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IMPACT OF CURRENT EVENTS ON
THE FUTURE OF BUSINESS

23rd & 24th April 2021

Editors

Dr. Yamini Meduri

Dr. Vishal Kutchu

Publication Partner



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VIGNANA JYOTHI INSTITUTE OF MANAGEMENT

Pragathi Nagar (via) Kukatpally, Hyderabad - 500 090

E:mail: conference@vjim.edu.in **website:** www.vjim.edu.in





VIGNANA JYOTHI INSTITUTE OF MANAGEMENT

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4800/24, 1st Floor,
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Delhi-110002

Editorial Office

A-4/18, 1st Floor,
Pocket 4, Sector-15, Rohini,
Delhi-110089

Tel: +91-11-41741293; Mob.: 8826623730, 8826623732, 9873434091

E-mail: editorial@journalpressindia.com; info@journalpressindia.com

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About the Conference

At the outset, the multifarious Covid-19 pandemic impacted a vast majority of individuals, businesses, and nations, one way or the other. The consequences of the predicament might have impinged various stakeholders in a variegated manner, but none have been exempted. Moreover, the unforeseen fluid situation has precipitated challenges to economies, organizations, and individuals alike. Apart from disrupting economic activities, the ubiquitous Covid-19 has subverted political, technological, social, and cultural domains. However, the distinctive Covid-19 pandemic has unfurled new-fangled approaches for businesses, employees, employers, and economies, initiating transformation. Consequently, the imperative to perceive, modulate and manage the exigencies has taken centre stage. Identifying the tenable path forward has become the primary focus for all businesses and nations, both big and small.

Though not a panacea for every challenge, innovation and adaptation have emerged as the 'mantras' for survival and sustenance of nations, businesses and individuals as a whole during the quandary. Technology driven solutions have emerged as the portents of the futuristic paradigms for workplace transformation and business prototypes. We are currently witnessing a demand for smart capabilities powered by Machine Learning (ML) and Artificial Intelligence (AI). In addition, Artificial Intelligence is gaining wider acceptability across the globe thus facilitating product improvisation and customization. Additionally, market experts have resorted to empirical testing of these products for their performance and cost-effectiveness. Remote workplaces, which earlier were a distant dream, of late, have been widely applauded, are a consequence of technology. As the time progresses, the need for developing sustainable economic and financial capabilities is increasing exponentially. More than ever, the value of sustainable supply chains driven by quality, quantity and reach is realized now. The prominence of building performance driven organic infrastructure using renewable solutions has gained substantial attention.

Editors

Dr. Yamini Meduri

Dr. Vishal Kutchu

About Vignana Jyothi Institute of Management, Hyderabad



VJIM, Hyderabad, a premier B School was established in 1993 to offer quality programs in management education, approved by AICTE, accredited by NBA and NAAC and rated National A** by CRISIL. VJIM aims at grooming professional managers by providing learning opportunities centred on the requirements of industry. A cornerstone for this initiative is delivering education modelled after international standards, steeped in Indian value system. This is facilitated by qualified faculty members with both academic and industrial research expertise and ably mentored by Governing Council members.

The institution enjoys 2000+ alumni in the corporate and entrepreneurship with 200+ students graduating every year. Faculty use innovative pedagogical tools and in-depth research to deliver the curated content that help the graduates be industry-ready. Research at VJIM focuses on providing practical solutions to real life business problems. It aims at linking theory with the application dynamics of the industry. VJIM strives to participate in research which the business world can connect with. Innovation and market relevance has been our hall mark.

About AMDISA

Supported by



AMDISA - *Association of Management Development Institutions* in South Asia is a network of Management Education and Management Development Institutions in South Asia. It has 304 members. Its mission is to “Promote management education and management development activities in South Asia, taking into account the economic, social and cultural context of the Region, with the firm dedication to world-wide exchange of experience and ideas in the fields concerned.”

AMDISA is the only Association which networks management development institutions across the eight South Asian Nations through exchanging information, facilitating inter-country research initiatives, conducting regional conferences, workshops, colloquia and programmes, and thereby providing a forum for interaction among academics and business leaders.

AMDISA launched the global benchmark quality assurance and accreditation system for Business Schools - SAQS. SAQS is the quality assurance scheme run by AMDISA as a service to the management education profession worldwide. SAQS emerged in an EFMD - AMDISA cooperation through a European Union funded Asia - Link project in 2003-04. It is inspired by EFMD's EQUIS criteria guidelines and is designed as an international accreditation system. It is a globally benchmarked system for mentoring, quality improvement, quality assurance and accreditation. SAQS accreditation processes lead to improvement through highlighting the need to meet internationally accepted quality standards. SAQS Quality Label is a recognition to the institution's commitment to Quality and Quality Assurance through continuous improvement. SAQS accreditation is institutional. Institution being defined as the organisational unit providing business and management education. So far 26 schools have been granted Accreditation - 23 from India and 3 from Pakistan; and 10 schools have been granted Re-Accreditation - 9 from India and 1 from Pakistan. 12 schools are currently under Accreditation / Re-Accreditation - 1 from Bangladesh, 5 from India, 1 from Maldives, 1 from Nepal, 3 from Pakistan and 1 from Sri Lanka. More schools in the region are expected to seek the academic guidance and strategic audit provided by SAQS in the near future.

Message from the Director

It brings me immense pleasure to facilitate the team organizing the 3rd International Conference on “Impact of current events on the future of business”. I am happy that the academic conference is focussed on understanding how businesses responded strategically to the complex and volatile Covid-19 Pandemic. It becomes vital for the researchers, academicians, business professionals, corporate houses to come together to learn from each other to understand the challenges and learn about the opportunities that the global pandemic has thrown to the world around.



The changing business environment has mandated the business & academia to transform and adapt the new learning environments to ensure the cycle of knowledge development and knowledge sharing continues even in these difficult times. Hence, the deliberation on these issues will surely contribute to the body of knowledge and I hope the conference adds significantly in that direction.

I wish great success to Vignana Jyothi Institute of Management and to the team of the 3rd International Conference for a great event ahead.

Dr. Ch. S. Durga Prasad
Director, VJIM-Hyderabad

Message from the Conference Team

The Covid-19 pandemic has impacted businesses globally. The year 2020, was an eye opener as well as a myth buster to one and all. Establishments, however large and professionally managed, had to learn new lessons from and for the situation. Companies, big and small, had to innovate and adapt to match the mercurial events taking shape. It is by now apparent to all stakeholders that anticipation, innovation, and adaptation are the 'mantras' for sustainability. As the adage reads, 'when the going gets tough, the tough get going', only those who have seasoned from man-made and natural calamities can endure.

Businesses across the world are struggling to survive as the pandemic forges ahead. However, it is not impossible to find examples of innovative businesses that have learnt how to thrive during this crisis. One such striking example is telemedicine. Patients and health service providers have been forced into live-video visits, which are surprisingly effective. To quote Michael Okun, national medical director for the Parkinson's Foundation, 'We accomplished in 10 days what we have been doing for 10 years-fighting and advocating and trying to get telemedicine up and going. Virtual classes, workshops and online training have emerged a blessing not only for academic purposes but also for corporate communication as well as gym and yoga classes. As consulting firm McKinsey writes in their recent article, Ready, set, go: Reinventing the organization for speed in the post-COVID-19 era, companies must "increase the speed of decision making, while improving productivity, using technology and data in new ways, and accelerating the scope and scale of innovation."

The life lesson that the pandemic roller coaster teaches us is in fact contradictory to the Darwinian theory of 'the survival of the fittest.' What we need to realize now is 'the survival of those who can sustain, innovate and adapt'.

In our efforts to understand and build sustainable solutions, we have tried to put together the required resources to discuss and deliberate through our 3rd International Conference on "Impact of current events on the future of business".

Dr. Ch. S. Durga Prasad, Convener

Dr. Yamini Meduri, Editor and Co-Convener

Dr. Vishal Kutchu, Editor and Member

Dr. Sagyan Sagarika Mohanty, Member

Mr. N Srinivas Chakravarthi, Member

Mr. Raghu Mantha, Member

Preface

The multi-faceted Covid-19 pandemic hit every individual, every business, and every nation. The impact might be different for different stakeholders, but none is missed. The unparalleled pandemic of Covid-19 pushed the boundaries of the environments that the employees, employers, businesses, and economies are operating in. A sudden drift in the work environment has brought in unexpected challenges to a lot of organizations and hence, the economies around the world. The impact is felt in cultural, social, business, political and technological spheres. As people, businesses and nations are impacted, the imperative to understand, temper and manage these forces is taking center stage. Identifying the path forward has become the primary focus for all businesses and nations, both big and small.

The current pandemic has presented unprecedented complexities to businesses around the world and organizations are attempting to survive and sustain through the complexities. The workplace and business transformation has been backed by the every growing technological advancements that rapidly rearranging the concept of work. We are now witnessing a call for smart capabilities powered by Machine Learning (ML) and Artificial Intelligence (AI). As AI is entering new markets or adding new products to existing markets, marketers are testing which of these technologies enable faster and less expensive time-to-market strategies. Furthermore, we are witnessing a resounding applause to remote workplaces which was a distant dream earlier. Also, a need for developing sustainable economic and financial capabilities is exponentially increasing as the time progresses. More than ever, the value of sustainable supply chains driven by quality, quantity and reach is understood now. The prominence of building performance driven organic infrastructure using renewable solutions has earned enough attention.

Against this backdrop, a two-day virtual International Conference is planned to provide a forum to showcase relevant research. The conference will be conducted by Vignana Jyothi Institute of Management (VJIM), Hyderabad, India, between 23rd & 24th April, 2021.

Editors

Dr. Yamini Meduri

Dr. Vishal Kutchu

Conference Team

Dr. Ch. S. Durga Prasad, Convener

Experienced Director with a demonstrated history of working in the education management industry. Skilled in Analytical Skills, Coaching, Conflict Resolution, Executive Coaching, and Instructional Design. Strong professional with a Post Graduation focused in Human Resources Management/Personnel Administration, General Management from Andhra University.



Dr. Yamini Meduri, Editor and Co-Convener

A Design Thinking professional from MIT Sloan School of Management, Yamini Meduri is an HR by passion and a teacher by Profession. In less than nine years, her research interest facilitated her to publish indexed publications to her credit along with talking her research in international conferences. A recipient of 'Young Scientist' research grant from Dept. of Science & Technology, Govt. of India for her research in Disaster Recovery study.



Dr. Vishal Kutchu, Editor and Member

Dr. Vishal Kutchu is a Senior Assistant Professor at Vignana Jyothi Institute of Management. He has over 18 years of teaching experience teaching Financial Statements Analysis, Enterprise Valuation and Working Capital Management. He is also a visiting faculty at MANAGE and NIAM, Jaipur. His research interests include market efficiency studies and case studies especially in accounting and valuation. He has published papers on testing weak form efficiency and semi strong efficiency of Indian Stock Market in national journals and presented papers in national and international conferences.



Conference Team

Dr. Sagyan Sagarika Mohanty, Member

She is a Post graduate in Business Administration with specialization in Marketing Management. Her area of interest in teaching as well as research includes brand management, marketing communication as well as Strategic Management. She has completed her Ph.D. in Marketing Management from Utkal University, with relevant academic experience of more than 14 years in different management institutions. She has a number of seminar presentation and publication to her credit in various national and international journals.



Mr. N Srinivas Chakravarthi, Member

Nekkanti Srinivas Chakravarthy, an MA in English & Linguistics and an MPhil in Applied Linguistics, is a seasoned professional with over 34 years of extensive experience in teaching English Language, Linguistics, (ESP-English for Specific Purposes- Business, Technical, Medical and Legal), British, American and Commonwealth Literature, as well as soft skills and CRT programmes in India and globally. In addition, he is a certified trainer for IELTS, TOEFL, SAT, GRE and GMAT by the Princeton Review, New Jersey, USA, American TESOL, Florida, USA and Cambridge English Language Assessment (CELA) U.K.



Mr. Raghu Mantha, Member

With more than 20 years of professional experience in handling academic library activities, Mr. Raghu Mantha is skilled in using library systems and special computer applications with In-Depth knowledge on management journals and publications. Raghu specializes in Library Automation, Budgeting, and scouting for best knowledge to create a state-of-the-art Library resource centre.



Team of Reviewers

Dr. Ramakrishna Yanamandra, Skyline University College, Sharjah



Dr. Ramakrishna Yanamandra is an Assistant Professor in Operations and Supply Chain Management and a member of Health, Environment and Safety (HES) committee, Quality Audit (Academic) committee and Risk Management committee at Skyline University College, Sharjah. He possesses around twenty eight years of corporate and academic experience. His research and teaching interests include Supply Chain Management, Operations Management, Lean Management, Total Quality Management, Six Sigma, Project Management, Healthcare Supply Chain and Service Operations Management.

