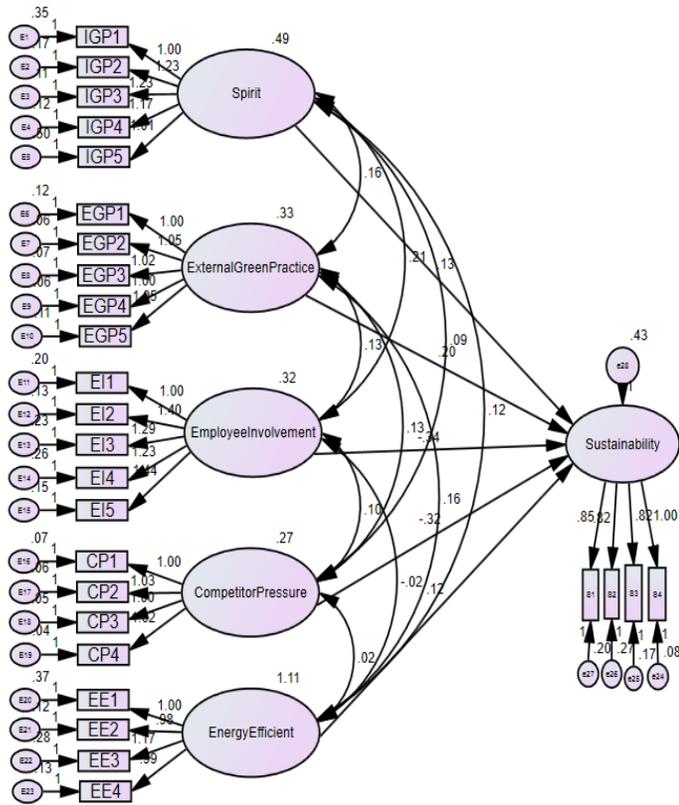
Table 9: Regression Weights of Structural Equation Model.

			Estimate	S.E.	C.R.	P
Sustainability	<---	Spirit	.129	.141	.912	***
Sustainability	<---	External Green Practice	.203	.174	1.169	***
Sustainability	<---	Employee Involvement	-.345	.185	-1.865	***
Sustainability	<---	Competitor Pressure	-.317	.178	-1.783	***
Sustainability	<---	Energy Efficient	.115	.080	1.437	***
IGP1	<---	Spirit	1.000			
IGP2	<---	Spirit	1.234	.139	8.869	***
IGP3	<---	Spirit	1.228	.132	9.287	***
IGP4	<---	Spirit	1.174	.129	9.087	***
IGP5	<---	Spirit	1.006	.152	6.604	***
EGP1	<---	External Green Practice	1.000			
EGP2	<---	External Green Practice	1.048	.088	11.940	***
EGP3	<---	External Green Practice	1.025	.089	11.457	***

EGP4	<---	External Green Practice	.997	.086	11.635	***
EGP5	<---	External Green Practice	1.050	.098	10.698	***
EI1	<---	Employee Involvement	1.000			
EI2	<---	Employee Involvement	1.399	.152	9.209	***
EI3	<---	Employee Involvement	1.287	.155	8.288	***
EI4	<---	Employee Involvement	1.225	.155	7.890	***
EI5	<---	Employee Involvement	1.436	.157	9.160	***
CP1	<---	Competitor Pressure	1.000			
CP2	<---	Competitor Pressure	1.031	.084	12.339	***
CP3	<---	Competitor Pressure	.999	.079	12.598	***
CP4	<---	Competitor Pressure	1.021	.076	13.449	***
EE1	<---	Energy Efficient	1.000			
EE2	<---	Energy Efficient	.979	.075	12.997	***
EE3	<---	Energy Efficient	1.171	.097	12.075	***
EE4	<---	Energy Efficient	.988	.077	12.853	***
S4	<---	Sustainability	1.000			
S3	<---	Sustainability	.820	.084	9.745	***
S2	<---	Sustainability	.817	.098	8.298	***
S1	<---	Sustainability	.847	.090	9.455	***

Estimates of the structural model (standardized path coefficients (β), standard error, critical ratio and hypotheses result) are presented Table 9. The level of significance (α) is set at 0.05. Figure 2 depicts the structural model. Out of 5 factors 3 are positively impacting Sustainability while 2 factors are negatively impacting but all are significantly impacting sustainability. Hence, all Null hypotheses mentioned in the study are rejected and all the constructs are significantly affecting Sustainability.

Table 10: Model Fit Index

Model Fit Index	Chi Square/df	CFI	GFI	NFI	TLI	RMSEA
Estimates	1.469	.931	.940	.915	.921	.077

The results of model fit shown in the table 10 are also good and satisfactory.

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
External Green Practice	Equal variances assumed	.100	.752	-.568	118.000	.571	-.104	.183	-.467	.259
	Equal variances not assumed			-.569	117.454	.571	-.104	.183	-.466	.258
Spirit	Equal variances assumed	.000	.985	.415	118.000	.679	.076	.183	-.287	.439
	Equal variances not assumed			.414	116.622	.679	.076	.183	-.287	.439
Employee Involvement	Equal variances assumed	.783	.378	-.352	118.000	.726	-.064	.183	-.427	.298
	Equal variances not assumed			-.351	115.017	.726	-.064	.184	-.428	.299
Competitor Pressure	Equal variances assumed	.000	.995	-1.240	118.000	.217	-.226	.182	-.587	.135
	Equal variances not assumed			-1.241	117.989	.217	-.226	.182	-.587	.135
Employee Engagement	Equal variances assumed	.764	.384	1.121	118.000	.264	.205	.182	-.157	.566
	Equal variances not assumed			1.121	117.806	.264	.205	.182	-.157	.566
Sustainability	Equal variances assumed	.973	.326	1.860	118.000	.065	.336	.181	-.022	.694
	Equal variances not assumed			1.859	117.564	.065	.336	.181	-.022	.694

To test the significant difference between Public Sector Banks and Private Sector Banks, 2-sample independent t-test was applied and the results show that no sig value is less than 0.05 which means that there is no difference between private and public sector banks on any of the factor.

IV. Conclusion

The concept of Green Banking was developed as a paradigm shift for the banking industry (Julia et al., 2016; Masukujjaman et al., 2016). There are very less number of banks that have sustainable banking practices. The study aimed to identify determinants of sustainability in Indian banking sector with reference to green banking. In the study four banks were selected (two from public sector and 2 from private sector) viz. State Bank of India (SBI), Bank of Baroda (BOB), HDFC Bank Ltd. and ICICI Bank Ltd. The area of study was Delhi and National Capital Region (NCR). The purpose was to find out the managers' perspective towards green banking. For the purpose data was collected and analysed to develop a conceptual model including managers' perception on Spirit of Ethical and high yield savings (SE), External Green Practices (EGP), Employee Involvement (EI), Competitors Pressure (CP), and Energy Efficiency (EE) and Sustainability. The data was analysed using exploratory Factor analysis in which 6 constructs were extracted after testing their reliability, on which CFA was applied and all

relevant test relating to measurement model was found to be significant. Structural model was executed successfully rejecting all null hypothesis leading to a structural model with significant regression coefficients with p value < 0.05, The results of this research support all alternative hypotheses and reject the null hypothesis, the estimates are consistent with expectations of entire model, because the relationship is significant (p>0.05) and in the anticipated direction. The results of independent sample t-test reveal that there is no significant difference in banks on the basis of ownership.

Scope for Future Studies
➢ Manager's perception and satisfaction towards the implementation of existing Green banking practices will help to get aware of the challenges faced by the actual field workers & desk handlers.
➢ This research provides valuable insights to bankers to understand the importance of green banking. The concept of green banking has motivated banking institutions to introduce paperless technology driven services and green lending practices while minimizing environmental impact and to perform their role as a corporate citizen on sustainable development.
➢ It will help researchers in exploring the research further as limited quantitative studies using Structural Equation Modelling technique with reference to Manager's

perspective on green banking strategies and its impact on sustainability are available.

➢ This study will help all the stakeholders, as COVID-19 cases have risen, social and economic uncertainty has increased, generating fears of another economic crisis. In order to keep life going and ensure business continuity, national digital agendas have been implemented rapidly keeping in the mind the positive impact of digital transactions

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ANALYSIS OF EMPLOYEES' FITNESS CONDITION AND EMPLOYERS' HEALTH PRESERVATION MEASURES IN PRIVATE ORGANIZATIONS AT DELHI-NCR

Radhika Soni* Manish Tomar** Shubham Riyal***

Purpose: The purpose of this paper is to understand the factors that are crucially affecting the fitness condition of employees at corporate level in private organizations at Delhi – NCR and identify various factors that can contribute for the well-being of the employees.

Design/methodology/approach: The study employed a multi-analytical approach through the use of structure equation modelling and factor analysis to test the proposed framework. A quantitative approach based web survey was performed to collect the primary data from 147 working employees in the private sector of Delhi NCR.

Findings: The result of analysis demonstrates that the factors identified are majorly affecting the fitness level of the employees and private organisations are playing a major role in maintaining well-being and health of their employees.

Originality/value – This study is one of its kinds to understand the role of various factors on fitness condition of employees.

Keywords: Social Support, Job Design, Health Problems, Work stress, Fitness.

In a developing nation like India, we have noticed that organizations have a tendency to concentrate on well-being rather than wellness. Despite the fact that issues of absenteeism and presentism have assumed an alarming portion of making a bad impact on the overall performance of the organization. A predominantly sedentary lifestyle is resulting in more number of working hours along with work pressure resulting in an extreme level of stress, physical illness, and declining level of productivity. What most evolved employers rely on is that a healthy workforce is mandatory to create and maintain a healthy organization. Physical and mental health is important to increase productivity at both the top and bottom levels of the organization. Organizations that are concentrating on their employees' health and well-being lead to save their direct cost at the corporate level, the decline in absenteeism and make sure the smooth flow of production. Employee participation indicates the energy and enthusiasm that employees bring to the workplace and is really a key symbol of their loyalty and contribution to the growth of the organisation. Employees that seem to be committed are also more happy, and thus more prone to really be devoted to the corporation. Even in a developing country like India, an increasing importance of fitness facilities reflects that more and more employers now begin to appreciate that maybe a healthy workforce is now a mechanism to effectively regulate rising healthcare expenses and respond to operational excellence fruitfully. Our purpose of the study is to survey the employees working in private organizations in Delhi – NCR and analyze the factors that are affecting their fitness level and to analyze to what extent their corporate pressure is the reason for their health regarded

issues. The study also further concentrates on the measures that are taken by their employers in order to maintain the employees' health and well-being. And it is also kept in mind that an employee's wellness is not only limited to employees, but it is to the whole organisation filled with safe, stable and motivated workers, on the other hand the organisations keeping such benefits handy also ends up as the most attractive and welcoming place to work with that protects its employees. There may also be a case where workers feel unhappy at work, and the frustration accompanies them home, exacerbating their tension and seriously affecting their overall quality of life-being, which in addition was just another consideration in administering the analysis to understand the reasons that organisations need to acknowledge while developing their code of ethics for employees and handling their HR activities accordingly.

I. Review of Literature

It is the background of the local community that dominates the study's findings and despite several interactions involving diverse staff and coworkers, the key to good attitude on

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workplace performance and absenteeism remained lacking and if we talk about managers, they are usually more obsessed with employee performance and even with the incidence of absenteeism as compared to workers. (Ahmed Abdulaziz Alashab, 2020). Creative approaches to increase employees' motivation and strengthen their well-being have been relevant since a very long time. Also in future, it's a sure bet to make, those who have the smartest players will be the most profitable firms. The most powerful thing an employer could do would be to delegate responsibilities and practices to workers and place them in positions that empower them to use the best of their innate abilities and allow them to grow while using their abilities to better their skills and capabilities. (J. Arthi, 2019). The use of drugs and alcohol in various workplaces is common these days but still this event is not recognised as some other forms very well recognised. Such phenomenons create personal, behavioral and safety problems in workplaces due to the influence of such hazardous substances.

Employees lead to such hazardous activities due to work stress, anxiety, unfair treatment in the workplaces. These activities critically affect the relationship and work life balance. (Milan Tucek', Alenka Skerjanc, 2019). The impact of the health and wellness system on employee efficiency that rely on both the pre-existing sickness level of an employee and health progress in their post-programme. Firms should not merely focus on identifying and minimizing health concerns for injured workers. (Timothy Gubler, 2017). Employees in the private organisations may indulge into activities that may include a physical activity but that does not mean that they are involved into active sporting activities mostly. (Tamás MADARÁSZ, 2016). Sometimes pressure is seen by an individual employee as rational, but it can also alert them to keep them more focused, and sometimes even help them to understand and learn things better. Further it entirely depends on how valuable tools and direct added features are available to them. Stress starts inside a wide range of job cultures, although when employees perceive they may not have the guidance of higher authority and coworkers and struggle to coordinate existing processes, it often makes the situation even harder. (Jayadev Babu Divakar, 2015). A workfitness evaluation is described as an examination of the individual's capacity to job without danger to the health and welfare of his or her own or of others. It is carried out for the worker or applicant, colleagues and the public to reduce potential health and safety threats. (Consol Serra, 2015). The design and execution of a health plan will be of value to both the client and the employee. The aim is to provide an accessible, reliable, compliant and moral wellbeing plan that lets the employee attain and preserve healthy health. (Bahaudin G. Mujtaba, 2013). Workplace stress affects the psycho-social well-being of the employees working in private organisations

that totally affects the organisational working environment and the level of productivity of employees. (Kohinoor Akhtar, 2012). There is a shortage of engaged workers when it comes to oil and gas companies as per the reports. This looked at the partnership between engaged workers, their success and profitability in industry. (Samira Al Jasmi, 2012). There is an immediate need for the companies to focus more on physical activities and, Corporate Fitness programs should be implemented nationwide or where ever it is necessary that is to make sure that it reaches to everyone in the target population, priorities should be given to the health and fitness programs by the organisations and Physical activity programs should be implemented in the context of a supportive environment (Nicolaas P. Pronk, Thomas E. Kottke, 2009). The various fitness and health programs, which were designed for the employees, somewhere justified the expense for the company by reducing the economic burden of the health scheme on employees. (Naydeck et al, 2008). It has also been noticed that there is a visible poor working relationship between health experts and managers of the private organisations for a number of reasons, like the way they both promote health, different perceptions regarding cure being better than prevention, another reason can be that the health experts have restrictions in getting deep into the organisations. (J. Connell & S. Grainger, 2002). It has appeared that corporate fitness has already become a trend in many of the developed nations because of the employees' participation under such programs. All this is possible because of the level of management of the corporate fitness programs and the need of the population to stay fit. (Keir Worth, Peter Green and Tim Bliss, 2001). From late early organisations are investing hefty amounts for the wellbeing of their employees. These wellbeing programs critically affect the lifestyle of the employees. These wellbeing programs include fitness, attitude, behaviorals, programs, lifestyle, loyalty and productivity of the employees in the organisation. These aspects of employees improve by indulging employees to various form physical, internal and external programs which shape the employees and organisational well-being (loren E. Falkencberg, 1987).

Research Hypotheses
Casual relationships has been hypothesized between the four identified research constructs and proposed model is framed below in Fig1
H1: Job Design will have a significant effect on Providing Social Support
H2: Job Design will have a significant effect on Conflict Between work and Family Commitment
H3: Providing Social Support will have a significant effect on Conflict Between work and Family Commitment
H4: Overtime and Number of working hours will have a significant effect on WFC.

Fig. 1
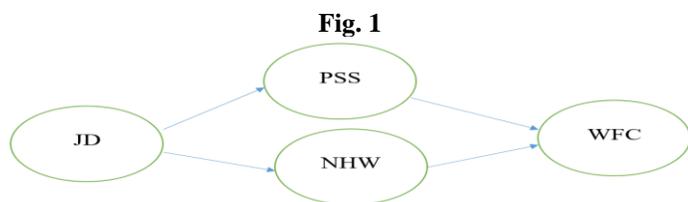
Here,

- JD = Job Design
- PSS = Providing Social Support
- NHW = Overtime and Number of Hours Worked
- WFC = Conflict between Work & Family Commitments

II. Research Design & Methods

Objectives of the study

1. To understand the factors that are crucially affecting the fitness condition of employees at corporate level in private organisations at Delhi – NCR
2. To study the effects of factors on the behaviour of Private organisations towards fitness level of employees.
3. To validate the factors.

Participants

This research work aims to discover the factors pulling the employees of the private organisations who are working in shifts, who may or may not come up with health issues due to the work pressure at their workplace. A quantitative approach based survey was performed to collect the primary data from 147 working employees, located in Delhi - NCR.

Construct Measurement

The proposed studies version is examined by applying factor analysis, simple linear regression analysis using IBM SPSS Statistics 21 programme. Hypotheses were formed and tested with regression analysis. A five - point Likert scale was used: 1 suggesting (strongly agree) and 5 suggesting (strongly disagree). The construct reliability (Cronbach's α) of the questionnaire is above the recommended value of 0.7 (Hair et al., 2010).

Research Instrument

Online survey method was used, which helped in providing a wider coverage. A pilot study was conducted on a sample of 30 respondents, selected through non-probabilistic sampling for the purpose of testing the reliability of the questionnaire. The survey instrument was modified and redesigned with minor amendments based on the feedback obtained during the pilot testing phase. The data collected in pilot study was not included in the main analysis.

Data collection and sampling

The online survey was sent to the respondents as a link through message delivery service provided by Whatsapp and Gmail as the target respondents are very active on both and hence was found to be very convenient. The online survey link was opened from March till April 2020, for a window of 30 days.

III. Results and Discussion

Fig. 2: Age.
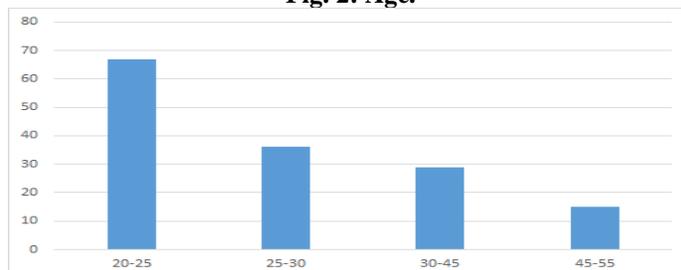
Fig. 3: The average number of hours of sleep in workweek.
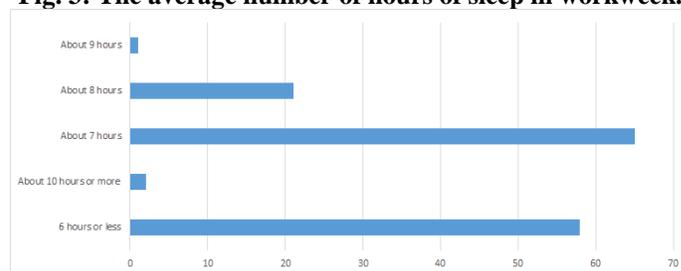
Fig. 4: Companies providing health and wellness programs.
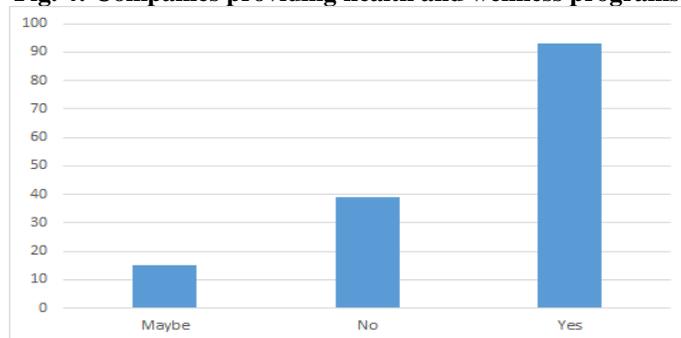
KMO

The Kaiser Meyer Olkin measure verified the sampling adequacy for which the value found was 0.719 in Table 1, which is above the acceptable limit of 0.5 (Field 2009). Barlett's test of sphericity, chi-square value of 1048.352 at p-value 0.000 indicates that it is suitable to apply Factor analysis.