Dr. Poonam Jindal, Vignana Jyothi Institute of Management



Dr. Poonam Jindal is an Assistant Professor in the HRM and Organizational Behaviour areas. She has taken certifications in counselling, NLP, Well-being and Happiness, TA101, TA Level-1 and Life Script Analysis in Transactional Analysis. She also is the National Council Member, ISTD, Hyderabad Chapter.

Dr. Jayalaxmi Samal, Sri Sri University, Cuttack, Odisha



Dr. Jayalaxmi Samal is an Educationalist and currently associated with Sri Sri University, Cuttack, Odisha as Assistant Professor in Faculty of Management Studies. She has more than 12 years of teaching experience. She holds her doctorate degree in Management. She has published more than 16 research articles in reputed peer reviewed international and national level journals including Scopus indexed journal. She was awarded with cash prize from Emerald Publishing House Ltd for her research.

Team of Reviewers

Ms. Niharika Atchyutuni, Vignana Jyothi Institute of Management



Ms. Niharika Atchyutuni is an Assistant Professor in the area of HRM & OB. She worked for 8 years in the industry before joining academics 7 years ago. She is currently pursuing research in the area of HR Analytics. She coordinates Career Vision Schooling, the flagship program at VJIM for professional development of students. Her areas of interest include: HR Analytics, Sustainability and Social Entrepreneurship.

Dr. Ratnaja Gogula, Vignana Jyothi Institute of Management



Dr. Ratnaja Gogula is a Professor and Head of Centre for MSMEs at VJIM. Specialized in Product Management, User Acceptance testing and Quality Assurance, Dr. Ratnaja has been leading several Entrepreneurship training initiatives at ISB, Hyderabad. Dr. Ratnaja is a thorough bred professional with enviable dedication and focus. She is a gifted teacher, must-have sounding board and a contrarian thinker.

Dr. Richa Pandey, Vignana Jyothi Institute of Management



Dr. Richa Pandey is an Assistant Professor in Finance area at Vignana Jyothi Institute of Management. Her research interests cover the areas of Investments, Alternative Investments and Behavioural Finance. She has, to her credit, a number of papers in international journals of repute, listed under ABDC category. She has presented her work at international conferences in various IIMs and IITs. She is reviewer for several international journals listed under ABDC category.

Team of Reviewers

Dr. Dammalapati Ravinath, Vignana Jyothi Institute of Management



Dr. Ravinath holds experience in Industry, Academics, and Administration span more than three decades of which 26 years is in Academics offering courses on Marketing Management, Strategic Marketing Management, and Rural Marketing in India. An alumnus of IIM A and Ness Wadia is interested in rural marketing and strategic marketing for his research.

Dr. Padmaja Nalluri, Vignana Jyothi Institute of Management



Dr. Padmaja is an Associate Professor in Statistics and Business Analytics. With more than 25 years of experience in teaching statistics, business research methods and business analytics to Post-graduate students. Leading various consulting and research assignments, Dr. Padmaja actively involved in accreditation activities of the institute. Her research interest is in the field of applied statistics in management studies and image compression.

Dr. D Srinivasa Rao, Koneru Lakshmaiah Educational Foundation



D. Srinivasa Rao (PhD) is currently working as Professor in Koneru Lakshmaiah Education Foundation, Vaddeswaram, Andhra Pradesh. He holds a doctoral degree in Econometrics and his teaching areas area, Quantitative Techniques, Macro Economics and Research Methodology. His research interests are Econometrics and Research Methodology.

Dr. Chithra Bagchi, Heritage Business School



Dr. Chithra Bagchi is an Associate Professor from Heritage Business School specialized in Marketing. With more than a decade of experience in academia, Dr. Bagchi takes pride in her teaching accomplishments and research.

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COVID 19: Effect of Job Insecurity on Employee Performance: Mediating Role of Depression

Mohammad Ali*, Sabrina Sharmin Nishat**, Farzana Tazin*** and
Mohammad Rabiul Basher Rubel****

ABSTRACT

The focus of the current study is to see the influence of job insecurity (JI) on employee performance in the form of in-role (IR) and extra-role (ER) performance with the mediating effect of depression. Data were collected from front line employees of 4-star and 5-star hotels of Bangladesh. Findings of the study showed significant effect of employee JI on both IR and ER performance. Again, JI exhibited positive relationship with employee depression in the workplace. For depression, both employee IR and ER performance also showed significant relationship. Finally, both the mediating relations were also found significant. Thus, it can be revealed that management of the organization needs to be more concerned on employee performance which may help them to attain sustainable competitive advantage in the industry. Therefore, it is essential for the organization to ensure employee continuity in the workplace which may minimize their depression to contribute more.

Keywords: Job insecurity, Employee performance, Depression, Hotel industry, Bangladesh.

1.0 Introduction

The Coronavirus disease 2019 (COVID-19) epidemic revealed a global bump with approximately 25.1 million verified incidents and over 8,44,000 deaths in 216 countries up to 31st August 2020 (World Health Organization, 2020). This condition generated an adverse impact on the economies, (Gössling et al., 2020; Nicola et al., 2020) societal connection, association, bonding (Balanzá–Martínez et al., 2020) and health. COVID-19 has brought about an exceptional catastrophe to all industries across the globe. Business sectors like tourism, accommodation, and travel agencies are facing a steep plunge in demand because of being subtle to severe tremors like the occurrence of pandemics (Chang et al., 2020). In specific, the hotel industry has faced massive sales decreases as service availing rates have massively fallen owing to the social distancing rule imposed by the world health organization as well as the local government. Thus, worldwide the hotel organizations faced a radical drop in the count of visitors (Sobieralski, 2020). In consequence, the hotel business across the world is facing an employment shockwave in comparison to other industries, with a sharp drop in the employment ratios and a theatrical increase in the frequency of short-term leaves.

In response to the upsurge of the pandemic in Bangladesh, the appearance of visitors into the country was controlled, and the percentage of internal travel also declined remarkably, initiating an undeniable managerial crisis in hotels. Employment uncertainty is generated by the spread of the virus in these industries, thus, causes an unavoidable threat to organizational operations and viability-an unusual situation that demands the hospitality industry to search for a variety of alternative approaches (Carnevale & Hatak, 2020).

*Corresponding author; Assistant Professor, Department of Business Administration in Management Studies, Bangladesh University of Professionals, Dhaka, Bangladesh. (Email: rana.ali0191@gmail.com)

**Lecturer, Department of Business Administration in Management Studies, Bangladesh University of Professionals, Dhaka, Bangladesh. (Email: sabrina.nishat@bup.edu.bd)

***Lecturer, Department of Business Administration in Management Studies, Bangladesh University of Professionals, Dhaka, Bangladesh. (Email: farzana.tazin@bup.edu.bd)

****Associate Professor, Department of Business Administration in Management Studies, Bangladesh University of Professionals, Dhaka, Bangladesh. (Email: rabiul.basher@bup.edu.bd)

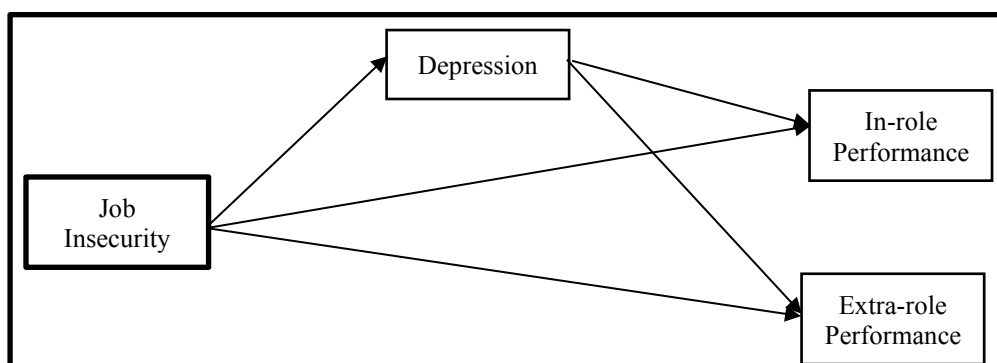
In this situation, examining job insecurity (JI), as seemed by hotel employees, and its negative implications might prove to be noteworthy in defining how industries can replenish and how fast-changing industries can experience a persistent future.

Undoubtedly, contemporary working conditions have been incapable to ascertain employment security for all employees owing to unpredictability arising from technological upgradations, economic shifts, political instability, even from time-period before the upsurge of the pandemic (Etehad & Karatepe, 2019). Employee conceptions about JI- the prejudiced and insensate conception of losing jobs have boomed on account of organizational re-engineering and cut-downs in addition to it, the pandemic has severed the condition. Employees might fall prey to JI for two particular causes (Mauno et al., 2014); mostly, moves in an organization brought by measurable JI, like employee cut-offs, dismissals, and mergers that affect specific workgroups of an organization, incorporating their conceptions of JI, and furthermore, separate work groups might perceive commonly or jointly about notions like particular threats or stressors. Henceforth, it cannot be avoided that employees face tremendous stress in the form of JI (Gaunt & Benjamin, 2007) signifying a negative correlation between factors of job attitude and employee mental health conditions (De Witte et al., 2015). A study by Chirumbolo (2015) explored the consequences of JI throughout the pandemic referring to the fact that JI influences worker involvement in damaging actions directing through damaging psychosomatic behaviors.

A contemporary study identified that psychological condition is a moderate to potential correspond of work performance (Ford et al., 2011). The current research also considered depression as a mediator between JI and employee performance (in-role and extra-role). The discrete expenses of depression are fairly recognized (Lacko & Knapp, 2018), and contemporary predictions propose that approximately \$925 billion annual cost is being incurred by the global economy in consequence of the productivity lost due to depression and anxiety conditions. Depression is a fairly prevalent mental health condition, declared by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), as the existence of continual dejected spirit infused with cognitive and somatic changes that considerably intervene with typical routine activities. The segregated costs of depression are well recorded, and updated statistics signify that reduced output arousing from depression and anxiety disorders cause an annual charge of approximately \$925 billion to the global economy (Chisholm et al., 2016).

The contributions of this study are two-tiered. Primarily, we addressed the impact of JI on employee performance in the shape of IR and ER in the hotel service industry in Bangladesh with mediating effect of depression in COVID 19 situation. There has been little research on assessing the effect of JI on employee work outcome in hotel organization as service industry (Jung et al., 2021). Another, here is a lack of research considering depression as mediator between JI and both employee IR and ER performance. Therefore, this contextual study adds to this track of study as well. Henceforth, Figure 1 presents the projected outline of the current study that portrays the relationship between JI and employee IR and ER performance with the mediating role of depression:

Figure 1: Proposed Research Framework



2.0 Literature Review

2.1 Job insecurity

JI was initially defined in the eighties as the powerlessness to maintain the steadiness of work of an individual in an endangered working condition (Greenhalgh, 1984). There is huge uncertainty facing the employees around the world due to globalization, technological innovation, economic and political changes. Thus, resulting in the replacement of stability and predictability with JI (Dewitte, 2015). Employees expecting a possible layoff results in stress which are traumatic and life-disrupting (Alaina C Keim, 2014). JI appears from workers' perception about events, signal link with work, people and social atmosphere. Employees have a negative perception of JI when new managers arrive. It can threaten an individual's personal resources and identity (Shoss, 2017).

JI as a significant work stressor resulting in drastic consequences does not only impact both employees and their employers. Alongside the advent of continuous changes in the working environment inducing feelings of JI, employers are now forced to deal with new demands or master skills not relating to their jobs. (Jiang & Lavaysse, 2018). Employees feel threatened by the prevalence of JI owing to the concept that they may lose their employments. JI means to behold idiosyncratic conceptions about employment settings, overtly, about losing job constancy and continuance of employment relationship with the organization (Laura Bernardi, 2008). So far, JI has been linked with adverse job-related outcomes. For example, upon confrontation with perceived JI, employees may reveal lower level of motivation and they become depressed.

2.2 Employee performance

Performance is expressed as the acquired result of competent workers in some situations (Prasetya & Kato, 2011). As stated by Hawthorne studies, and scores of other research work on productivity of worker showed up the reality that employees who are pleased with their job will have maximum job performance, in consequence, foremost job retention, than those who are not satisfied with their jobs (Landy, 1985).

Employee performance can be stipulated based on IR and ER performance. IR performance alludes to the behavior directed toward formal tasks, duties and responsibilities designated to the sole employee previously referred in their job description (Williams & Anderson, 1991). Contrarily, ER performance indicates to those activities that are vitally important for organizational success but are discretionary in nature, for example, acting respectfully, assist others, quality relationship with fellow workers and superiors (Niehoff & Moorman, 1993). Scholars also termed ER performance as organizational citizenship behavior (Colquitt et al., 2009).

2.3 Employee depression

Depression is not just a form of acute unhappiness. It is a jumble that influences both brain and body as well as behavior, immune system and nervous system. Depression is observed as a disorder because it is imbalanced in a person's work activities or relationships (PDM Task Force, 2006). Depression also varies from ordinary sorrowing in that the person feels the world as empty or cruel, in contrast to, clinically depressed persons who hold their sense of emptiness or badness in themselves. In most cases depression ranges from light to extremely severe (PDM Task Force, 2006).