Table 1: KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.719
Bartlett's Test of Sphericity	Approx. Chi-Square	1048.352
	df	231
	Sig.	.000

Reliability

Reliability Score through Cronbach's alpha was found to be .732, which is quite higher than the standard value of 0.7as shown in Table 2.Besisdes this, Reliability analysis of each construct was done to test whether a group of items consistently reflected the construct it is measuring (Field, 2005) shown in Table 2.

Table 2: Reliability. Source: Research Output.

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.732	.735	22

As the sample size was less than 150, factor loadings greater than .45 were accepted. As the sample size was less than 150, factor loadings greater than .45 were accepted. The six extracted components together explained 63.171% of the variance. The items that clustered on the factors suggested that factor 1 represented Providing social support of the respondents, factor 2 represented Job Design, factor 3 represented conflicts between work and family commitment, factor 4 represented over time, and number of hours worked. The last factor was discarded as they had very few statements.

Hypothesis testing with linear Regression Analysis
H1= Job Design will have a significant effect on Providing Social Support.

Table 3: Model Summary and ANOVA.

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Hypothesis
.067[a]	.004	-.003	4.67354	.565	.454[b]	Rejected

Dependent Variable: PSS (Providing Social Support)
Predictors: (Constant), JD (Job Design)

In the above table R square = 0.004. The ANOVA table indicates the Fcal 0.565 at 0.454 significance, which is above the acceptable limit of 0.05 level. Hence, we can say that there is no strong relation between job design and Providing Social Support for the employees working in the private organisation.

H2= Job Design will have a significant effect on conflict between work and family commitment.

Table 4: Model Summary and ANOVA.

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Hypothesis
.308[a]	.095	.089	2.62009	15.223	.000[b]	Accepted

Dependent Variable: WFC (Work and family commitment)
Predictors: (Constant), JD (Job Design)

In the above table R square = 0.095. The ANOVA table indicates the Fcal 15.223 at 0.000 significance which is above the acceptable limit of 0.05 level. Hence we can say that there is a strong relation between job design and conflict between work and family commitment for the employees working in the private organisation.

H3= Providing social support will have a significant effect on Conflict between work and family commitment.

Table 5: Model Summary and ANOVA.

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Hypothesis
.060[a]	.004	-.004	2.74274	.449	.504[b]	Rejected

Dependent Variable: WFC (Work and family commitment)
Predictors: (Constant), PSS (Providing social support)

In the above table R square = .004. The ANOVA table indicates the Fcal .449 at 0.504 significance which is above the acceptable limit of 0.05 levels. Hence we can say that there is no strong relation between Providing social support and Conflict between work and family commitment of the employees working in the private organization.

H4= Number of working hours will have a significant effect on Conflict between work and family commitment.

Table 6: Model Summary and ANOVA.

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Hypothesis
.151[a]	.023	.016	2.72262	3.383	.068[b]	Rejected

Dependent Variable: WFC (Work and family commitment)
Predictors: (Constant), NHW (Number of working hours)

In the above table R square = 0.023. The ANOVA table indicates the Fcal 3.383 at 0.068 significance, which is above the acceptable limit of 0.05 level. Hence, we can say that there is no strong relation between number of working hours and Conflict between work and family commitment of the employees working in the private organisation.

IV. Conclusion

All proposed hypotheses are supported, important inference we obtain from proposed research is that the job structure designed for the employees in the private organisations causes a conflict type situation between their professional and commitments towards their family. However, the various kinds of job structure that are prevailing in private organisations are not efficient to that level so that they can provide relevant amounts of social support to their employees.

One noticeable fact that can be observed from our research that there is no strong relationship between social support required to an employee and conflict arises between his or her family and work commitment. The interpretation of the study also indicates that there is no strong relationship between numbers of working hours as per his/her job structure and the conflict arising between his family and work life commitments, though in practicality this may arise a problem, due to lack of work life balance. The reason that research is showing such results is because of the population sample chosen for research. The sample size in the research is majorly unmarried and lies between the age bracket of 20-30 years and hence they merely fall under the category for commitments towards any dependent. Previous research reveals that the organisation provides a hazard working environment when it comes to the number of working hours as per their job structure and our study reveals that the organisations are now working upon it and providing relevant fitness programs to maintain the level of stress among employees. Organizations such as Accenture, Asana, Draper, Google, Microsoft, SAS, Motley Fool are the few examples of the companies that spend large amounts of resources for their employees wellbeing. Companies funding their employees training programs, equipment, various memberships, screening, meditation, stress reduction, granted flexible working hours, therapies, cell to discuss health related queries, various gift cards, cash prizes and many more only to maintain their employees well beings. Limitations of the study that the literature review is not available extensively and most of the previous research talk about the organisation's programs from organisational point of view and not from employees perspective. The majority of respondents for this research are from the age group of 20-30 years, who are more reluctant to any disease hence, further research is required from the employees of different age groups in order to attain broader perspective.

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#COVID-19: A JOURNEY OF INDIAN CONSUMERS FROM NORMAL TO NEW NORMAL

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Purpose: The purpose of this paper is to provide a conceptual background and managerial implications of COVID 19 and its impact on consumer behaviour.

Design/Methodology/Approach: This is primarily a conceptual paper focusing on the impact and changes in the consumption pattern of consumers due to the COVID-19 pandemic. The paper undertakes a thorough review of the relevant literature.

Findings: The findings of this paper suggests that both consumers and business firms are on a new learning curve adjusting to the new normal. To fulfil the needs of consumers in the situation of crisis it has become essential for business firms to integrate their supply chain logistics and their warehouse operations and encourage online procurement of goods.

Originality/Value: The paper is original and makes the foundational contribution for a beginning stream of research.

Keywords: Covid-19, coronavirus, consumer behaviour.

JEL Classification: M31

In today's world, in order to sustain in this turbulent environment, the companies strive to make proactive strategies to predict the changes in the tastes, preferences and the lifestyles of consumers. This prediction helps them to make innovative changes in their products and services. The changes in the consumer behaviour is due to the cognitive and affective processes, which are eventually based on their needs and preferences. These changes in the consumer behaviour are due to some challenging factors like political, environmental, economical, legal and pandemics. These pandemics occur once in a 10-50 year. Due to increase in population, humans are bound to live closer to animals and this increases the chances of these pandemics to occur even at a more frequent intervals (Donthu and Gustafsson, 2020). Consumption patterns are habitual as well as contextual. There are four contexts, which force the consumer to change their consumption patterns as explained by Sheth (2020) in their paper. These are social, technological, rules and regulations and last but not the least, natural disasters. Social contexts include marriage and having children, changing the place geographically, etc. that is basically the change due to workplace, friends and family. Technology brings out changes by modifying or breaking the old habits. One such example could be online information search and online ordering. The third factor causing the change in consumption pattern is rules and regulations made for unhealthy products like alcohol, smoking and firearms. The last factor, which we are facing today, is natural disasters or pandemics like COVID- 19. Pandemics like COVID 19 occur rarely but their negative impacts on economies across the globe cannot be ignored. Though we cannot stop the emergence of these pandemics, we can prepare ourselves to lessen the adverse effects arising due to these rarely occurring catastrophes. The outbreak of novel coronavirus has dramatically affected the traditional brick and mortar model of trade resulting in a shift of consumers from offline to online shopping. The unusual situations bought by coronavirus has led the consumers to fulfil only the basic needs in the need hierarchy given by Maslow and defer their other demands. Covid - 19 has impacted the consumer behaviour in a drastic manner. However, the change is not limited to consumption patterns only, but also to shopping, information searching and the post consumption behaviour like disposal of waste. Due to the disruptions caused by COVID 19, many businesses are forced to be shut causing the disturbances in commerce of various industry sectors posing short-term challenges in the form of health, safety, workforce, demand and consumption. The focus of this paper is to study the impact and changes in the consumption pattern due to this ongoing pandemic.

I. Review of Literature

As defined by Cennimo, Bergman and Olsen (2020) Coronavirus disease 2019 (COVID-19) is "an illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; formerly called 2019-nCoV), which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China". The first case of COVID 19 was reported to the WHO on December 31, 2019. It was declared as a global health

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emergency by WHO on January 30, 2020 and further on March 11, 2020, it was declared a global pandemic, after H1N1 influenza which was one such kind in 2009. It was termed COVID 19 to avoid any kind of stigmatization arising in terms of populations, geography, or animal associations. This disease had never been identified in humans, previously. As of now, no effective vaccine has been developed and therefore, various medical research teams round the globe have joined their hands to find a cure for this novel CORONAVIRUS. In recent history across the world, many such epidemic outbreaks have been experienced like Ebola, Swine flu, Dengue, SARS, MERS etc. Several researches have been conducted to study the consumer behaviour. Previously, it was found that less focus has been given to impact of such epidemics on consumer behaviour rather attention was given to preventive human behaviour. Also, the findings of earlier studies were difficult to generalize. However, the current global COVID 19 pandemic situations have enabled researchers to study its impact on human behaviour. Some prominent researches taken up in the recent past has been summarised in table 1.

Table 1: Literature summary on pandemics and human behaviour.

Author	Year	Country	Epidemic	Findings
Goodwin et al.	2009	Malaysia	Swine-flu (Influenza A H1N1)	Masks and food buying increased and people cancelled their travelling.
Rubin et al.	2009	United Kingdom	Swine-flu (Influenza A H1N1)	In the early stages, behaviour of some people changed. The reasons of this changed behaviour were perceptions about the severity of the flu, the belief it will be continued for a long time and risk can be controlled.
Seale et al.	2009	Australia	Swine-flu (Influenza A H1N1)	Personal hygiene measures were considered less important than vaccines and quarantine.
Sharifirad et al.	2014	Iran	Swine-flu (Influenza A H1N1)	Motivation to protect and the preventive measures are significantly related
Gamma et al.	2017	Guinea Bissau	Ebola	People adopt avoidance measures as a result of perception of health knowledge
Gamma et al.	2020	Gambia	Ebola	Health knowledge was found to have an important role, which influenced the intention of people to adopt avoidance measures.
Laato et al.	2020	Finland	COVID-19	Human behaviour regarding sharing of unverified information is studied and it has been found that online information trust and excessive information available results in sharing unverified information.