Depression has also been viewed as a veto subject in the organization. A lot of employees face organizational depression. Maximum employees conceal their sadness due to the fear of job loss or discrimination among their colleagues (Lacko & Knapp, 2018). Due to depression and anxiety, employees face negative reactions from employers and colleagues. Actually organizational depression is a mental sickness related to drawbacks due to a poisonous workplace atmosphere (Rasool et al., 2016). According to the grouping of DSM-5, Depression is a familiar mental health condition that

confirms continuous dejected temper collective with perceptive and sensual deviations which pointedly intervenes with everyday routine working. Beyond all health conditions, depression has far-reaching consequences on individual work performance (Kessler et al., 2008). Depression is a psychological discomfort that encompasses a tireless feeling of sorrow and loss of attraction (American Psychological Association, 2020; Sandoiu, 2020). Owing to the upsurge of COVID-19, tension arises among the employees regarding their careers. This COVID-19 triggers job loss of employees and unstable future job market which grows depression among the employees (Sandoiu, 2020; Morath & Guilford, 2020; UN News, 2020). Normally, employees with depression shows low concentration, lethargy and decreasing decision-making capacity (Kessler et al., 2008). Several areas of job performance are deteriorated by depression such as interpersonal relationships, innovation, time management, workplace safety etc.

3.0 Hypotheses Development

3.1 Job Insecurity and employee performance

JI is adversely related with employee job related outcomes (Darvishmotevali et al., 2017) as it is perceived as a job stressor. Employees who are mostly worried about JI cannot perform with full spirit (Darvishmotevali et al., 2017). Shin and Hur (2020) found that JI negatively controls employee job performance and acts as a mediator between the association of supervisor rudeness and employee job performance. JI acts as a negative determinant of in role performance (Schreurs et al., 2012). Piccoli et al. (2019) believed that JI leads to negative behavioral consequences like poor performance, absenteeism, job switching intention, etc. Rubel et al. (2018) suggested that employee feelings towards the insecurity of jobs can play as an important hindrance IR service and extra role service behavior. Based on the previous empirical evidence on the relationship between JI on employee performance, the following hypotheses may be developed.

Hypothesis 1a: Job insecurity is negatively related to IR performance.

Hypothesis 1b: Job insecurity is negatively related to ER performance.

3.2 Job insecurity and employee depression

JI as a psychological stressor (Kim & Kim, 2018) leads to high stress on employees' mentality. It acts as a determinant of job anxiety that causes depression (Kim et al., 2017). Kim & Kim (2018) claimed that JI significantly contributes to increase employee depression which may even lead suicidal attempt. Amid Covid-19, employees feel insecurity about their job and as a result of which anxiety and depression exist among young adults (Ganson et al., 2021). JI creates mental burden for employees that becomes the reason of poor mental health (Ganson et al., 2021). Therefore, it could be hypothesized that JI may act to enhance employee depression.

Hypothesis 2: Job insecurity is positively related to employee depression.

3.3 Employee depression and employee performance

Depressed employees are less productive employees because depression prevents dedication and engagement towards performance (Anwar et al., 2021). Depressed employees tend to be frequently absent and less involved in the assigned tasks which lead poor job performance (Parent-Lamarche et al., 2020). Lerner et al. (2015) concluded that job stressors like depression, anger and fear have a detrimental impact on employee performance. Alam (2020) concluded that work stress causes depression, which, in turn, is negatively correlated with employee performance. Lack of coworker and supervisor support may lead to high employee depression which may significantly deteriorate the IR and ER performance of employees (Talebzadeh & Karatepe, 2020). These arguments might be induced into the following hypotheses:

Hypothesis 3a: Employee depression is negatively related to IR performance.

Hypothesis 3b: Employee depression is negatively related to ER performance.

3.4 Employee depression as a mediator

We encompass the present study by assessing depression as a mediator in the relationship between JI and employee performance. Literature has emphasized the significance of negative relationship between JI and employee performance which decreases IR and ER performance (Piccoli et al., 2019; Rubel et al., 2018; Shin & Hur, 2020). Similarly, researchers have claimed employee depression plays a prominent role to reduce the level of employee performance (Alam, 2020; Anwar et al., 2021; Parent-Lamarche et al., 2020; Talebzadeh & Karatepe, 2020). Common beliefs of the scholars support that JI is a psychological threat for employees which creates high depression (Ganson et al., 2021; Kim et al., 2017; Kim & Kim, 2018). However, researchers are still investigating the impact of JI on employee performance. It can be argued that JI is a determinant of depression which decreases employee performance.

Accordingly, employee depression has been experimented as a mediator by the researchers. Morasco et al. (2013) identified that employee depression influenced by JI is a potential mediator between JI and chronic pain. Furthermore, it was supported that depression mediates the relationship between workplace culture and employee productivity (Laing & Jones, 2016). Parent-Lamarche et al. (2020) found that depression mediates the influence of working condition on job performance. Recent research also provides the evidence of mediating role of depression (Bianchi et al., 2015; Fazeli et al., 2020). Therefore, the present study argues that depression plays a mediating role in the relationship between JI and employee performance and the hypothesis is as follows.

Hypothesis 4a: Employee depression mediates the relationship between job insecurity and IR performance.

Hypothesis 4b: Employee depression mediates the relationship between job insecurity and ER performance.

4.0 Methodology

4.1 Sample

The current research is a cross-sectional in nature where data were collected in 2020 (October 2020–November 2020) from numerous categories of employees working in both four (4) and five (5) star hotel in Bangladesh. A structured questionnaire is employee to collect data for the current research. Front line employees were included of the 4-star and 5-star hotels in Bangladesh. Approximately there are 105 (4-star and 5-star) hotels in Bangladesh (Bangladesh Civil Aviation and Tourism Ministry Report, 2017). Among these 105 hotels, almost 76% (80) hotels are in Dhaka the capital city and chottogram division where rest 24% (25) are situated in other locations of the country (Bangladesh Civil Aviation and Tourism Ministry Report, 2017). Thus, these two locations are considered the sampling frame of the current research.

With the help of the human resource department the researchers distributed 800 questionnaires equally to all participated organizations. Of 800 questionnaires distributed, 478 were reverted. 60 questionnaires were discarded due to inconsistent information. In total 418 questionnaires were found suitable for further analysis. The current research employed purposive judgmental sampling a category of non-probability sampling design. Judgmental sampling is suitable when there is no complete list of the respondents and very difficult to identify the actual number of population (Sekaran & Bougie, 2016).

4.2 Measures and data analysis technique

The current study adapted all items from the previous validated literature. Such as JI and depression were measured by 8 and 5 items adapted from Jung et al., (2021) and Ganson et al., (2021). Finally, both IR and ER performance were measured by 3 items for each adapted from Rubel et al., (2018). In this study independent ad mediator variable were assessed by 5 point Likert scale whereas, 7 point Likert scale were employed to measure both dimensions of dependent variable. Statistical package for Social Science (SPSS) was employed to insert data, analyze the descriptive statistics and measure the demographic profile of the respondents. Whereas, Partial Least Square (PLS 3.2.7) was used to assess both measurement and structural model of the research framework based on the hypotheses.

5.0 Results

The respondents of the current research were from line employees; therefore, their perceptions were examined. The average age of the respondents who participated in this survey is 34 years. Approximately half (50%) of the participants are between 25-34 years. Two-thirds portion of the respondents is male (67.80%). On average, the span of work experience of the respondents is around eight years.

5.1 Measurement model

The measurement model has been evaluated using a confirmatory factor analysis (CFA) to confirm the reliability, convergent validity and discriminant validity of the model. The data presented in Table 1 reflects that the value of all item loadings is higher than 0.5 while both AVE's and CR outcomes are predominantly higher than 0.5 and 0.7 respectively. Recommended by Hair et al. (2014). Among the values presented in this table, the lowest value of CR is 0.843, and that AVE is 0.519, as stated for CDO. Henceforth, it can be concluded that the study confirms convergent validity by achieving the parameter for acceptability.

Table 1: Measurement Model

| Constructs | Items | Item Loading | AVE | CR |
|------------------------|-----------|--------------|-------|-------|
| Depression | Depre 1 | 0.768 | 0.519 | 0.843 |
| | Depre 2 | 0.647 | | |
| | Depre 3 | 0.737 | | |
| | Depre 4 | 0.728 | | |
| | Depre 5 | 0.714 | | |
| Extra-role Performance | ERP 1 | 0.876 | 0.735 | 0.892 |
| | ERP 2 | 0.913 | | |
| | ERP 3 | 0.825 | | |
| In-role Performance | IRP 1 | 0.825 | 0.733 | 0.845 |
| | IRP 2 | 0.886 | | |
| Job Insecurity | Job Ins 1 | 0.763 | 0.692 | 0.931 |
| | Job Ins 2 | 0.893 | | |
| | Job Ins 3 | 0.799 | | |
| | Job Ins 4 | 0.866 | | |
| | Job Ins 5 | 0.848 | | |
| | Job Ins 6 | 0.813 | | |

Furthermore, this study tested discriminant validity by an empirical standard to show how each construct was different from others following Hair et al. (2014). This study used Heterotrait-monotrait (HTMT) method suggested by Henseler et al. (2015) for discriminant validity analysis. Henseler et al. (2015) proposed value ≥ 0.85 as the stricter criterion or value ≥ 0.90 as the lenient criterion. The present value was found supporting the limit of the stricter criterion of ≥ 0.85 . Therefore, the discriminant validity standard was justified (see Table 2).

Table 2: Discriminant Validity

| | Depre | ERP | IRP | Job Ins |
|---------|-------|-------|-------|---------|
| Depre | | | | |
| ERP | 0.265 | | | |
| IRP | 0.242 | 0.637 | | |
| Job Ins | 0.223 | 0.337 | 0.346 | |
| Mean | 3.61 | 4.67 | 4.81 | 3.72 |
| S.D | 0.66 | 0.87 | 0.92 | 0.69 |

5.2 Structural model

A structural model is developed by studying the hypothetical relationships among the variables. Following Table 4 and Figure 2, the path from depression to employee ER performance ($\beta = -0.164, p < 0.01$) and IR performance ($\beta = -0.126, p < 0.01$) also illustrate significant relationships. Moreover, the path from JI to depression shows significant relation ($\beta = 0.196, p < 0.01$). Finally, the paths from JI to both outcome variables (extra-role and in-role performance) indicate their substantial relationships having values of ($\beta = -0.274, p < 0.01$) and ($\beta = -0.249, p < 0.01$), correspondingly. Table 3 shows the results of the hypothesized relationship.

Table 3: Result of Direct Effect

| Direct Path | Std. Beta | Std. Error | t-Value | P-value | Decision |
|---------------------------------------|-----------|------------|---------|---------|-----------|
| Job Insecurity > In-role Performance | -0.249 | 0.045 | 5.58** | 0 | Supported |
| Job Insecurity > Ex.-role Performance | -0.274 | 0.042 | 6.51** | 0 | Supported |
| Depression > In-role Performance | -0.126 | 0.048 | 2.65** | 0.008 | Supported |
| Depression > Ex.-role Performance | -0.164 | 0.046 | 3.58** | 0 | Supported |
| Job Insecurity > Depression | 0.196 | 0.049 | 4.02** | 0 | Supported |

This research also measures the mediating effect of depression on both JI and employee IR and ER performance following Preacher and Hayes (2008). The current results indicate considerable mediating effect of depression on JI and employee IR performance ($\beta = -0.025, p < 0.01$) and ER performance ($\beta = -0.032, p < 0.01$).

Preacher and Hayes (2008) recommend that the upper and lower limit values of confidential interval should not include zero to get mediation effect. The present study supports this requirement to get the mediating effect of depression between JI and employee IR performance (LL 5 0.095, UL 5 0.268), and ER performance (LL 5 0.271, UL 5 0.130).

Table 4: Result of Indirect Effect

| Indirect Path | Std. Bet. | Std. Erro | t-Value | 95% LL | 95% UL | P-value | Decision |
|------------------------|-----------|-----------|---------|--------|--------|---------|-----------|
| Job Ins > Depre. > ERP | -0.032 | 0.011 | 2.87** | 0.013 | 0.123 | 0.004 | Supported |
| Job Ins > Depre. > IRP | -0.025 | 0.011 | 2.26** | 0.056 | 0.142 | 0.024 | Supported |

6.0 Discussion

The aim of this research is to examine how JI influences employee performance through the mediating effects of employee depression in the setting of a developing country. Specifically, the influence of JI on employee performance through depression among the front-line employees of the organizations in Bangladeshi hotel industry. The outcome of the study is congruence with the past studies. The results of the current study accepted the first hypothesis on the relationship between JI and employee IR and ER performance. Earlier Shin and Hur (2020) supported that JI directly and indirectly makes negative link with employee performance.