II. Research Design & Methods

The Review process was based on the following pattern. The literature was searched from Google Scholar by using the keywords such as "Corona virus", "COVID 19", "consumer behavior" and "pandemics". Research papers published in peer-reviewed journals in English were included in this study. We also viewed websites of WHO, Statista and Ministry of Health and Family Welfare to gain further insights into COVID 19 pandemic in India. We excluded book reviews, editorials, news and panels from the search. The selected papers were compiled in table 1 which contain the country, type of epidemic and findings of the relevant studies.

The COVID-19 pandemic in India
India got its first case of COVID-19 reported on 30th January, 2020. India is ranked number one in terms of highest confirmed cases in Asian region and on number two in terms of confirmed cases globally after the United States. The same can be depicted from the given table:

Figure 1

as of November 6, 11:36 GMT	Total infections	Active infections	Recoveries	Deaths
Total (worldwide)	49,159,634	12,850,919	35,066,968	1,241,747
United States	9,926,637	3,344,007	6,341,604	241,026
India	8,411,724	520,729	7,765,966	125,029
Brazil	5,614,258	388,135	5,064,344	161,779
Russia	1,733,440	407,429	1,296,124	29,887
France	1,601,367	1,438,052	124,278	39,037
Spain	1,365,895	N/A	N/A	38,486
Argentina	1,217,028	154,125	1,030,137	32,766
United Kingdom	1,123,197	N/A	N/A	48,120
Colombia	1,117,977	74,602	1,011,166	32,209
Mexico	949,197	153,588	701,837	93,772

Source: Statista, Worldometer · Get the data · Created with Datawrapper

As per the reports of Ministry of Health and Family Welfare, the following (Fig. 2) are the top ten cities in India in terms of highest number of confirmed cases. The table depicts confirmed, active as well as deceased cases in each of these ten cities as on 8th Nov., 2020. Figure 3 shows the WHO report which shows over 8,507,754 people have been infected with the novel Corona Virus causing over 126,121 deaths till 31st Oct, 2020.

S. No.	Name of State / UT	Active Cases	Cured/Discharged/Migrated	Deaths
		Total	Cumulative	Cumulative
1	Andaman and Nicobar Islands	175	4206	60
2	Andhra Pradesh	21434	812517	6779
3	Arunachal Pradesh	1559	13785	45
4	Assam	6758	200939	940
5	Bihar	6287	213513	1136
6	Chandigarh	815	13978	232
7	Chhattisgarh	23256	173872	2434
8	Dadra and Nagar Haveli and Daman and Diu	32	3239	2
9	Delhi	40258	383614	6912
10	Goa	2036	42239	641

Source: Ministry of Health and Family Welfare.

Figure 2
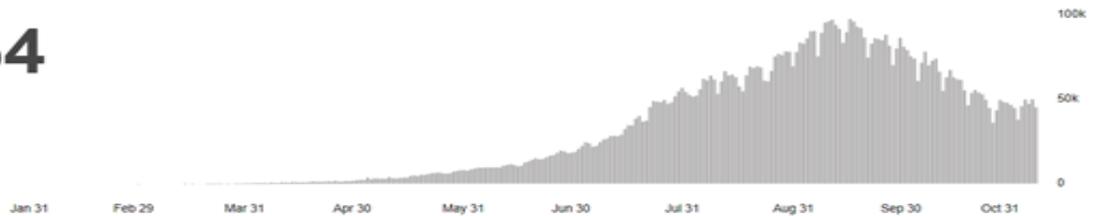
Source: World Health Organisation.

III. Results and Discussion

Consumer behaviour during COVID-19
As humans, we depend on our senses a lot since we use them in all situations of life and we depend heavily on them when making decisions. The current situation, however, deprives us of our senses, because we do not have access to as many options as we have in normal circumstances. Societies across the globe are in lockdown and people are required to maintain social distance and stay at home. Authorities are also asking us not to use our senses; we should wear a mask while leaving our homes, we should not touch anything, or get close to other people. All these restrictions lead to several questions that need to be answered. What will happen when we open up our societies? Will we be too cautious for a longer period of time or will we seek to compensate ourselves because we have been deprived of our access to so many things. Both consumer behaviour and consumption patterns are dependent on time and location. Customers' preferences of where to shop is restricted due to lockdown and social distancing. This lockdown situation has contributed to a restriction on space and a shortage of mobility. However, at the same time, there is more flexibility in terms of time, as customers do not have to stick to their normal schedules for going to work, to school or to shop. Thus, during the period of COVID-19, it becomes important to understand and examine how consumer behaviour has changed and transformed until today, and to identify the key motivators underlying this change.

It has been an observed phenomenon that people engage in the practice of hoarding essential products whenever the possibility of any uncertain situation arises. Consumers start to store items for everyday use leading to disruption in demand and supply in the markets, shortages, etc. During COVID-19 period, the purchases of cleaning items have also increased. People tend to defer the consumption of the non-essential products such as durable goods like electric appliances, houses, automobiles etc. and services like bars, restaurants and sports etc. during the crisis. This deferment causes the shift in the demand. Also, there is another consequence which is familiar to deferment and it is known as Pent up demand. This means when for a short period of time, the access to the marketplace is denied regarding certain services. For example, visiting amusement parks or movies for entertainment. The behaviour of consumers after the emergence of Covid 19 pandemic can be studied in four different stages. First stage includes proactive behaviour where the focus was on increasing immunity and taking care of health generally. After this stage, consumers' purchases shifted to protection products like masks, gloves, PPE etc. After this, consumers made themselves prepared for living in isolation and hence they started accumulating supplies and consequently made themselves ready to experience the restrictions in life in the third and the fourth stage. The fifth and last stage is yet to come where it will be returning to "New Normal" (Stanciu et al., 2020). Apart from the shifts in the various paradigms stated above, one major shift which is still needed to be discussed is the shift from offline to online shopping. Due to reasons like modern technology and the preference to choose the eatables and other products personally, some consumers were always reluctant to go for online shopping. But due to this pandemic, consumers are forced to go for online shopping and studies like Nielsen Company's posit that these consumers will not return to the offline shopping methods again. This study shows that if the online platform convinces the consumers regarding certain parameters like quality, efficiency, goods are produced locally etc, will gain consumers loyalty in the coming period post crisis. With the outbreak of the COVID-19 pandemic, it becomes important to know the order and importance of meeting the needs of the customers. It can be observed in the studies conducted since the COVID-19 pandemic crisis began. Throughout this time, based on various studies and reports, when the type and actions of consumption are analyzed within the framework of Maslow's need hierarchy theory, the main focus is to ensure that the first step viz "Physiological Needs" of the consumers such as air, water, food, shelter, clothes, and temperature are attempted to be met. Besides this, the second step in the need hierarchy theory viz "Security Needs," also stands out in the global health crisis. The needs such as personal security, employment, resources, health, property, welfare are often felt at different levels within the system of order and predictability (DUYGUN & ŞEN, 2020).

IV. Conclusion

Major disruptions in the consumer behaviour has occurred due to lockdown and social distancing during COVID 19. Consumption is bound to be changed either due to time or location. Due to flexibility in time but rigidity in location, consumers have adopted various creative and innovative ways. Consumers have got flexibility in work life boundaries as they work, study and relax at home only. Lockdown and social distancing has forced the consumer either to stay at home or if going, then for some urgent work. Thus, if the consumer is avoiding going to the store, then the store has to come to the consumer. This shows that the direction has been changed and due to this distribution, chain can be well managed by the shopping habits during COVID-19. Since the consumer is locked in the house for a long period of time, technology is being adopted profusely to work, study and consume conveniently. Existing habits are likely to either modify or break if consumers are adopting new technologies. To contain the spread of COVID 19, it is also likely that the government will impose new rules and regulations regarding consumption in public places like airports, railway stations, malls etc. During this pandemic, it is vital to understand and study how consumer behaviour is being impacted and what are the main motivators

underlying this change. In the COVID-19 period, determining how consumer behaviour has changed and transformed until today and determining the main motivators underlying this change has been vital for understanding and analysing today.

Implications

This section discusses the implications of the impact of COVID 19 on the consumer Behaviour. First implication of the impact of COVID 19 on the consumer behaviour is the improvisation, which the consumers as well as the business are learning. As businesses are governed by formal procedures, it is not easy for them to change quickly. However, in the process of improvising their infrastructure and business models, many large retailers and supermarkets have started merging their brick and mortar stores with e-commerce platforms thus becoming more resilient to manage a crisis like situation such as Covid-19. The second implication for the managers is to fulfil the needs of their customers in the situation of crisis. As discussed above, whenever any uncertain situation arises people start engaging in stocking up essential goods resulting in mismatch in demand and supply. Thus, to overcome the fluctuations in demand it becomes essential for businesses to integrate their supply chain logistics and their warehouse operations and encourage online procurement of goods. A third implication for management is that different industrial sectors require different technological advancements, unless the consumers learn to use these, they will prefer to go back to the old habits once the situation returns to normal.

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THE EFFECT OF COVID-19 ON PUBLIC TRANSPORTATION

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Purpose: It is not a piece of news that the outbreak of the pandemic COVID 19 has effected many industries thoroughly. One of the industry which got affected due to this epidemic is the Public Transportation Industry. The Public Transit System has to go through much of the challenges which include financial challenges, operating challenges, fleet management challenges and crew management challenges. All these challenges have given rise to several questions, such as what would be the new normal after the COVID 19 crisis and above all, what would be the consumer behaviour regarding the same? Will they prefer to continue the trend or move towards their vehicles for commutation. To answer all these questions, Apart from that, the participants were asked to rank the measures which they find most suitable out of the given list of measure, and they were also given a chance to express their views and opinions about the same.

Design: To conduct this study, a survey was conducted amongst the people who are regular users of the public transportation system. The questionnaire was filled with a variety of people who belong to different demographics. The short survey was filled by 681 respondents from India. For the study we have used 680 responses.