The second hypothesis was also supported; JI can reinforce the depression of employees as the two are positively related. Similar results were also supported by the empirical analysis of Ganson et al. (2021). The result shows that when employees are concerned about the security of their job during COVID-19, they have a tendency to be depressed. The results of the study confirmed the third hypothesis. The current findings showed a significant relationship between employee depression and IR and ER performance as advocated by (Talebzadeh & Karatepe, 2020). In the present context of hotel industry, due to COVID-19 depressed front-line employees cannot psychologically engage themselves in the job that ultimately deteriorate their performance.

In this study, hypothesis four presumed that depression mediates the association between JI and both IR and extra role performance. The result confirmed the mediating role of depression between JI and employee IR and ER performance, which is reliable with the previous study directed by Morasco et al. (2013). Since JI increases employee depression (Ganson et al., 2021) and depression decreases employee performance (Alam, 2020), the results established the mediating effect of depression between JI and employee performance.

In the present study, JI was found as a negative determining factor of employee performance that eventually impedes the performance of the organizations in hotel industry as well. Moreover, employee depression was found as intervening variable between JI and employee IR and ER performance. Therefore, hotel organizations should ensure the job security of employees which will contribute to reduce depression and ultimately improves their current level of performance.

6.1 Theoretical and practical implications

The findings of this research prioritize the importance of pragmatic style when managing employees' conceptions of job security in controlling their depression and refining their performance. At the instance of ensuring the job security by an organization, employees believe that their well-being is considered. They respond by enhancing their enactment beyond the specific task-related errands for which they are cared for and recognized by their organization. The current study imparts the empirical evidence to belief that organizations can reduce employee depression when job security is ensured and well communicated with employees. Such insight may enrich human resource management (HRM) theories imparting support of employee IR and ER outcomes as well as recognizing JI as a job stressor. Moreover, the findings accelerate the argument of mediating impact of employee attitude by presenting depression as a mediator between JI and employee IR and ER performance. On theoretical aspect, the present results differentiate the study from the existing literature of HRM. The findings of the study contribute to the literature on HRM and employee

outcomes by providing insights into JI, depression and employee performance in a developing country context. The current study provides the evidence of negative impact of JI on employee performance and the positive linkage of depression with JI amidst COVID-19.

Specifically, in practice, the results of the study provide Bangladeshi hotel organizations with a comprehensive understanding of the dimensions of JI and their applicability in the service sector for an improved economy. Proper security of job may lead to better performance of the employees. The study assesses how JI has an impact on front-line employees' performance through depression. The study suggests that hotel managers must concentrate on job security to make employees more devoted towards their performance. Fear of COVID-19 creates psychological pressures which becomes acute due to depression that arises from insecurity of job. Hence, hotel managers should take care of the issues of employee depression.

The findings help in presuming that job security is an important factor of goodwill of an employer when employees are not depressed. As a result, employees become more enthusiastic to perform effectively for the organizations. Hence, the outcome of this research will help the managers of hotel organizations to gain better insight of preventions of employee performance due to depression and the extent to which job security is crucial in this regard. Moreover, the findings will be beneficial to the organizations of other service industry and other developing countries.

6.2 Limitations and future research direction

The study admits some limitations though it has been designed carefully. This study is cross sectional in nature; therefore, longitudinal approach can be used in the future study to examine the causal relations of the variables. Only three dimensions have been used in the present study whereas depression was incorporated as a mediator. Hence, researchers can analyze the impact of JI addressing the mediating effect of other altitudinal variables such as engagement, commitment, perceived support from leader, etc. The study focused on just hotel industry which is not enough to generalize the findings of service sector in a developing country context. Therefore, more service industry such as, insurance, banking, medical, etc. can be covered to achieve more generalizable results in the context of service sector of Bangladesh. Moreover, similar study can be performed in the developing country context to extend the literature in JI and employee outcomes.

7.0 Conclusion

This paper aims to examine how JI influences employee performance through depression during COVID-19. The study concludes that insecurity of job is significantly related with employee outcomes such as, IR and ER performance. Our findings prioritize the idea that when job security is not ensured, employee performance suffers. Hence, management of hotel industry can attain better performance when employees feel their job is secured. More specifically, hotel industry should pay more attention on job security and mental health such as, state of depression, to get maximum and sustainable employee performance.

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A Critical Analysis on the Impact of Work from Home Policy in India

Saparya Suresh*

ABSTRACT

The sudden outbreak of the pandemic, the works places across of the world were forced to take up work from home or remote working as a strategy for overcoming the operational difficulties due the strict lock down across the world. After an year of the being under the forced circumstances, slowly the employers are encouraged to adopt this work from as a permanent policy in the years to come. Many big Indian companies including Tata Steel, Infosys, Maruti Suzuki, Philips etc are evaluating the job roles that will enable WFH permanently In this context we present a critical analysis on the work from home policies understand the merits and demerits of such changed work environment especially from an Indian context in this paper. The study focuses on critically analysis the impacts of WFH policy from environmental and economical point of view.

Keywords: *Work from Home (WFH), Pollution, Unemployment.*

1.0 Introduction

The sudden outbreak of the pandemic, the works places across of the world were forced to take up work from home or remote working as a strategy for overcoming the operational difficulties due the strict lock down across the world. The idea of remote workplace is not new. The term 'telecommuting' was first coined in 1973 by Jack Niles in his book - Telecommunications - Transportation Trade-off [1]. However, the modern data remote work policies where formulated and adopted by companies after 1999 fuelled by the growth in the Telecommunication technologies.

Though various studies have focused on the benefits of such remote workplace and historically it had been adopted by various organizations to cut down on operation, major employers always had an inertia in adopting remote work policies at a large scale. Yet, tech giants like Facebook and Google were remote friendly companies (company that not only has physical offices in different locations but also allows its workforces to work remotely according to company policy as well as individual preferences), they preferred to as few as possible to work from home raising several concerns of lapsed productivity and lack of accountability. However, world has seen radical shift the work philosophies as the pandemic in 2020 had forced all the organizations to switch to work remotely. This forced circumstances, had allowed to the employers and employees to test and understand the benefits of the Work from Home (WFH) policies that a major fraction of the employers are encouraged to think WFH policies on a permanent basis. Many big Indian companies including Tata Steel, Infosys, Maruti Suzuki, Philips etc. are evaluating the job roles that will enable WFH permanently [2].

In this context, the paper focuses on critically analysis the impacts of WFH policy from environmental and economical point of view. This paper is organized as follows: section 2 looks at the previous academic literature on Work From Home policies, section 3 details the analysis and discussions and section 4 presents conclusion.

*Assistant Professor, *Quantitative Methods and Operations Management, Indian Institute of Management, Kozhikode, Calicut, Kerala, India. (Email: saparya@iimk.ac.in)*

2.0 Previous Works

As discussed before, the idea of work from home had been there in the picture for a significantly long time. And, only few researchers have shown interest in understanding the various aspects related to WFH scenario from an academic.

As mentioned above, the earliest work to discuss the idea of remote was done by Jack Niles in his works. The work discusses how telecommuting developments can help in bringing the workers together by communication instead of the physical presence and thus providing an alternative to urban transportation [3].

Further few works which came up later, talks about the possibility of switching to a WFH mode taking the advantage of innovation in Telecommunications and how it is relevant for quality of work life or work -life balance. Shamir and Salomon (1985) analyses of the differences along these aspects between working at home and working at a normal workplace, and speculation about the possible consequences for the individual of the transfer of jobs from employers” premises to employees' homes [4].

As the technology grew, the focuses of the academic literature in understanding the efficiency of teleworking. Delanoije et al 2019, examined how a teleworking day affects daily work-to-home conflict and daily home-to-work conflict based on boundary theory and the study suggested that employees experienced less work-to-home conflict but more home-to-work conflict on teleworking days compared to non-teleworking days[5]. However, the academic literature on teleworks were limited.

The unprecedented pandemic scenario has led to various changes in our lifestyle and that certain of these changes are expected to be permanent. The current responses in the business world hints that WFH policy is such permanent change for the future. These events have motivated several researchers to take a looks the WFH scenario from an academic angle. The pandemic year has seen a slight increase in the work related to telework. Mongey and Weinberg 2020 has tried to categorize occupations by a measure that captures the likelihood that jobs can be con- ducted from home [6]. Purwanto et. al 2020, identify and obtain information about the advantages and disadvantages of working at home (Work From Home) during pandemic COVID- 19. The results of the study suggests that there are several advantages and disadvantages to the WFH program, the advantages are that the WFH activity is more flexible in completing work, does not follow office hours, does not need to spend money to pay for transportation costs or gasoline costs , can minimize the level of stress experienced besides traffic jams traffic from home to the office, have more free time. The disadvantage of WFH is that it can lose work motivation to bear electricity and internet costs, can cause data security problems [7].

Cicala 2020 documents an increase in residential electricity consumption while industrial and commercial consumption has fallen during the COVID-19 pandemic in the United States using hourly smart meter data from Texas reveals how daily routines changed during the pandemic, with usage during weekdays closely resembling those of weekends [8]. The study suggests that the increase in residential consumption is found to be positively associated with the share of the labour force that may work from home.

Daniel et al 2020 presents new estimates of the share of jobs that can be performed from home. The analysis is based on the task content of occupations, their information and communications technology requirements, and the availability of internet access by country and income groupings [9]. The studies like Baker 2020[11], Gottlieb 2020 [12] , Holgersen et al 2020 [13] also looks into categorizing the jobs which can be converted as work from home.

Khazan 2020 [10] suggests how work from home is here to stay permanently changing the work culture in the society. Taking these trends as a motivation, the current paper analyses the impact

work from home policy is impacting the Indian society from an environmental as well as the economic perspective. The study stands out as there had not been any study taking the Indian context. Being a high populous developing country with a significant proportion of population in the employable age, makes it an interesting context to explore.

3.0 Impact of WFH Policy on India

The study makes use of the available secondary source of the data to make a thorough analysis on the impact of WFH policies from an environmental and economic aspects in a country like India.

3.1 Environmental impact of WFH.

As a country, India has faced a skewed growth. Most of the development were concentrated in certain cities and states of the country. Specifically, cities like Mumbai, Chennai, Kolkata and later Bangalore started growing at exponentially faster rate compared to rest of the country. Various geographical as well as political factors have played greater role catalysing the growth while attracting major business investment into these cities. It has happened so that these cities have been the major employment hub causing large scale migration of the population into cities causing further expansion of these cities. To have a better clarity on the notion, let us consider the detailed case of Bangalore, the capital city of the southern state of Bangalore.

Bangalore is one of the fastest growing cities in the world. In the 1970s, the city was known for its splendid lakes, numerous parks, and lush green trees and proved to be a paradise for anyone who chose to live here until the city underwent a massive socio-economic change. Till 1970s, the city catered as a major hub various hub for manufacturing industries creating employment opportunities for many [14].

The liberalisation of the Indian economy in the 1990s provided a new impetus to the already thriving industries of Bengaluru. The city attracted large-scale private investment from across the world and this phase witnessed a significant rise in the GDP growth rate of Bengaluru. When India grew at an average rate of 7.93% between 1993 and 2004, Bengaluru clocked a GDP growth rate of 20.76% in the same period. IT sector exports, of which about 40% is contributed by Bengaluru, has helped India immensely in bridging the trade deficit [14].

This fast paced growth of the city was accompanied by the large scale migration into city causing a population boom leading to wide infrastructure-related issues that have really affected the image of Brand Bengaluru and further resulting in various traffic congestion, deteriorating air quality, poor waste management, water scarcity and poor road maintenance have made life in Bengaluru difficult. In the past four decades, Bengaluru has witnessed a reduction in the number of waterbodies by 79% and green cover by 89% according to one estimate [14]. As per the 2011 census was 96.2 lakh people. Of these, a staggering 44.3 lakh people are classified as migrants, based on migration data recently released by the Office of the Registrar General & Census Commissioner.

This unplanned and uncontrolled growth in the city have led to emergences of various business and technology hubs scattered in various part of the cities [15]. As per the statistics, 16 tech parks in the city housing more than 5000 companies situated in various parts of the city. Added to this, residential areas in the city are also unplanned and scattered. This unplanned city layout in the major reason for daily traffic congestion. In addition to the traffic congestion, this increasing population has been a constant reason for the changing climate in the city as well as the wide-spread pollution. A major part of these problems are due to the working population who are majorly migrants daily commuting to work.

The lockdown has resulted in forcing these work force to stay at home and work from home

keeping the roads free during the entire period of initial lockdown in the country in the month of the April and May 2020. Further lockdown forced a large proportion of these migrant population to get back to their native places. An analysis of the air quality data has revealed that the lockdown has contributed towards reduction in air pollution by 28% [16]. This analysis can easily help us infer that a strong correlation exist between the commuting working population and pollution in the city as the emission from the vehicular pollution is a key contributor to air pollution in Bengaluru, which is the most traffic-congested city in India. Similar trends were clearly visible in the rest of the country also.