Findings: Majority of respondents would like to travel by their vehicle than taking public transport to commute, be it any public transport. Apart from that, there is a very less percentage of people (Cab- 7.6%, DTC- 34.29%, Metro 14.24%, Shuttle- 16.67%, Others- 9.29%) who are willing to continue the current trend of their commutation, while others are willing to commute through their own vehicles. all the measures mentioned: Compulsion of wearing masks, Use of Sanitizers before entering the transport, Use of Aarogya Setu App, Compulsion of wearing gloves and Allowing limited no. of food joints to operate at the stations, are welcomed by people.

Orinality: this study has been conducted to know that what will be the impact of COVID-19 on the consumer behaviour regarding the Public Transportation System, and what are the people's views on the particular topic, and what measures would people like to take while resuming to take the public transportation. This study also shows what is the opinion of people regarding the same, differentiated demographically on the basis of gender, age, and employment status.

The outbreak of the pandemic Coronavirus (COVID-19) has caused a direct impact on the Public Transportation System. Although the immediate crisis management of COVID-19 is currently in the foreground and the focus is on the epidemiological and economic effects, the security policy consequences of this pandemic must also be kept in mind, both at national and international level (NDA Vienna, 2020). Although the System of Public Transportation was disturbed all over the world it has hugely impacted India, as much of the countries had either reduced their services or continues normally with some rules and restrictions as mentioned in Table 1. Since March 25, the Government of India has imposed a lockdown to contain the spread of COVID-19 outbreak- with the public transportation system limited to essential services only (UITP India, Newsletter). Public Transport in India is inadequate, that has led to a surge in private vehicles, leading to a situation where road-based public transport is causality in sharing the same road space and would victimise the low speeds that congestion brings with itself. Inadequate public transport has led to the development of a huge unregulated informal sector in terms of

shared auto-rickshaws, small busses and many more to further add to the woes. Taking metros in consideration: Delhi Metro, Chennai Metro and Noida metro are all set to get functional, whenever asked for. (Economic Times- 26th May 2020 and Live Mint- 18th May 2020). Public transportation has always served as the backbone of urban mobility. The COVID-19 crisis has had an impact on the public transportation system, however, ridership in major cities in the US, Europe and China, is down by 50-90%, from pre-crisis level. Although public transit agencies are now eligible to receive $25Bin emergency funding under CARES Act, American Public Transit Association (APTA), forecasts a reduction in farebox revenue of 75% over the next 6 months (Pala, 2020). Public transportation isn't just a mobility solution, but a vital service that keeps our cities alive with people at its heart (Mezghani,

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UITP Secretary-General). Taking India into consideration, the total contribution of the urban sector to India's GDP is estimated to be between 63-75%, which was 45% in the 1990s.

Unfortunately, the public transportation system has been particularly hard hit by the COVID-19 crisis and their complete resumption, albeit graded, is not a fairly simple task. The problem of congestion and pollution that plague most Indian cities could worsen soon and as per WHO, the increase in pollution could lead to an increase in the spread of Coronavirus. Everyone is aware of this fact that increased congestion on the roads will eventually lead to an increase in pollution. Therefore, the Public transportation system is still in need. All we need to do is to encourage people to use more public transport as it is safer from a long term prospect. Also, is would use lesser public space.

The Public Transportation System can never come to an end, but surely is going to face difficulty post- COVID-19 crisis, the four major challenges relating to the same would be:
i. Operation and service delivery, which would cover aspects of crowd management to ensure physical distancing, service planning for uncertain demands, difficulty in flexible re-scheduling of services due to lack of tools and physical ticketing system and lack of digital ticketing.
ii. Financial Management, which would include Financial needs for staff salary, capital investment, fuel expenses, operators or vendors and maintenance expenses.
iii. Fleet Management, including, fleet or infrastructure readiness after the lockdown and inadequacy of material for sanitization of the fleet, bus stops and other facilities.
iv. Crew Management, which includes, unwillingness or unavailability of staff to take up operations, lack of equipment to ensure the safety of crew and training of crew for etiquette on physical distancing.

Taking the first challenge into consideration, which is Operation and Service Delivery, this would be very difficult to manage the crowd. Even people would be showing the change of pattern in the ridership. Then how can we develop a new model to show sustainability? What could be some of the measures that could be taken into consideration to manage the system? Is there any requirement of new rules? And most importantly, what is the public opinion on the same? To answer these questions, a short survey was taken taking into consideration 680 respondents from all over the world, and of all age groups, in order to know their opinion about the pattern of ridership they would like to adopt and the measures they would like to take before travelling in the public transport. What encouragement would public need and what would be the new normal, so that people can regenerate interest in public transport again.

Table 1: Situation of Transportation Services in different Countries of the World.

S.No.	Country	City	Situation
1.	Brazil	Rio de Janeiro	Reduced Services
2.	France	Paris	Reduced Services
3.	France	Marseille	Reduced Services
4.	France	Lyon	Reduced Services
5.	Germany	Berlin	Normal Services
6.	Germany	Hamburg	Normal Services
7.	Italy	Milan	Normal Services
8.	Russian Federation	Moscow	Normal Services
9.	Spain	Barcelona	Reduced Services
10.	Spain	Bilbao	Reduced Services
11.	Spain	Madrid	Normal Services
12.	United Kingdom	London	Reduced Services
13.	United States of America	Los Angeles	Reduced Services
14.	United States of America	New York City	Reduced Services
15.	United States of America	Washington DC	Reduced Services

Source: UITP Compilation, Coronavirus (COVID-19) Flash Update- Service and Ridershipof 70+ locations across various modes.

I. Review of Literature

For the Literature review of the particular topic, few other research papers have been studied, to create the relevant survey for the people. The research papers which helped throughout the research showed some of the information mentioned below. It is due to the increase in the travel volume of the people, that the spread of pandemic is obvious, that is the reason, people generally attempt to avoid any sort of public transportation in these times. The result also concluded that the countries which were near Hong-Kong (the pandemic epicentre), had more air travels and were affected more than other countries. (Assessing the impact of airline travel on the geographic spread of pandemic influenza. Gratis, Ellis & Glass; 2003).Like the above-mentioned research was about air travel, this particular research is conducted to test the spread of influenza by the means of busses and trams. The result of the study shows that the new people affected by influenza

were those who travelled by the busses and trams nearly 5 days ago. There is a high magnitude of risk involved in travelling through the busses and trams during the pandemic period and can cause severe damage to the respiratory system. (Is Public Transport a Risk Factor for Acute Respiratory Infection? Troko, Myles, Gibson, Hashim, Enstone, Kingdon, Packham, Amin, Hayward & Van-Tam; 2011). The study represents that, there exists a correlation between public transport and airborne diseases. According to the data collected from Public Health England (PHE) much of the people who travelled from boroughs with higher rates of influenza-like illness have had higher no. of contacts while travelling underground. (Analysing the link between public transport use and airborne transmission: mobility and contagion in the London underground. Gosce & Johansson; 2018). The particular research shows how the public transportation system becomes a transmitting object of influenza through the means of saliva droplets. It has been proved that the saliva droplets could easily travel up to a distance of 2 meters. Therefore, people tend to avoid public transportation system in the situation of a pandemic. (Study on transport characteristics of saliva droplets produced by coughing in a calm indoor environment. Zhu, Kato & Yang; 2006). This research was conducted, where a jet airliner carrying 54 people was delayed by 3 hours and within 72 hours 72 per cent people were infected with symptoms such as cold, cough, fatigue, headache, sore throat and myalgia, due to the same airliners throughout the aircraft. Therefore, it was proved that the public transport with the airliners, were proved to be the source of carrying the infection. (An Outbreak of Influenza Abroad a Commercial Airliner. Moser, Bender, Margolis, Noble, Kendal & Ritter; 1979)

Objectives for the study
The objective of this study is to determine, the impact of the outbreak of the pandemic COVID-19 on the public transportation system and what are the measures that people are ready to adopt or want the authorities to adopt to make the travel from public transportation safer.

II. Research Design & Methods

➤ Participants
To conduct this study, a survey was conducted amongst the people who are regular users of the public transportation system. The questionnaire was filled with a variety of people who belong to different demographics. The short survey was filled by 681 respondents from India. For the study, we have used 680 responses. One questionnaire has been deleted during the data cleaning process. All the participants were the people who used public transport at least once in a month (28.4%). The final list of respondents involved both the genders (43.2% female and 56.8% male); all age groups

(16.9% between 10-20, 48.2% between 20-30, 16.9% between 30-40, 12.6% between 41-50, 4% between 51-60 and 1.3% of the people were 60 above); and all kinds of employment status (47.6% are students, 44.3% are employed, 6.5% are a homemaker and 1.6% retired) who are in a habit of using public transportation (42.6% daily, 16.9% once in a week, 12.1% once in a week and 28.4% once in a month).

➤ Materials
The questionnaire used was full of typically closed questions in which the alternatives were directly given, besides there was an open-ended question as well in the last section, which asked for people's opinion about the current state and the suggestion they would like to present to the transportation authorities. The scales used to know the behaviour of people regarding the ridership pattern post-COVID-19 crisis was the category scale and for knowing the measures they want to take or are comfortable in taking is the staple scale wherein the scale was from -2 to 2 (strongly disagree= -2; disagree= -1; neutral= 0; agree= 1 and strongly agree= 2). In the end, an open-ended question was placed so that people can express their views or some other measures regarding their opinion about what they want as their new normal. The data were collected using a structured questionnaire filled through online as well as offline mode. We found the reliability test score 0.864 and reliability score higher than 0.7 is considered as good.

Observations
The study was conducted to check the consumer behaviour post-COVID-19 crisis, and what measures they would like to take further, to make new normal in the public transportation system. To know the consumer behaviour, the results were segregated demographically based on gender, age and employment. When segregated according to gender, it was discovered that 76.19% of females and 69.94% of males would be impacted by travelling through public transport due to COVID-19 (Table 2).

Table 2: Impact of COVID-19 on Travellers.