Further, such work from home opportunities can motivate the employees from migrating to the cities while encouraging them to stay back the rural home towns. This can help the real estate crisis in the major cities. Added to this, while any organisation is adopting work from home policies for a significant fraction of the their employees, the needful huge office and other real estate infrastructure base needed for such WFH employees falls down. This can positively contribute to environment in conserving the trees and lands with the lower demands for sky scrapers for catering these corporate workforce.

Thus, keeping the work-force at home engaging through remote work can work as solution to rising environmental issues in the country.

3.2 Economic impact of WFH

From an economical perspective, there are merits as well as demerits for with the implementation of WFH policy.

From positive angle, while the WFH can save a lot of unnecessary expenditures incurred by the employees in commuting to the office, it increases the money in the hands of the public which can in turn increase the spending capacity of the such fraction of the population. This in turn can help in incentivising in these employees spending to boost up the economy.

Further, from an employer's point of view, he can save a lot on the infrastructural and operational cost of engaging these employees in the work place. Hence, positively contributing the employers profit.

While, the WFH does benefit the employees as well as employers in a positive manner, it can indirectly cater various other problems. It is important to note that most often, these huge infrastructure maintained by the employers creates a large number indirect blue collar opportunities involved in maintenance and security services of these facilities. If the de-scaling of these real estate facilities occurs due to the adoption of work from home policies, a lot of these blue collar employment opportunities will be affected bring a lot of unemployed people into the economy. Creating further employment opportunities can pose a relevant problem while the economy still struggling to create opportunities for the existing unemployed lot.

Additionally, these WFH policies can cause a dip in the demand for automobile market as the people will be encouraged to stay at home. Thus, the already struggling automobile market in the country which plays vital role in the economy can be severely affected further because of such policies. This can further stimulate in creating unemployment in the society.

Hence, we can clearly observe that while WFH policies can economically benefit the employees and employers in direct profit generation, indirectly it can negatively affect the economy in a macroscopic scale as it can lead to unemployment in many of the indirectly related sector and hence causing instability.

4.0 Conclusion

From the analysis, we can conclude that while WFH policy can positively influence the society in addressing the environmental problems, it can severely affect the economy as it can lead to

wide scale indirect unemployment problems in the society. Thus, the government and organisations coining the policies for WFH should take at most care in bringing down the negative impacts of these policies.

Certain recent surveys and studies have tried to understand the employees perspectives on such WFH policies. A major fraction of the employees currently engaged in WFH, though excited to work from home in the beginning, have highlighted how the scenario has gotten monotonous and their difficulties in being efficient and productive. Additionally, a lot of employees have reported the increased working hours and prolonged meetings schedules which has come about due to WFH and blurred the line dividing their personal and work life. Thus, affecting the work- life balance of these employees. Some of the surveys highlights experiences of the employees regarding they tried to overcome the shortcomings of the WFH scenario by opting to work from cafes or co-working spaces to increase their efficiencies and productivity.

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Factors Determining Choice of Newspapers a Reader Buy

Ramar Veluchamy*, Rutika Gawande** and Saloni Keshwani***

ABSTRACT

Increasing trend of online newspapers has changed the reading pattern of readers as compared to traditional newspapers. Online newspapers have not radically substituted traditional newspapers. The study examine the factors influencing the choice of newspapers for readers to buy. Various demographic factors such as, age, educational qualification, income, gender, occupation, geographic region and qualitative factors such as readability, interest level are considered focusing on the dimensions such as different culture, languages. There are people who buy newspapers (one or more) and also have subscriptions for some online newspapers / e-papers, therefore this study determines what kind of newspaper is most preferred by the reader and what purchase decision they make. In context of India, the study also helps the printing industry examine how it is affecting the consumer behavior to choose a particular newspaper whether online or offline.

Keywords: *Factors determining choice of newspaper, Determinants of selecting a newspaper, Consumer perception on newspaper purchase, Purchase behavior of newspaper customers.*

1.0 Introduction

The growth of technology has affected almost every industry and with that it has also affected the reading trends of newspapers. Newspaper publishing remains one of the practices most influenced by the growth of the Internet. The introduction of e-newspapers has actually created a fantastic way for people to easily review day-to-day activities and events around the world almost at a glance. E-newspaper is a self-contained, portable and refreshing edition of a conventional newspaper that captures and preserves information online. People find it more preferable to read it from apps or through online channels. There are various other factors that determine the interest of the people in the choice of the newspaper they actually want to read and that are the language in which they want to read. Religions and cultures also affect the choice of newspaper. With all that business people prefer to read newspapers like economic times and others usually read normal newspapers. Printing companies also need to examine and consider the needs of readers. Awareness of readers' desires and objectives will be the perfect starting point for designing content campaigns. In this way, companies might sell readers what they want at any given time and place. Thus, this paper reflects on the preference of different people for newspapers and whether online newspapers are superior to offline newspapers. The availability of news through television, radios at first posed a big challenge to the print media. These news were available 24*7 and gave immediate updates about anything happening around the world. These were made more interesting as the viewers had to listen to the news and were also sometimes animated which was visually better as compared to that of print media. There have been many reasons because of which the print media has been affected.

*Corresponding author, Assistant Professor, Department of MBA, XIME,, Phase 2, Electronic City, Bengaluru, Tech Mahindra Building, India. (Email: drvramar@gmail.com)

**Student, Department of MBA, XIME,, Bengaluru, Tech Mahindra Building, India. (Email: rutika25blr@xime.org)

***Student, Department of MBA, XIME, Bengaluru, Tech Mahindra Building, India. (Email: saloni25blr@xime.org)

One of the biggest reasons is due to the pandemic all over the world where many of the businesses got affected including print media. But due to E-newspaper this industry was able to survive to some extent. The applications provided by various newspapers Times of India, The Hindu, Economic Times, the news reached the public at a very fast pace and instant updates. In times like these E media was a big support. Even during national holidays where print media is not able to deliver the news on time print media helps to get the news on time. It takes just a few hours after the occurrence of the incident the news is among the public through E-media. Besides the E-papers by various newspaper companies the news easily spreads through social media platforms like WhatsApp, Facebook, Instagram, Twitter, YouTube, etc. which poses a big time challenge to all the print media companies. Social media platforms have an added advantage that people can post their views about any news and discuss it with people all over the world resulting in reduction of the biased nature of any news article. With the increase in the ways to grow the readership of the content posted in the social media these platforms are giving a big competition to print media and even their digital platforms. With the increase in the number of examinations where students have to be well versed with the current affairs and current affairs being an important subject in the competitive exams the importance of reading news has increased. Reading a hard copy is mostly preferable for the audience as it is easy to read and does not have any effect on eyes, back, etc. But students find it easy to search for any particular news and read through the news in one go and this is possible through the internet. Trends suggest that the circulation of newspapers and any other print media has increased. The digital versions of print newspapers, for which customers are increasing in numbers, also contribute to this development. There are many incentives for the news reader to switch from print to digital format as they include easy access and instant updates. Readers have more options as they can browse news according to their preferences and even have a chance to provide feedback. Despite all these reasons, we must note that print media still control readership in India. Currently, a substantial amount of people are dependent on print media to read news. The old age people usually prefer to read newspapers than to read news online.

2.0 Literature Review

Newspapers have always been a source of information for people to make them aware of the happenings around them and in the world. Research on print media and online media is frequently concerned with choosing media to read newspapers based on certain factors but this research focuses on preference of media for reading newspapers and why a particular newspaper is preferred over others.

2.1 Difference between print and online news

A few investigations looking at gaining from online versus print sources might be certainly looking at learning of changed subsets of substance. Contrasts on the web and print papers, what contrasts ought to not out of the ordinary as far as how much people can take in open issues data from them? To start with, it appears to be impossible that numerous hypothetically intriguing impacts would be found because of contrasts in Correspondence Exploration. Yet, various impacts may be delivered by the distinctions in structure and association among on the web and print news.

The era of new digital media has made significant changes in this sector and newspaper publishing activities are the one getting affected. But a study shows that nearly 50 crore people use smartphones in India but it has not substituted online newspapers with print media like west rather it has become complementary because print media is considered to be the most trustable source to get the information even after relying on multiple media consumption. This study also states that increasing urbanization has also increased readers of newspapers. (Rosheena Zehra, 2017). One of the

reasons stated is the increasing trend of door to door service to supply the print newspaper. India is considered to be the youngest populist country (median age- 26.8 years), half of the population of middle age prefer to use print media as a trustable means of gathering information.

In Lindsay H. Hoffman, 2006, analysis news that depicts that information that aids people influences them to act on the basis of the attitude they hold. Introduction of a new technology such as the internet has made a difference in online versus print newspaper context. New technology has changed the content of newspapers which has increased the consumer participation in reading and availability of information through video, audio, discussion polls, and make information more readily available. This study also provides evidence that online newspaper content may be different to attract the young demographics, who live by different rules.

(Rusha Mudgal and Dr. Pooja Rana, 2019) Working professionals should understand the inclination towards reading newspapers and the form of media that is being used for this section of society. They have found that print media circulation has increased with increase in demand for consumers for information, and the consumer base is also growing who want newspapers to be updated with the rapidly changing world. Although internet penetration is increasing and digital media provide quick access and instant updates, In India, print media dominates the readership as a reliable source of information that is most preferred by the Indians. Through this study, they are spreading awareness among the students for online platforms such as-smartphone apps, social media platforms like, Facebook, twitter, Instagram, WhatsApp etc. and denying the traditional way of reading i.e. print media.

This study examined how the different factors such as-income, age, and education are affecting the preference of media. Online media has delivered a tremendous continuous source of information at hand quickly as a result print media is declining gradually so they are struggling to sustain in the market to meet the growing demands for information rapidly. They have worked to understand the behavior of the audience using general social survey data, and found that there was a sizable amount of interest in news consumption across all educational and financial backgrounds. Those with less education tended to prefer getting news from television sources. Those who prefer getting print media tended to be wealthier and more educated (Bryan Anderson, 2018). The study conducted in Enugu Urban Town factors influencing readers' choice of newspaper based on factors like; age, sex, educational, income, content, ownership, over price. The study could help readers to know which newspapers have the widest range of issues that affect their likes mostly. The research was focused on Spanish language newspaper readers. The goal of this paper was to decide why people read newspapers and to establish a model that reflects the fundamental reasons for reading the digital rather than the conventional medium.

The study confirms the existence of a major positive relationship between motivation related to searching for updated news and readership of online news; at this early stage, readers who use the internet to access the news are still largely inexperienced and unfamiliar with the service.

To some degree, this unfamiliarity with the medium can complicate online reading of newspapers. In addition, readers can consider as a disincentive the degree of knowledge of the medium and the website needed for specific data searches.

Nonetheless, given the pace of progress made by the newspaper sector in the electronic media, this phenomenon may well fade away in a reasonably short time. The findings confirm that, if adequately separated, the channels may be complementary and could be correlated with various motives and circumstances of use. Newspaper and magazine publishers may be obliged, on an intermediate basis, to abandon their conventional and approved print medium - paper - and to distribute their products through a modern and IT-based medium. The highest probability of emerging as the successor has been allocated to the so-called "electronic newspaper" based on "e-paper" which is a high-tech screen as thin as paper.

By analyzing the consumer preferences associated with paper-based newspapers and magazines, the analytical research exploring this topic shows the business possibilities for such an innovation. In addition, it also illustrates the substantial demands made on an "e-newspaper" in terms of the qualities it should possess by using a joint analysis. In addition to basic guidelines for the design of the end-device, the study shows that it only has few drawbacks from the point of view of potential users, but integrates many advantages that enhance usability and comfort of use. In summary, the findings indicate that the end-device "e-newspaper" is likely to be easily adopted by users after-market launch (Markus Zinnbauen, 2003).

3.0 Literature Gap

Gerald Wilkinson, (1972), focused on socio-economic classification and concentrated on the trend of choosing newspaper during 1956-71 in Britain and Northern Ireland. Much has changed during these years as there is increase in technology i.e. e-papers and online subscriptions and also many changes have occurred in print industry. Mudgal, Rusha and Rana, Pooja (2019) highlighted the readers' choice among print and e newspaper taking age, gender and education as the predictor variables. However, factors like income, place, occupational status, culture, language in context of India has not yet been explored for such researches. Some decision-making factors, which influence the choice but in a lesser way can be the reasons for why one reads a particular newspaper like for awareness, knowledge, job seeking etc. Such variables can be considered while deciding on the population that is to be targeted. Some researchers have used quoted cluster but in here simple random sampling will be used. There are also chances that in this modern era a person is subscribed to more than one paper based on the information it needed, therefore this will also be considered during the research i.e. the possibility of consuming more than one newspaper.

4.0 Research Objective

The objective of the research is to determine the preference of the consumer to read newspapers in the context of India depending upon the different factors such as-age, income, education. Research Question: how demographic and individual preference determine preference of the newspaper? For finding out the relation in selecting a particular newspaper or what leads a person to choose a newspaper, we are taking independent factors as- what value of information they prefer, what is there field of interest- General or specific knowledge, whether they factors like readability, adaptability, geographic location and language have any effect on the selection of a particular newspaper. In addition to this independent variable will also include the presence of respondents over the internet in order to find if they prefer reading online or offline newspapers. Dependent variables include-language of newspaper-English or local language, online or offline, Publisher of the newspaper, and these factors are affected by the control variables like- Age, gender, education qualification, income level and occupation of the respondents.

5.0 Research Design

5.1 Scope of study

Our scope in this research is expanded to a wide range of parameters such as age, gender, occupation, educational qualification, geographical location since we are studying the preference of the people selecting the type of newspaper.

5.2 Data specifics

In our research it is kind of not possible to carry out primary research. So we planned to carry out a secondary research from the sources that are reliable and cost effective since it is our first research. Various articles, journals and research papers related to the topic were read thoroughly and various researchers' thoughts and facts have been considered before coming to the conclusion. The data collected by us through the research has been summarized so that our research is effective and true as much as possible. All the other variables of the research and their effect have been analyzed and studied thoroughly.

5.3 Sampling method

The main area of focus has been estimated and solutions have been found based on the primary data that is questionnaire and secondary data from research papers written by various researchers. The main conclusions and perceptions of various researchers have been studied which will ultimately help us to conclude on suggestions and solutions for our key question. Random sampling method will be used for finding out the solutions

6.0 Variables and Measures

In our study we have dependent variables, independent variables and control variables. Dependent variables: Whether online reading is preferred or offline will be dependent on the availability of the internet. Whether general newspapers or specified newspapers are preferred will depend on occupation of the person, language comfortable to the person, etc. For example, a manager will prefer to read economic papers. Various other dependent variables are English and local language newspapers, Indian or foreign publishers and daily or weekly newspapers. Independent Variables: To what extent the internet is present, readability, fields that are interesting for the individual whether it is general awareness or specific such as economics or sports. Others include geographic coverage of source, language known to the reader. Control variables are Age, Gender, Education qualification, Income level.

6.1 Measures

Methods of measuring in our study are through direct methods and indirect methods. In direct methods, surveys will be conducted for the preference of the newspaper through special, regular and household-enterprise surveys. In this the survey can be done through Google forms with various questions which can help us make a conclusion on the preference of the newspaper. Indirect method of measuring considers using pre-existing data source and statistical models. In our research, various newspapers, journals, articles and research have been studied thoroughly to understand the preference and trends of the reading patterns of the readers.

6.2 Method of analysis

Our focus area has been from the small regions to big cities so that most of the people can be covered during the research which will ultimately make our research more specific. Research papers, journals, newspapers and articles focusing on the newspapers, e-news and the effect of culture on the newspapers have been studied thoroughly. The loopholes and the implementation of the newspapers to provide news to as many as people possible have been identified. Based on all the above measures we have provided our conclusion and suggestions. The data collected by us is from various age groups, geographical location, from people speaking different languages and from people of various professions.

7.0 Result and Discussion

To find the required relation between individual preferences for choosing a particular newspaper, we collected responses from a sample of 104 respondents. The profile of the respondents according to demographics was collected as - Age <18 with 5 females and 1 male, Age 18-24 with 24 females and 38 males, age 25-34 with 13 females and 12 males, age 35-44 with 0 females and 1 males, age 45< with 1 females and 7 males. Most of the respondents are from west and then from South India. It was noticed that a significant proportion of respondents (n=104) were from the age group of 18 to 24 with a total of 64 respondents. From 104 respondents 59 were male and 45 were female. Between 18 to 24 years of age, 26 of the respondents were female and 38 were male. In this age group people read newspapers with the intention to get information about ads for jobs. 38% of females strongly get attracted to ads where 26 males strongly disagree with this. 45% of people read to get a specific field's knowledge. 70% of people prefer to read English newspapers also this is educating directly proportional to geographically influence as the sample is from tier 1 city and responses are from graduated people. 59 responses are from graduated people. 24 people reading English newspapers prefer to read easy English. As earlier mentioned most of the respondents are graduates and there is a significant correlation between education, language and newspaper selection. As seen people preferring to read newspapers for general knowledge is high. Therefore, it is seen that 63% of respondents prefer recent newspapers rather than old (example- weekly newspapers). This also indicates that people in a significant amount prefer to read online where newspapers are not available. Among the daily newspaper reader (be it online or offline) 62.5% of respondents place high emphasis on the reliability of information, sources and the news publishers. In a general interview with approachable respondents it was clearer that respondents do prefer renowned publishers over local newspapers. With increase in the use of internet respondents are more focused on quick accessibility of news therefore as seen in sample 63.4% of respondents like reading news online due to easy accessibility of information and reliability. 84.6% of respondents were focused on accessibility of news and newspaper. Lastly, the most important factor which also supports the accessibility, availability and use of the internet is price. Apparently, 70% of respondents read a low priced but renowned publisher's newspaper. Looking at these factors it shows that for a general day to information people read an accessible and reliable information provider.

8.0 Recommendations

News organizations can use social media platforms to increase their customer base which otherwise is a challenging thing to do. Newspaper publishers should look into consumer behavior so that they can print according to their convenience which will increase the readability of the paper. Ultimately, increasing the customer segment and profitability. The language used in the newspaper should be easy and readable as analysis above resulted in the same. According to the findings, consumers prefer the latest news in hard copy of newspapers whereas for online access of news they prefer instant updates. Therefore a publisher should focus on capturing the latest news and providing the same to the customers.

9.0 Conclusion

Interestingly, the Indian media portrays a complimentary situation as it does. It comes to the contrast of the old and the modern media. The accompanying comparative statistics of print media vis-à-vis online media reveal a peculiar Asian pattern where, considering access to online content, the Indian community still assigns significance to the reading of hard copies of newspapers. The effect of

English newspapers in India on readers and, in particular, There is a great deal of feeling towards the educated community. Furthermore, if the ownership trends are accurately read, it is in fact that the English newspapers set the agenda for the majority of the regional newspapers to spiral and calibrate public opinion to the grassroots level, as most of these English newspapers are national in character and part of the conglomerates that print regional language newspapers. What is more, this can be seen from the skyrocketing ad revenue that print media orders, comparatively speaking, volumes about print media longevity in India. Thus, the influence of print media, particularly English newspapers complimenting online newspapers, is evident in this analysis. It can be accomplished by evaluating the pros and cons of print and internet media. Suspected that all media had a major role to play in disseminating news to audiences. It should be remembered, though, that print newspapers should strive to keep pace with the emerging competition from online newspapers to retain a healthy media industry.

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Price Discovery and Risk Management in Agri-commodity Futures Market in Emerging Market Like India

Syeda Rukhsana Khalid* and V. Mary Jessica**

ABSTRACT

In the present study attempt has been made to examine the price discovery in the commodity futures market of India. Plethora of studies are there which have investigated price discovery in developed countries like the USA. There are few studies which have investigated it in developing economies like India or China where the futures market is still in a nascent stage. Most of the studies in India were carried out for commodities with fewer observations of data or for commodities traded on regional exchanges. Even more, the studies are very meager in India which has used the ARDL approach.

The study reports price discovery, hedge ratios and hedging effectiveness of future contracts in agricultural commodities like turmeric, cotton and rubber. The lead lag relationship is examined between the future and spot prices using the ARDL Bound Test. For the short run dynamics Wald Test was used and Granger causality was applied to ascertain the direction of flow of information.

For the present study all the commodities' future and spot prices are co-integrated and there is bi-directional Granger long and short run causality between them. In the short run, when the commodities series were in disequilibrium the results indicated that greater adjustment was made by the spot price to re-establish the equilibrium except rubber near month and distant month where the speed of adjustment for the future series was more.

The present research estimated the hedge ratios and investigated the hedging effectiveness provided by the turmeric, cotton and rubber futures market. The hedge ratios are high for all the commodities and are near to one (naïve hedge ratio). The hedging effectiveness is more than fifty percent (56% to 99%) for all commodities except turmeric (25%). The hedging effectiveness for rubber maturity month contracts (99.04%) and rubber near month contracts (97.55%) are high when compared to rubber distant month contracts (55.99%).

This study will help the farmers and traders to transfer their risk from spot to futures market of the specific commodities and protect themselves from the adversities of high price fluctuations in agri-commodities, and will also help the farmers and traders in increasing their bargaining power as they can take cues from the price signals of the futures market.

Keywords: Price discovery, Hedging, ARDL, Wald test, Granger Causality, Indian Commodity Futures Market.

1.0 Introduction

There is tumultuous growth in recent years in Indian Commodity Futures Market but at the same time it has undergone vicissitudes and has been blamed for speculative activities from time to time and even had witnessed banning of certain agri-commodities from future trading. The present study intends to find out whether the futures market is matured enough in the commodities of turmeric, cotton and rubber to discover the price. There also exists a spate of literature which analyses the merits of hedging. The theoretical rationale on the significance of hedging is fortified with a lot of analytical investigation. The present study felt the need to examine the effectiveness of Indian Commodity Futures in mitigating and managing the price risk through hedging as it has not been extensively researched for hedging effectiveness of the future contracts and in estimating the hedge ratio specifically using ARDL approach.

*Corresponding author; Associate Professor, Department of Management, Amjad Ali Khan College of Business Administration, Hyderabad, Telangana, India. (Email: syeda_rukhsana@yahoo.ca)

**Professor, Department of School of Management Studies, UOHYD, Hyderabad, Telangana, India. (Email: vmjsun@gmail.com)

Price discovery and Risk management are the two vital functions of any derivative market. Risk Management is achieved through the process of hedging whereas Price discovery is the efficiency of the futures market to absorb all the information and reflect it through the future price. Price discovery, according to Schreiber and Schwartz (1986), is the process in which markets attempt to reach equilibrium prices. Fama (1970), in Efficient Market Hypothesis describes a market as efficient that absorbs and reflects all the information. To eliminate supernormal profit from arbitraging on price differences, an efficient futures market should send price signals to the spot market immediately, except for some transaction costs, the future prices become equivalent to spot prices. Indian agricultural futures market efficiency with cost-of-carry (stochastic convenience yield) and no-arbitrage profit expectation can be represented as:

$$F_{t, t-k} = S_{t, t-k} + d_t$$

Where $F_{t, t-k}$ is the futures price at time t for delivery at time $t-k$, d_t is the cost-of-carry, and $S_{t, k}$ is the expected spot price at the maturity of the contract, i.e. time $t-k$. If the cost-of-carry is zero or stationary, arbitrage model implies that the futures price is co-integrated with spot price. To ensure long-term efficiency of Indian commodity futures markets, two critical criteria must be met i.e. F and S must be integrated to the same order and they must also be co-integrated, otherwise F and S will tend to drift apart over time.

Futures are one of the most commonly traded derivatives and are more liquid when compare to the spot or cash market because of high leverage, ease of shorting, low transaction cost and high transparency. This results in greater participation from traders and investors which in turn helps in quick absorption of information and aids the spot market in attainment of the equilibrium price. Futures market should be an unbiased estimator of spot market and it should lead the spot market but in reality sometimes because of the lesser participation from investors and traders or immature futures market the price discovery tends to happen in spot market. The crux of the price discovery function hinges on whether the latest information is reflected first in changed spot (cash) or in changed future prices (Hoffman, 1932, pp.258-259). Working (1962); Black (1976) argues that in reaction to new information futures markets react quicker than their underlying spot markets due to advantages such as, more transparency, lower transaction costs and higher liquidity.

Risk arises in every aspect of human endeavour as it is inherent in human nature. Management of risk and risk itself both are inseparable and stakeholders exposed to risks have learnt to manage the impact of economic risk through a host of means which have grown manifold with the growing world economy. Commodity price volatility is one of such growing economic risk whose effect encompasses virtually everyone. The major risk faced by the participants of the commodity market is the price fluctuations or volatility. One of the most vital and practical applications of Commodity Futures Trading is to manage price risk through 'Hedging'. By the mechanism of hedging, the risk of price volatility or variability of a commodity can be managed.

2.0 Review of Empirical Studies

Gupta, S., Choudhary, H., & Agarwal, D. R. (2017), they have examined hedge ratio and hedging effectiveness in agricultural (castor seed, guar seed) and non-agricultural (copper, nickel, gold, silver, natural gas and crude oil) commodities traded in NCDEX and MCX, respectively. Constant and dynamic hedge ratios are estimated by using ordinary least square (OLS), vector autoregression (VAR), vector error correction model (VECM) and vector autoregressive-multivariate generalized autoregressive conditional heteroskedasticity model (VAR-MGARCH). The results of constant as well as dynamic hedge ratios reveal that the Indian futures market provides higher hedging effectiveness in case of precious metal (65–75 per cent) compared to industrial metal and energy commodities (less than 50 per cent).