Impact on the travelling decision made by people due to COVID-19 on gender basis	People's opinion			
Gender	Maybe	No	Yes	Grand Total
Female	57	13	224	294
Male	67	49	270	386
Grand Total	124	62	494	680

Around 55.1% of females and 73.31% of males would prefer travelling from their vehicle than public transport, even if the authorities are taking strict measures for social distancing (Table 3).

Table 3: Count of people preferring their vehicles post COVID-19 crisis.

People preferring their vehicles over public transportation post even if proper sanitization and physical distancing are followed.	People's opinion			
Gender	Maybe	No	Yes	Grand Total
Female	79	53	162	294
Male	69	34	283	386
Grand Total	148	87	445	680

Taking their ages into account, the decision of more than 55% of people from each age group would be affected by travelling through public transport, due to COVID-19 (Table 4).

Table 4: Impact of COVID-19 on travellers.

Impact on the travelling decision made by people due to COVID-19 on different age groups	People's opinion			
Age Groups	Maybe	No	Yes	Grand Total
21-30	49	24	255	328
31-40	28	10	77	115
41-50	24	12	50	86
51-60	2	3	22	27
Above 60	3	-	6	9
10-20	18	13	84	115
Grand Total	124	62	494	680

More than 55% of people between the ages of 10-31, more than 70% of people between the age group of 31-60 and 100% people who are above 60 would like to prefer their vehicles instead of using public transportation as a means of travelling even if the norms of physical distancing and sanitization are followed (Table 5).

Table 5: People preferring personal vehicle post-COVID-19 crisis.

People preferring their vehicles over public transportation post even if proper sanitization and physical distancing are followed.	People's opinion			
Age Groups	Maybe	No	Yes	Grand Total
21-30	87	40	201	328
31-40	18	14	83	115
41-50	13	7	66	86
51-60	4	2	21	27
Above 60	-	-	9	9
10-20	26	24	65	115
Grand Total	148	87	445	680

When considering the employment status of the respondents, around 60% students, 70% employed people, 75% Homemaker and 100% of the retired people would prefer travelling from their vehicle instead of using public transport post-COVID-19 crisis (Table 6).

Table 6: People preferring their vehicles post COVID-19 crisis.

People preferring their vehicles over Public Transportation, even if proper sanitization and physical distancing are followed.	People's opinion			
Employment status	Maybe	No	Yes	Grand Total
Employed	59	30	212	301
Home Maker	8	3	33	44
Retired	-	-	11	11
Student	81	54	189	324
Grand Total	148	87	445	680

These were the observations regarding consumer behaviour according to their demographics. Now, talking about the measures which should be considered as new normal for public transportation system are ranked according to the respondent's perception, that what they consider more relevant than the other and their opinion what else they want the transport authorities to be taken as a measure.

For the interpretation of the options given to the respondents, which they consider relevant and which they consider as irrelevant, separate options were given, which were:
1. The compulsion of wearing masks
2. The compulsion of wearing gloves
3. Use of sanitizers before entering the transport
4. Allowing limited no. of food joints to operate at the stations
5. Use of Aarogta Setu app

With these options, people were asked to rank them between the numbers -2 to 2 (-2 being awarded as the weight of the expression of total disagreement to the option, -1 being the weight of a little disagreement to the option, 0 being the weight of a neutral response to the option, 1 being the weight of a little agreement to the option and 2 being an expression of a total agreement to the option).

According to the respondent's responses and their interpretation, it was observed that the measure which most of the people wanted to follow was 'The compulsion of wearing masks', with a mean of 1.91 (Approx) and a standard deviation of 348.87 (Approx). The second most preferred measure was 'Use of Sanitizers before entering into the transport', which showed a mean of 1.76 (Approx) and a standard deviation of 238.07 (Approx). After that, the 3rd most preferred measure was preferred to be 'Use of Aarogya Setu App' which had the mean of 1.36 (Approx) and a standard

deviation of 167.6 (Approx). The fourth in a row was the measure 'Compulsion of wearing gloves', which had a mean of 1.35 and a standard deviation of 153.18 (Approx). And the least preferred measure was considered to be 'Allowing limited no. of food, joints to be operated at the stations' with a mean of 1.18 (Approx) and a standard deviation of 133.39 (Approx) (Table 7).

Table 7: Mean and Standard Deviation for different Measures.

Measures	The compulsion of Wearing Masks	Use of Sanitizers	Aarogya Setu App	Compulsion of Gloves	Limiting no. of Food Joints
Sum of wifi (weights of measures * Frequency of respondents)	1301	1196	926	918	801
Mean	1.9132	1.7588	1.3618	1.35	1.1779
St. Dev.	348.7801	238.0672	167.6022	153.1764	133.3885

The preference of the above was decided as per the mean of different measures. Another observation is that the Standard Deviation is very high of all the measures. This is all due to the uneven selection of people. From, the Table 8, we observe that the standard deviation of the 1st measure i.e. 'Compulsion of wearing masks' is the highest, as most people prefer to agree with the fact that it is important and none of the respondents shows a disagreement. The second-highest standard deviation is of the 3rd measure i.e. 'Use of sanitizers before entering into transport' and the reason for which is only 7 people out of 680 disagreeing with the particular option.

Then comes the 'Use of Aarogya setu app' which shows a standard deviation of 167.60 (approx.), and the reason for this could be much more people are towards disagreement of the option. Then are the least preferred options, 'Compulsion of wearing gloves' and 'Allowing limited no. of food joints to operate at the stations' with a standard deviation of 153.18 (approx) and 133.39 (approx.) respectively. These deviations are also high as still there is a vast gap between people who are agreeing to these options and people who are disagreeing to these options, but still, the gap between the agreement and the disagreement is lesser than the other measures (Graph 1).

Graph 1: Prefererence of options among Respondents.
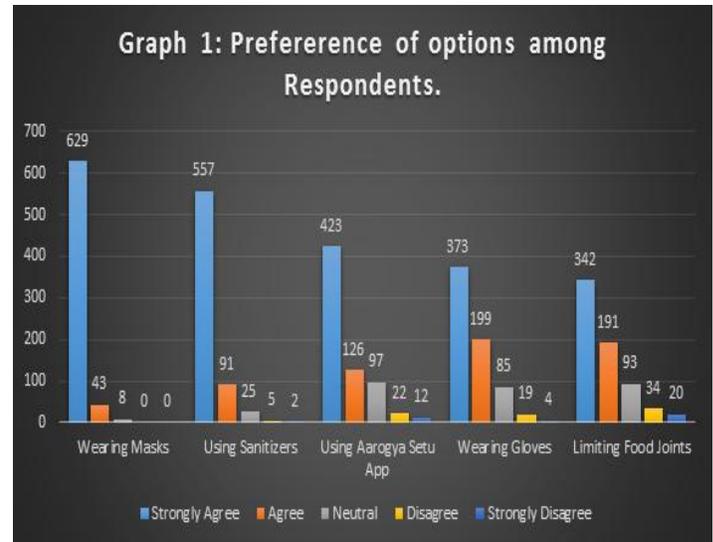
Therefore, as we can see from the graphs, the responses of most people in all the measures are 'strongly agree' (graphs 1-5), and very less no. of people tend to disagree with other options.

III. Results and Discussion

From all of our observations, we conclude came to several conclusions, about consumer behaviour relating to the public transportation system and what measures they would like to want authorities to take post-COVID-19 crisis. Taking into account, all the observations above, we can conclude that Majority of respondents would like to travel by their vehicle than taking public transport to commute, be it any public transport (Table 8). Apart from that, there is a very less percentage of people (Cab- 7.6%, DTC- 34.29%, Metro 14.24%, Shuttle- 16.67%, Others- 9.29%) who are willing to continue the current trend of their commutation, while others are willing to commute through their own vehicles (Table 9).

Table 8: Consolidated data of people preferring their personal vehicle post-COVID-19 crisis.

Count of people who would prefer their personal vehicles post COVID-19 crisis even if sanitization and physical distancing is followed for different modes of transport	People's Opinion			
Modes of transportation	Maybe	No	Yes	Grand Total
Cab	14	9	96	119
DTC	10	12	13	35
Metro	96	48	193	337
Others	28	17	138	183
Shuttle	-	1	5	6
Grand Total	148	87	445	680

Means of Transport	Use own vehicle	Continue Trend
Cab	80.67%	7.56%
DTC	37.14%	34.29%
Metro	57.27%	14.24%
Others	75.41%	9.29%
Shuttle	83.33%	16.67%

Thinking about what other measures people would like the transport authorities to take, to make the ride safer, would include all the options presented in the survey, as the outcome (in the form of the mean) was favourable (positive no.) which indicated that all the measures mentioned: Compulsion of wearing masks, Use of Sanitizers before entering the transport, Use of Aarogya Setu App, Compulsion of wearing gloves and Allowing limited no. of food joints to operate at the stations, are welcomed by people. Apart from these measures, the respondents were also asked if they had any ideas or opinion about what other measures could be taken, in which a lot of people showed they're shared their opinion and views that how could the travel through public transport become safer, a compilation of which is given in Table 10.

Table 10: List of other suggestion of measures, which could be taken by the transportation authorities.

S.No.	Suggestions
1	Tapping no. of footfalls
2	Alternating Seating
3	Spots drawn of Station and stops
4	Public Transport being operated on 30% capacity
5	Vehicle to be sanitized after every journey
6	Sanitization Tunnels
7	Pre-booking of tickets online
8	Travel while sitting to be allowed only
9	Health monitoring of the staff
10	Imposing penalties
11	More usage of machines than humans
12	Screening of each traveller before entering the station or vehicle
13	Stopping the vehicle at every alternate station/ stop
14	Increase in no. of vehicles to facilitate every passenger.
15	Development of apps for cashless mode of payment
16	Usage of QR codes for payment
17	Spreading disposable sheets on the seats of the vehicle, which could be changed after every ride.
18	Appoint a person for sanitizing vehicle at every petrol pump.
19	Staff to be given proper PPE kits

Most of the suggestions were very appealing and had innovative. This suggestion table had meant for the demonstration, that what the people want their new normal in the public transit system to be. Most of the respondents were daily users of the public transport and knew what kind of drawback they are and would be facing post-COVID-19 crisis. With the outbreak of the pandemic COVID-19, the Public Transportation System has received a new opportunity, to restructure the whole system of processes followed earlier, and create a new normal for the people, which would be safer and trustworthy for the people so that they start using public transportation system more often. Though the public Transit system is considered the backbone of the urban mobility, it would get affected to some extent post-COVID-19 crisis and that would be the time, when the authorities would show their efficiencies.

IV. Conclusion

The particular research could play a vital role in the decision making process of public transportation authorities. The study highlights what would be the consumer behaviour of people towards the public transit system post-COVID-19 crisis, and therefore, the authorities can come up with new schemes and branding techniques to change their prevailing perception. Also, the study highlights the measures, people expect to be taken in terms of its relevance to them and other suggestions by the respondents. This act can assist the Public Transportation Authority so that they can take measures to ensure proper physical distancing and sanitization.

Limitations
Though the study has been conducted taking into account all the aspect, still, it deals with some of the limitations. The first limitation could be a limited sample size. The sample size taken to represent the views of people all over the world is a very small part of it (680 respondents). Secondly, though the people are demographically divided based on their gender, age and employment status, still an important factor has been neglected, which is the location of the respondent. Some of the respondents represent the rural areas while others represent the urban areas, and the modes of transport are highly differentiated between these 2 areas. Thirdly, the survey was circulated all over the world, and India is much more populated from the other countries of the world have different kinds of facilities and services to manage people, therefore, the nationality plays an important role here.

Further Scope of Study
In order to study further upon the same topic, the sample size could be increased, in order to get more relevant results. Apart from that, results could be segregated based on the respondent's location, and the facilities available in their locality. Another factor that could be taken in mind is respondent's nationality, which can be distinguished according to the facilities and services available in that particular economy. And lastly, more modes of transportation

could be added to the responses so that a clear projection of the results is depicted.

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COMPARATIVE ANALYSIS OF BSE SECTORAL INDICES DURING COVID-19 AND VOLATILITY FORECASTING USING GARCH MODELS

Deepmala Jasuja* Preeti Sharma**

Purpose- *The current study intends to study the impact of Covid19 on various sectors of Indian economy. The study is focused on the comparison of the financial performance of 17 BSE Sectoral Indices during the covid period. In addition to this, volatility forecast has been made for a period of 30 days.*

Design & Methodology- *To compare financial performance ANOVA, and CAPM models have been applied on daily data of adjusted closing prices of 17 BSE sectoral indices is collected from January – July 2020. ARCH and GARCH models have been used to predict volality.*

Findings *– Results suggests that Capital goods, BANKEX, Auto, Consumer durables, Finance, Industrials, Telecom, and Power have negative average return in the said duration. Energy, FMCG, Healthcare, Information technology, Metal, Oil and Gas, Realty and Utility have positive average return. Further the systematic risk is highest in case of Finance sector ,while It is least in Realty, Oil and Gas, Healthcare, and Utility.*

Originality *– The Current research bridges the gap in existing literature by making a comparison of performance of BSE sectoral indices and volatility modelling during the given duration,*

Keywords: Covid-19, Pandemic, Economic Downturn, Coronavirus, Impact, Outbreak, Recession, Sectoral, GARCH, Indices, BSE.

JEL Codes: E2, E5, E6, G2

The COVID19 has spread at an exponential rate, infecting millions of people and bringing economy to a standstill. The Great Shutdown' due to COVID - 19 is speculated to lead us to a Global recession, which is feared to be more devastating than 'The Great Depression' of 1930 (Gopinath, 2020).Ever since the COVID striked India, markets appear to be under fear and uncertainty (Business World 2020) which has sent the crashing level not witnessed ever since financial crisis of 2008. It is estimated that India is to drop about $4.5 billion) every day during the lockdown (Mohanty, 2020). Pandemic has impacted almost every sector with some being worst affected and other being resilient.

There are numerous research carried out to see the impact of novel coronavirus on specific sectors. Zhang et al. (2020) discovered that risk of financial global market increased after this pandemic and the stock market became volatile and uncertain. (Ayed et. al 2020) took different sectors of Tunis Stock Exchange and found that consumer cyclical structure is the worst affected amongst all. Particularly, banking sector is in crisis due to high default rates, high NPAs, falling risk-weighted asset values and interest incomes (Barua & Barua, 2020). (Yan et. al 2020) analyzed the potential impact of coronavirus on equity market and found that in the short run markets are affected adversely whereas in long run markets

correct them. (Onali, 2020) saw the effect of covid19 on volatility in financial markets and found that value of the negative impact on the performance of stock market increased three times. The lockdown had multiplier effect on Automotive Sector as the sector was in slowdown and COVID lead to truncated consumer demand with affecting revenues and cash flows (Business World, 2020). FMCG and retail sector is no far in the race as the macroeconomic dynamics, delayed demand, consumer behavior and supply chain disruptions has changed the entire outlook (Shetty et.al 2020).So, in this paper researchers have attempted to study the impact of COVID-19 on returns of sectoral indices of Bombay Stock Exchange.

I. Review of Literature

Ever since the pandemic has grown out rightly, researchers all over the world are focused into looking the aftermath of COVID-19 on the economic outlook and different sectors.

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(Mahendra Dev & Sengupta, 2020) discussed about the effect of Covid-19 on Indian economy and has suggested some policy measures and recommendations to revive up the economy. (Ozili & Arun, 2020) has seen spillover on majority of sectors in India including the influence of social distancing policies on economic actions and sector specific indices. Where in it was concluded that mountings lockdown days, Central Bank announcements and cross-country travel ban significantly impacted the level of operations and sectoral stock market returns. (Al-Awadhi, Alsaifi, Al-Awadhi and Alhammadi, 2020) in their study used the panel data approach to examine the effect of COVID19 on stock market of China and the findings indicate that COVID-19 have significant negative effects on stock returns. (Mazur et. al 2020) investigated the US Stock Performance triggered by COVID 19 where it was found that natural gas, food, healthcare, and IT stocks achieved high positive returns, whereas petroleum, real estate, entertainment, and hospitality sector shares fall drastically.

Looking on to the impact of current pandemic on Indian economy the researcher has attempted to analyze the spillover on various sectors of the economy. Similar study was conducted by (Nguyen 2020) to examine the early impacts of corona breakout on stock market returns of 11 sectors through equity values of 10 countries. Amongst the sectors considered, Communication Services, Consumer Goods, Health Care, Information Technology, and Utilities came out to be resilient whereas Energy sector was worst affected. (Elsayed & Abdelrhim,2020) measured the spread of coronavirus by 'Cumulative Cases' and 'Cumulative Deaths', taking dependent variable as responses of Egyptian sectoral indicators and it was discovered that return of the stock market sectoral indices seems to be related to cumulative cases and deaths than daily indicators. (Ashraf 2020) examined the response of stock market to the confirmed cases and deaths from COVID-19 and it was suggested that stock markets reacted more proactively to the growth in number of confirmed cases as compared to the growth in number of deaths. Researchers have gone deeper into the problems and found that Coronavirus has impacted several other sectors and few studies have focused on sector specific returns.

II. Research Design & Methods

Research Objectives

1. Measuring the financial efficiency of all the sectoral indexes and contrasting their risk and returns during selected period of Covid-19.
2. Volatility Prediction of Sectoral indices (having ARCH effect) using GARCH model.

Data Description and Data Collection Source

The daily data of closing prices for 17 indices sector wise were obtained for the current study from S&P BSE SENSEX's official website for the period 1 January to 20 July 2020.The returns of all the indices have been calculated after converting the values into their natural log form.

Statistical tools used

The comparative study of indexes uses the Analysis of variances (ANOVA) and CAPM model . ANOVA is applied to check the equality of means of return on series' . CAPM to estimate sytematic risk in the current study has been applied using ordinary least square (OLS) regression.Since the problem of heteroscedasticity in times series is prevelent, we have used the ARCH (Engle, 1982) and GARCH (Bollerlev, 1986) models in current study due to presence of volatility clustering (Roy, 2018).

III. Results & Discussion

The results of Table 1(ANOVA) and (Robust Tests of Equality of Means) accept the null hypothesis of equality of average return of all the series'. While the mean log returns show consistency, the standard deviation(risk) associated with each index tends to be different according to the descriptive statistics of the regular index returns as well as the systemic risk measured by CAPM.

Table 1: Analysis of Variance (ANOVA).

Log_return					
	Sum of Squares	Df	Mean Square	F value	Sig.
Between Groups	0.433	15	0.029	0.368	0.987
Within Groups	169.183	2160	0.078		
Total	169.616	2175			
	Statistic[a]	df1	df2	Sig.	
Welch	0.434	15	814.522	0.969	

Source: The Authors Calculation

Tabel 2 presents the calculations of beta using ordinary least square regression equation. As per the results the systematic risk is highest in case of finance then in bankex, Energy, telecom, Industrails, and auto respectively. While it is least in realty, oil and gas, healthcare, and utility.

Table 2: Results of Alpha and Beta (Using OLS).

Sectoral Index	β(beta)	p value
Capital Goods	0.93	<2e-16 ***
BANKEX	1.27	<2e-16 ***
Auto	1.05	<2e-16 ***
Consume durables	0.80	<2e-16 ***
Energy	1.27	<2e-16 ***
Fast moving consumer goods	0.71	<2e-16 ***
Finance	1.47	<2e-16 ***
Healthcare	0.58	<2e-16 ***
Industrials	1.13	<2e-16 ***
Information technology	0.88	<2e-16 ***
Metal	1.00	<2e-16 ***
Oil and gas	0.51	<2e-16 ***
Telecom	1.13	<2e-16 ***
Realty	0.41	<2e-16 ***
Power	0.94	<2e-16 ***
Utility	0.62	<2e-16 ***

*** significant at 1% level of significance
Source: The Authors Calculation

From the results of table 3, it can be observed that all series are having ARCH effect except Capital goods, Consumer durables, Realty and Utility. The series' having ARCH effect have been processed further to create GARCH models. The unit root test results confirm stationarity of indices at level.