Kushankur Dey, Debasish Maitra, (2016), examined whether commodity futures markets in India helped rationalize farmers' price expectation or not. "It has become an ongoing debate whether Indian commodity futures markets can accommodate farmers. The study starts with questions on the efficiency and other roles of commodity futures markets." They studied efficiency, causality and divergence/convergence of futures markets of pepper, coffee, and natural rubber (NR) by employing error correction, co-integrations, and causality models. Their analysis showed that pepper futures market is efficient in price discovery, while NR and coffee spot markets did the process faster. Coffee and pepper spot and futures prices exhibit the convergence; NR showed sign of divergence. Unidirectional causality was observed in pepper futures to spot while, bidirectional causality was observed in coffee and rubber.

Nambiar, R. S., & Balasubramanian, p. (2016), analysed and compared price behaviour in Indian Rubber Spot and Future prices during pre recession and post recession. They collected daily closing prices of rubber futures and spot during the year 2004-2014 from NMCE, and used Vector autoregressive (VAR) method for assessing the short run causality between the two price series of Rubber. Their results revealed that during the post recession period the Rubber futures had played its inherent function of price discovery.

Muruganathi, Shivakumar, Ajjan, & Sivakumar, (2013) confirmed the price discovery in turmeric futures market in India using Johansen's co-integration and Granger Causality. This paper investigated the relationship between turmeric spot price prevailed in Erode market and futures price traded on National Commodity and Derivatives Exchange (NCDEX) for over a period of eight years (2004 -2012). It was found that futures price of turmeric led the spot market and unidirectional causality was confirmed from futures market to spot market. In the short run, when the turmeric series was in disequilibrium the results of Vector Error Correction model indicated that greater adjustment was made by the spot price to re-establish the equilibrium. The result of the study confirmed that the turmeric futures market is efficient, since it played a fair role in price discovery and there is price transfer from futures to spot market.

Sehgal, Rajput, & Dua(2012) examined price discovery in ten agricultural commodities i.e. Chana, guar seeds, soya bean, Potato Agra, Kapas, Turmeric, Black Pepper, Barley, Maize and Castor seeds, and they confirmed price discovery in futures for all commodities except Turmeric. They used Johansen's Co-integration and Granger causality for the analysis of ten agricultural commodities, and found bi-directional Granger lead relationships between futures and spot in all agricultural commodities except Turmeric in which there is no co-integration and hence no causality and is informationally inefficient.

(Jain & Biswal) examines the price discovery and information sharing relationships between the S&P CNX NIFTY index and its futures using An Autoregressive Distributed Lag (ARDL) Bounds Test for co-integration and found that the spot index and its futures are co-integrated and used augmented VAR approach of Toda & Yamamoto to test for direction of causality in prices. Results indicated higher efficiency in the spot market i.e. unidirectional causality from spot to futures market was confirmed.

Dinica and Armeanu (2014), estimated the optimal hedging ratio of the non-ferrous metals traded on the London Metals Exchange using three methods: the error-correction model, the ordinary least squares regression, and the auto regressive distributed lag model. The results showed that the optimal hedge ratio and hedging effectiveness had increased with the hedging horizon, converging to one for long tenors. Their findings also showed greater in-sample hedging effectiveness for more complex models, but the increase in performance was not significant for the out-of-sample analysis.

Kushankur Dey, Debasish Maitra, (2012), selected 'pepper' as a commodity to explore the price discovery with a series of tests, namely co-integration, error correction with weak exogeneity, Granger causality, and forecast error variance decomposition and confirmed unidirectional causality

from futures to spot prices in the Indian pepper futures market, the adjustment of shocks or innovations in the futures market was found to be relatively faster than that of the spot market.

Narsimhulu and Satyanarayana S.V. (2016) examined the efficiency of Indian agri-commodity futures in price discovery and risk management in India, using Johansen's test of co-integration (VECM), Wald chi-square test, and Granger causality test. The risk-management function was investigated using OLS (ordinary least squares) method and VECM to determine optimal hedge ratio (OHR) and hedge effectiveness (HE). Daily closing spot and future prices of Chana, Chilli, and Turmeric (commodities traded on NCDEX) for a period of 10 years (2004 – 2013) were analysed and was found that there was a long-run relationship between commodity spot and futures prices of the three commodities. "... The VECM results revealed that there is a long-run causality running from futures prices to spot prices, which enable the spot market to adjust its short-run deviations from long-run equilibrium path with nearly 2.17%, 2.78%, and 4.41% speed of adjustments in Chana, Chilli, and Turmeric, respectively. The Granger causality test results revealed that there is only a unidirectional causality from futures returns to spot returns of commodities - Chilli and Turmeric.

However, in the case of Chana, there is a bi-directional causality between futures and spot returns. According to hedge ratios of OLS and VECM results, it was found that the commodity futures provide 50%, 56%, and 55% variance reduction in their spot prices of Chana, Chilli, and Turmeric, respectively. It was observed that the commodity futures were more effective in hedging, and the near month futures contracts are suitable for hedging".

3.0 Methodology

3.1 Objectives

1. To investigate the price discovery in select commodities of NCDEX.
2. To find out the hedge ratio and hedging effectiveness of the select commodities.

3.2 Data

The secondary data used in this study was collected from the official website of National Commodities & Derivatives Exchange Ltd (NCDEX). The daily closing prices of future contracts for selected commodities (rubber, cotton, and turmeric) and their respective spot closing prices were collected. The future contracts have been categorized into Maturity Month Contract (Maturing in the same month), Near Month Contract (Has only one month to maturity), Far Month Contract (Has two months to maturity) and Distant Month Contract (More than two months to maturity). Roll over methodology was used to construct the pooled series of daily data. The first day of a contract was considered as the first day of the second month from maturity month and it ends with the last day of the second month. Similarly, the contracts were rolled over to the next contracts. So that the data did not overlap and methodological problems associated with overlapping of the data were avoided.

The commodity 'Rubber' had been chosen from the Plantation category of NCDEX commodities. The daily closing prices of RBBRS4KOC and spot RBBRS4KOC were collected. For commodity rubber, four types of contracts have been identified: Maturity Month Contracts, Near Month Contracts, Distant Month Contracts. The commodity 'Cotton' had been chosen from the 'Fibre' category of NCDEX. There are a total seventeen future contracts available. All the contracts belong to the Distant Month category. There are a total of 284 observations. The commodity 'Turmeric' had been chosen from the Spices category of NCDEX commodities. There is only one Turmeric contract available on NCDEX and hence was chosen for the study. There are a total 87 distant month contracts available for this contract, there are a total 1176 observations collected from 87 contracts.

For the present study, there are large gaps in dates of future prices because of the difference in

the launching months of futures contracts, and also as fluctuations in the prices of commodity futures are more; there is high probability that such data may have one or more structural break.

A structural break occurs when there is a sudden shift in time series, and occurrence of structural breaks in time series data may cause analytical errors. Presence of structural breaks also reduces the power of unit root tests.

As the present study is based on commodity futures data which is a pooled series constructed from various contracts which were launched in different months, it was suspected that there would be one or more structural breaks. Hence, the need was felt to use a unit root test which gives accurate results on data with structural breaks. The study used BreakPoint Unit Root Test of Eviews 9.5 to test the stationarity of data.

The present study had chosen innovational outliers “assumes that the break occurs gradually, with the breaks following the same dynamic path as the innovations”, and chosen trending the data with intercept and trend break.

Table 1: Descriptive Statistics

| Name of the Commodity | Series | Skewness & Kurtosis | Inference | Jarque Bera | Standard Deviation | Stationarity |
|-----------------------|--------|---------------------|---|---------------|--------------------|--------------------------------------|
| Turmeric | FP | 0.97 & 3.27 | Positively Skewed & Leptokurtic | 189.99 (0.00) | 3365.16 | FP is stationary at 1% |
| | SP | 1.04 & 3.37 | Positively Skewed & Leptokurtic | 9.27 (0.00) | 3541.162 | SP is stationary at first difference |
| Cotton | FP | 1.64 & 4.49 | Positively Skewed & Leptokurtic | 154.78 (0.00) | 2337.09 | FP is stationary at 1% |
| | SP | 1.56 & 4.32 | Positively Skewed & Leptokurtic | 136.91 (0.00) | 2314.33 | SP is stationary at 1% |
| Chilli | FP | 0.30 & 1.76 | Positively Skewed & Platykurtic | 12.99 (0.00) | 1534.41 | FP is stationary at first difference |
| | SP | 0.003 & 1.86 | Slightly, Positively Skewed & Platykurtic | 8.9 (0.011) | 1415.06 | SP is stationary at first difference |
| Rubber | | | | | | |
| Maturity Month | FP | 0.36 & 2.06 | Positively Skewed & Platykurtic | 5.51 (0.063) | 4561.27 | FP is stationary at 1% |
| | SP | 0.38 & 2.09 | Positively Skewed & Platykurtic | 5.54 (0.062) | 4568.96 | SP is stationary at 1% |
| Near Month | FP | -0.10 & 2.27 | Negatively Skewed & Platykurtic | 5.56 (0.06) | 4880.80 | FP is stationary at 1% |
| | SP | -0.12 & 2.21 | Negatively Skewed & Platykurtic | 6.66 (0.035) | 4878.66 | SP is stationary at 1% |
| Distant Month | FP | -0.20 & 1.75 | Negatively Skewed & Platykurtic | 8.43 (0.014) | 1137.36 | FP is stationary at 1% |
| | SP | -0.31 & 1.55 | Negatively Skewed & Platykurtic | 12.15 (0.002) | 1049.10 | SP is stationary at 1% |

3.3 Result

The ARDL model was estimated for log values of FP and SP variables of the select commodities, using E-views 9.5. It was pertinent to check the residuals of the select models for serial independence, as the parameter estimates would not be consistent because of the lagged values of the variable SP and FP that appeared as regressors in the respective models.

The estimated models were checked for serial correlation and stability. To check for the presence of serial correlation in residuals, Breusch-Godfrey Serial Correlation LM Test was used and Cusum test (Appendix 1) had been used to test the stability of the models. The next step was to check

for cointegration between the two variables FP and SP and vice versa. The ARDL Bound Test had been used for this study, to test the co-integration between the variables. The F-Statistic values are given below in the table

Table 2: Result of ‘BOUND TEST’

| Commodity | F-statistic | Hypothesis "No Long-Run Relationship" |
|-------------------------------------|-------------|---|
| Turmeric | | |
| ARDL (3, 2) (Dependent Variable SP) | 17.99 | The hypothesis can be rejected for both the models at 2.5% and 1% respectively |
| ARDL (2, 1) (Dependent Variable FP) | 7.17 | |
| Rubber(Maturity Month) | | |
| ARDL (1, 8), | 11.68 | The hypothesis can be rejected for both the models at 2.5% and 1% respectively |
| ARDL (8, 1) | 11.11 | |
| Rubber (Near Month) | | |
| ARDL(2,2) | 5.67 | The hypothesis can be rejected for both the models at 2.5% and 1% respectively |
| ARDL(2,2) | 6.17 | |
| Rubber(Distant Month) | | |
| ARDL(2,2) | 7.69 | The hypothesis can be rejected for both the models at 1% and 5% respectively. |
| ARDL(2,1) | 4.38 | |
| Cotton29 | | |
| ARDL(1,2) | 7.71 | The hypothesis can be rejected for both the models at 1% and 2.5% respectively. |
| ARDL(2,2) | 5.94 | |

There exists a long run relationship and co-integration between the future prices and spot prices of all the select commodities, indicating Granger Causality at least in one direction. To determine the direction of Granger Causality F-statistic should be significant and lagged error term should be negative and significant. The ARDL co integrating and long run form for the models are given in Appendix 2. The speed of adjustment towards long run equilibrium for a single period (for the present study it is daily i.e., one day) had been determined. The long-run coefficients from the co integrating equations are also reported with their respective standard errors and they are significant.

As the long run relationship between the variable FP and variable SP had been established, the short run dynamics can also be investigated. The study had used Wald Test for the same. The output of the WALD test is displayed in the Appendix 3.

Table 3: Summary Table (Co-Integration and Granger Causality)

| Commodity | Dependent Variable | Speed of Adjustment | t _{ECT(-1)} | F-Statistic | Granger Causality | |
|--------------------------|--------------------|---------------------|----------------------|-----------------|-----------------------|-----------------|
| | | | | | Long Run | Short Run |
| Turmeric (Distant Month) | SP | 6.8% | -7.353 (0.000) | 88.973 (0.000) | FP Granger causing SP | FP \square SP |
| | FP | 5.2% | -4.642 (0.000) | 245.532 (0.000) | SP Granger causing FP | SP \square FP |
| Cotton (Distant Month) | SP | 10.23% | -3.934 (0.000) | 125.266 (0.000) | FP Granger causing SP | FP \square SP |
| | FP | 9.98% | -3.454 (0.000) | 141.881 (0.000) | SP Granger causing FP | SP \square FP |
| Rubber (Maturity) | SP | 60.48% | -6.000 (0.000) | 4.654 (0.000) | FP Granger causing SP | FP \square SP |

| | | | | | | |
|------------------------------|----|--------|-------------------|---------------------|-----------------------|---------|
| Month) | FP | 57.64% | -5.851 (0.000) | 15.389 (0.000) | SP Granger causing FP | SP □ FP |
| Rubber (Near Month) | SP | 10.12% | -3.376 (0.000) | 361.9 (0.000) | FP Granger causing SP | FP □ SP |
| | FP | 11.13% | -3.522 (0.000) | 368.14 (0.000) | SP Granger causing FP | SP □ FP |
| Rubber (Distant Month) | SP | 10.14% | -3.941 (0.000) | 22.62657 (0.000) | FP Granger causing SP | FP □ SP |
| | FP | 16.6% | -2.974 (0.003) | 85.57447 (0.000) | SP Granger causing FP | SP □ FP |

Long run hedge ratio ($-\alpha_{F(-1)}/\alpha_{S(-1)}$) and short run hedge ratio (β) are calculated. Hedging effectiveness (Adj. R square) is also calculated for the select commodities.