Table 3: Results (ARCH LM-Test).

Sectoral Indices	Chi-Square value	p-value	Sectoral Indices	Chi-Square value	p-value
BSE SENSEX	37.97	0.000	Industrials	23.15	0.027
Capital Goods	20.10	0.065	Information technology	43.32	0.000
BANKEX	26.64	0.009	Metal	56.108	0.000
Auto	24.61	0.017	Oil and gas	32.825	0.001
Consume durables	20.08	0.065	Telecom	26.297	0.009
Energy	55.91	0.000	Realty	27.385	0.068
Fast moving consumer goods	33.01	0.001	Power	22.079	0.037
Finance	27.05	0.008	Utility	43.479	0.000
Healthcare	27.12	0.007			

Source: The Authors Calculation

In this analysis, we estimate the basic GARCH (1, 1) variants derived below. According to Brook and Burke (2003), the model lag order (1, 1) is satisfactory to seizure all the clustering of volatility existing in the data. In all estimations as per table 4, the terms ARCH (α) and GARCH (β) are positive and significant (at 1% level of significance). The sum of the coefficients of ARCH and GARCH (α + β) is very

similar to one, suggesting that the volatility shocks are persistent. The sum of coefficient adjacent to unity is also a signal of a covariance stationary model with a high degree of persistence; and long recollection in the conditional variance. The response function to shocks is likely to perish gradually because the rate is high implying if there is a new shock, over a longer time it will have an effect on returns.

Table 4: Results of GARCH estimation.

Sectoral Index	Estimate			
	Mu	omega	alpha1	beta1
BSE Sensex	0.0063 (0.5862)	0.0019 (0.09)	0.3431 (0.002)	0.6559 (0.000)
BANKEX	-0.0152 (0.3776)	0.0023 (0.0613)	0.2309 (0.0002)	0.7681 (0.0000)
Auto	0.0049 (0.7835)	0.0020 (0.1101)	0.2095 (0.0014)	0.7878 (0.0000)
Energy	0.0219 (0.2779)	0.0055 (0.1477)	0.3089 (0.0204)	0.6873 (0.0000)
FMCG	0.0122 (0.2905)	0.0012 (0.2106)	0.2661 (0.0007)	0.7329 (0.0000)
Finance	-0.0127 (0.5376)	0.0043 (0.0374)	0.2730 (0.0012)	0.7260 (0.0000)
Health care	0.0310 (0.0015)	0.0017 (0.1197)	0.3821 (0.0047)	0.6169 (0.0000)
Industrial	0.0036 (0.8456)	0.0042 (0.1161)	0.3039 (0.0054)	0.6951 (0.0000)
Information technology	0.0256 (0.0387)	0.0032 (0.2298)	0.3662 (0.0027)	0.6329 (0.0000)
Metal	0.0168 (0.2742)	0.0033 (0.1440)	0.3212 (0.0185)	0.6778 (0.0000)
Oil and gas	0.0087 (0.2914)	0.0006 (0.2091)	0.2682 (0.0006)	0.7309 (0.0000)
Telecom	-0.0097 (0.5330)	0.0025 (0.0357)	0.2759 (0.0008)	0.7231 (0.0000)
Power	0.0027 (0.8551)	0.0028 (0.1140)	0.3048 (0.0038)	0.6942 (0.0000)

Source: The Authors Calculation

Table 5 displays effects of estimation of volatility using model GARCH. The volatility forecast was made 30 days in from the last data date. The table below shows highest to lowest volatility. It is highest in case of energy and lowest in case of oil and gas.

Table 5: Average volatility.

Sectoral Index	Average Volatility	Sectoral Index	Average Volatility
Energy	0.390487	Power	0.2335
Information technology	0.343277	Automobiles	0.231543
Finance	0.333723	BSE SENSEX	0.207293
Metal	0.30391	Health care	0.185053
Industrials	0.285877	FMCG	0.15639
BANKEX	0.25935	Oil and gas	0.112354
Telecom	0.252867		

Source: The Authors Calculation

IV. Conclusion

Future Research Implications

The present study analyzed the effect of COVID-19 on Indian sector indices. It is noteworthy that the average return during this time was negative for some of the sectoral indices, which have been sensitive to all changes in the economy. In the case of healthcare, the highest average return may be seen while in the case of BANKEX the lowest. In the case of energy, the highest average volatility can be noted down and in the case of oil and gas, it is the lowest. The time taken for the analysis shows volatility caused on Indian stock market. Currently the market graph can be seen with no clear pattern in the uncertainty process but in the analysis, the research tried to predict volatility using GARCH model for coming 30 days. From the forecast, it can be observed that for the coming month (as predicted) the Indian market will continue to see a huge increase in volatility. From the past pandemic experience, It can be concluded that the pandemic has its own duration (usually an year) and the economy is bound to return back to its usual risk and scenario of return at its end and show market corrections in long run.Considering the limitations of the current study, areas of future research could be to take few more sectors into study like MSMEs and Agriculture which are worst affected by the pandemic .It is also suggested that the duration of study can also be increased to study the volatility clustering more accurately.

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A Book Review On "The Luxury Strategy: Break the Rules of Marketing to Build Luxury Brands"

Vinamra Jain *

In the book, Kapferer and Bastien have focussed on what to do and what not to do when branding in luxury industry. The authors have given impetus on the strategic perspectives with relation to marketing activities. A wonderful approach provides clarity on the gap between premium and luxury. The authors have also discussed the differentiating constructs amongst both fashion and luxury products and services.

The readers of this book will be able to understand how the concept of luxury evolved, what is the meaning of luxury in the lives of people in the olden days and that it is today. They have re-invented the 'Anti-laws of marketing' and given 24 updated principles in a chapter where they have clearly spoken about aspects one must bear in mind when creating their marketing strategy for luxury products and services. Through these aspects the authors are being specific with hot the luxury marketing works differently from convention product marketing. Some of such aspects speak about 'Do not respond to the rise in demand', 'Role of advertising is not to sell' and 'Do not relocate your factories' to name a few. The authors talk about crating scarcity of their products in the market rather than ensuring abundant quantities. By doing so, the brand ensures rarity is maintained and the charm to carry or use that stays with the consumer. The authors quote, "Each Rolls-Royce Phantom requires 2,600 hours to be completed, that is, 10 times as much as a Ford". They re-emphasise this with more examples like "At Ferrari, production is deliberately kept to fewer than 6,000 vehicles a year – rarity value sells". They have even been categorical about how luxury companies must never look for ways to reduce their cost of production. Porsche the car company's Chief Executive Officer is generally credited with what he allegedly stated, 'When I see two Porsches on the same street, I begin to worry'. Such strong statements are testimonials of bosses from such brands about how luxury products are not meant for many, even if they could afford it.

In the chapter named, 'Facets of luxury today' both authors have defined the importance and the role 'brand name' plays in this industry. Most of the products would very visibly showcase their brand/logo on them. For example, the printing of the 'double G' logo is printed very distinctively many of Gucci's products. In some part of the book the authors talked about how vital the history, culture and heritage of the town/country is from there the product originated. This plays in favour of the product giving it a sense of self-assurance. They have focussed on topics ranging from 'Consumer attitudes vis-à-vis luxury', 'Developing brand equity', 'Brand stretching', 'Pricing', 'Distribution', 'Communication' and 'Financial and HR management' in the context of luxury. Towards the final part of the book Kapferer and Bastien write about the various 'Business Models' which have over time been tested with success and have been easy to implement and execute by luxury brands, conglomerates and houses like Louis Vuitton Moet Henessey, Piaget, Cartier, Giorgio Armani, Bugatti etc. In my opinion the authors in these deliberations have spoken about 'how and when to enter the luxury segment', and even more importantly 'how to end the brands luxury tag' without closing business and by continuing to remain in the business and moving to a newer segment. The authors have beautifully showcased examples of companies like 'Apple' and 'Mini' and how they are trying to follow and define luxury in their own way. In this edition, a fresh perspective to enter the markets like 'BRICS (Brazil, Russia, India and China) and CIVETS (Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa)' has also been suggested to luxury business houses. Constructive criticism is always considered important in the learning curve. Once, the reader goes through the initial few pages there are many new things to learn especially for people who have not read the first edition. I do feel that the authors may have included a chapter dedicated to the upcoming brands and designers from developing nations like India, China and Brazil how they could eventually strategize to reach and do business shoulder to shoulder with the European and American luxury houses. I would like to close by hoping as an Asian reader, that, I would like the authors to present a third edition of the book to be a functioning hand guide for upcoming designers and brands especially from the developing nations who are interested in catering to the happy few of the world.

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JIMS 8M: The Journal of Indian Management and Strategy

Call for Papers: Special Issue

on

"Covid-19 – Work -Life Balance and Sustainability"

This special issue of 8M Journal invites papers to address issues pertaining to pandemic and its outcome. It seeks to contribute to the knowledge in order to develop the idea of sustainability of economy, environment and society in the wake of the pandemic, which has affected millions across the world in terms of both physical existence and livelihood. One of the significant impacts of this pandemic and its spread across the globe has been on businesses as mobility has been restricted across borders, countries and sectors. The outbreak has implications on the operational mechanism of businesses, how costs need to be managed and the workforce to be restructured. Globe has witnessed slowing of businesses, disrupted supply chains and anxious workforce. The initial reaction to the pandemic was halting operations as far as possible, keeping employees in the safety of their homes and many companies across the globe have started rethinking strategies about long-term impact and mitigation. At the same time, employees are also dealing with multiple issues while working from home. Thus, this arrangement has proved to be isolating for some and workers often find themselves juggling with the entire set up, this pandemic has proven to be a uniting force for a sentiment of struggling to balance work and personal responsibilities together. A pertinent question is whether this outcome of Covid-19 will represent a permanent shift in attitude for both the employers and employees and sustainability of an organization. Covid-19 has brought this need to devise means to sustain and bring harmony between economic progress, society and planet earth. It is now primarily an urgent need to bring a healthy balance between people, businesses and environment.

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