Table 4: Hedge Ratios and Hedging Effectiveness

| Commodities | Short Run | Long Run | Hedging Effectiveness |
|-------------------------|-----------|----------|-----------------------|
| Turmeric(Distant Month) | 1.03 | 1.00 | 24.86% |
| Cotton(Distant Month) | 0.99 | 1.00 | 66.06% |
| Rubber(Maturity Month) | 1 | 1 | 99.04% |
| Rubber(Near Month) | 0.99 | 1 | 97.55% |
| Rubber(Distant Month) | 0.99 | 0.99 | 55.99% |

4.0 Conclusion

The present study reports price discovery, hedge ratios and hedging effectiveness of future contracts in agricultural commodities like turmeric, cotton, and rubber. If ‘futures price leads spot price’, future market is said to be efficient and it implies that futures market is the first, in absorbing and reflecting the new information than the spot market and if farmers are provided with future price information they will benefit from future price signals. But, if the futures market is not mature enough i.e., the participants are less resulting in low volume of transactions and less liquidity then, the futures market will not be efficient, and the ‘spot price leads futures price’, and the farmers will not benefit from the futures market. There can also be bidirectional information flow between futures and spot markets; it implies that both the markets are efficient, and helps in price discovery, signifying developed agricultural commodity markets.

For the present study all the commodities’ future and spot prices are co-integrated and there is bi-directional Granger long and short run causality exists between them. In the short run, for the present study, when the commodities series were in disequilibrium the results indicated that greater adjustment was made by the spot price to re-establish the equilibrium except rubber near month and distant month where the speed of adjustment for the future series were more.

The present research estimated the hedge ratios and investigated the hedging effectiveness provided by the turmeric, cotton and rubber futures market. It is one of the important elements of success of futures contracts. The hedge ratios are high for all the commodities and are near to one (naïve hedge ratio). The hedging effectiveness is more than fifty percent (56% to 99%) for all commodities except turmeric (25%). The hedging effectiveness for rubber maturity month contracts (99.04%) and rubber near month contracts (97.55%) are high when compared to rubber distant month contracts (55.99%).

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Covid-19 and Corporate Governance (India): Practical Issues, Implications and New Relief Measures

C. S. Divyesh Patel and Naresh K. Patel***

ABSTRACT

Purpose: This research aims to study number of practical issues and risk faced by corporates and its implications and new relief measures introduced in relation to Corporate Governance (India) during COVID-19 outbreak. However, their extent and impact will naturally vary with the nature and size of a business.

Design/Methodology/Approach: Exploratory research is used to study and investigate practical issues and implications faced by Corporates regarding Corporate Governance practices in India during COVID19 outbreak.

Findings: COVID 19 Pandemic has impacted not only human but significant commercial impact being felt globally. It has come with inherent commercial risks impacting on business operations due to disruptions to Meetings, Dividend, Liquidity, Disclosure, Capital Allocation, Risk Management and Internal Control. Regulators should allow companies to conduct a hybrid AGM. It has compelled Companies to step up on building their technology infrastructure. Management should review of their share buyback programmes during such financial crisis. Remuneration committee should emphasize on Executive Pay matters. Government has initiated relief measures under Companies Act, 2013 and LLP Act, 2008 and relaxations from compliance with provisions of the SEBI (LODR) Regulations, 2015 due. Major initiative is contribution for COVID-19 is eligible CSR activity and introduction of schemes of Companies Fresh Start and revised the LLP Settlement to provide an opportunity to make good any filing related defaults and make a fresh start on clean slate.

Originality/value: Drawing on such analytical framework, this research provides further directions to amend and inculcate various corporate Governance practices for Government, Regulators, Companies and other stakeholders during such crisis. It also addresses the current policy issues that may have a significant effect on Corporates strategies.

Keywords: *Corporate Governance, Virtual /Hybrid Meetings, COVID19.*

1.0 Introduction

World's economy is a corona patient. Corona virus disease (COVID-19) epidemic has affected many countries and the World Health Organization (WHO) has declared it 'Pandemic'. The WHO more specifically defines a pandemic as "a worldwide spread of a new disease." On March 11, 2020, the WHO officially declared the COVID-19 outbreak a pandemic due to the global spread and severity of the disease. It's possible that the corona virus threat will eventually fade, as the Ebola, Zika, and Severe Acute Respiratory Syndrome (SARS) viruses have in recent years. But even if it does, the next devastating, yet-unnamed outbreak is not so much a matter of "if" but "when." The profound impact of the measures being taken across the globe to contain the spread of the Coronavirus COVID-19 is creating a number of issues for companies. The Indian Government declared lockdown for a period of 21 days with effect from 25.03.2020 in compliance of Order of The National Disaster Management Authority (NDMA) chaired by Hon'ble Prime Minister Shri Narendra Modi, Ministry of Home Affairs (MHA) has issued an Order dated 24.03.2020 under Section 10(2)(1) of the Disaster Management Act, directing the Ministries/ Departments of Government of India, State/Union Territory Governments and State/ Union Territory Authorities to take effective measures for ensuring social distancing so as to prevent the spread of COVID-19 in the country.

**Assistant Professor, Department of MBA, C K Shah Vijapurwala Institute of Management, Vadodara, Gujarat, India. (Email: divyesh.patel@cksvim.edu.in)*

***Professor & Dean, Department of Faculty of Management and Information Sciences, Dharmsinh Desai University, Nadiad, Gujarat, India. (Email: nareshpatel13@gmail.com)*

While we are now focusing in India on securing the population from health hazards and on providing relief, especially to the poor, we also need to think long-term - to secure the health of the economy, the viability of businesses, and the livelihoods of people. The Indian Governments and Regulators have passed legislation introducing a series of measures including those relevant to maintaining the good corporate governance of companies. These measures have applied with immediate effect. Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. In his pioneering research, Gottfried and Donahue (2020) stated that as the global COVID-19 health emergency continues, the economic fallout is escalating as well and it would lead to logistical impediments and shifts in timing and strategy but, importantly, also creates opportunities for savvy investors. Global economic growth has gone into reverse, businesses have started cancelling service to customers, and millions of workers are technically unemployed or fired. It raises the question: what happened to "stakeholder capitalism", the enlightened economic model many companies embraced just months ago? How can it be squared with what we're seeing today? Corporate governance also comprises risk management; therefore, a key professional mandate of management is to ensure that risk is not diversified or spread to the detriment of the institution. Boards of directors are responsible for the governance of their establishments. The governing board is to ensure that management renders services that are appreciable to the stakeholders. Jensen, M.C. (2001) proposed that there should be a system of executing services that strengthen the connection between institutions and their stakeholders through effective communication. It is supported by Davies, M. A. (2012) in his research where he stated that it is the duty of the board to ensure a higher standard of performance and accountability by engaging in practices that foster good governance. Therefore, political and administrative reforms in many countries could directly shape what is to be referred to as good governance, especially in developing countries. Adherence to governance standards brings simplicity and reduction of risk in such institutions through the support of standard protocols, stakeholders, and government. Corporate governance is the system by which organizations are bound for and controlled. It is a configuration of checks and balances (both internal and external to organizations), to make sure that they discharge their duties well and accountable to all stakeholders (Dignam, A. and Galanis, M.,2016). They are also to ensure that establishments deliver their duties in a socially responsible way, in all areas of their business activity (Grayson, D. and Hodges, A., 2017). As we know that the heart of corporate governance is transparency, disclosure, accountability and integrity. Good corporate governance practice is an important element in attracting investors, and investors are willing to pay a premium of up to 25% for a well governed firm (Barton, D. and Wong, S.C., 2004). Todorovic (2013) has inferred that implementation of CG practices such as disclosure, protection of shareholders rights and equal treatment of shareholders can ensure safeguard investments. Drobotz, W. (2004) researched that Good CG lead to increase valuation, increase higher profit, higher sales growth and reduce capital expenditure.

2.0 The Research Methodology and the Course of the Research Process

The study is purely based on exploratory research or grounded theory approach aims to study number of practical issues and risk faced by corporate and its implications and new relief measures in relation to Corporate Governance during COVID-19 outbreak. This study used Secondary research methods namely Online research, Literature research and Case study research are carried out during stages of research process to narrow the scope of research objectives and to transform ambiguous problems into well-defined one. Running business in the midst of a pandemic is an unprecedented

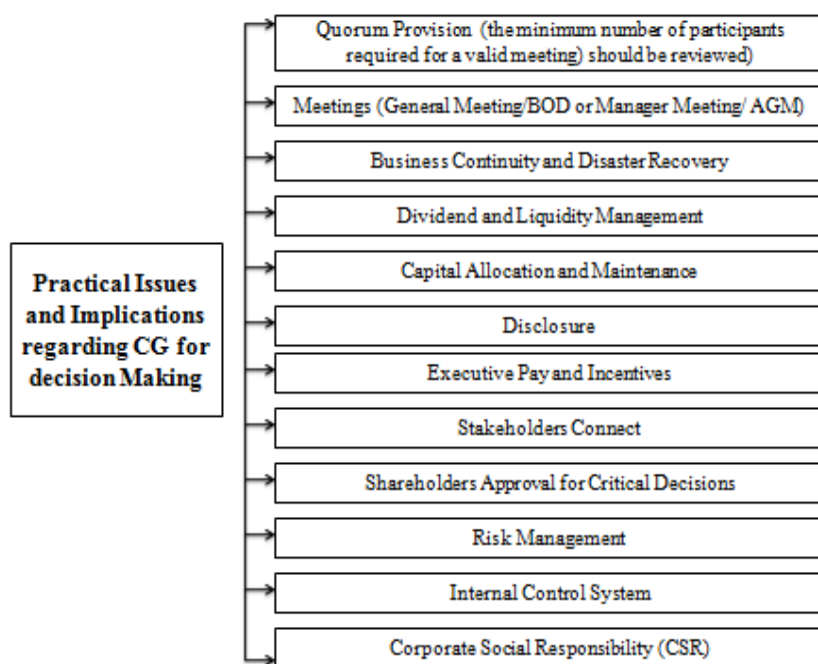
challenge for business leaders worldwide. The restrictions imposed by many governments all over the world in handling the COVID-19 outbreak raise significant challenges as regards corporate governance. However, their extent and impact will naturally vary with the nature and size of a business, but the approach taken in respect of these issues could be crucial for the particular business to thrive or at least survive this new reality.

3.0 Covid-19 and Corporate Governance (India)

3.1 Practical issues and implications

The rapid outbreak of the corona virus presents an alarming health crisis that the world is grappling with. In addition to the human impact, there is also a significant commercial impact being felt globally. As viruses know no borders, the impacts will continue to spread. In fact, 94 percent of the Fortune 1000 is already seeing COVID-19 disruptions. With the rapidly-developing situation, we are still in the premature stages of understanding the impact that COVID-19 will have. However, some important issues and implications regarding corporate governance practices and standards has been depicted in Figure-1.

Figure 1



Source: Compiled by Researcher

3.2 Meetings

Indian Government's directives of a 21-day lockdown and social distancing to avoid mass gatherings are likely to have an impact on Quorum Provision referred under section 103 of Companies Act, 2013 (i.e. the minimum number of participants required for a valid meeting). And in turn it would impact on format of Meetings namely General Meeting, B.O.D or Manager Meetings, AGM and NCLT Convened meetings. As in-person company meetings will largely no longer be possible. Hence, Small and Retail shareholders are likely to be the most exaggerated as compared to Institutional investors as they have several platforms to engage with company managements. The

failure of not holding shareholder meetings will likely lead to a delay in urgent business transactions and to the adjournment or postponing of AGMs. That means it would lead to material impact on business. Although the board of directors can take all the crucial decisions relating to the working of a company, a set of critical decisions require shareholders' approval including appointment/re-appointment of directors, undertaking related party and inter-corporate transactions exceeding regulatory thresholds, issue of securities, schemes of arrangement, etc. Not obtaining shareholder approval in time might lead to non-compliance with the provisions of law or possibly even failed transactions. The only option for shareholder approval is via the postal ballot (i.e. Voting by post or through any Electronic mode) but subject to certain items of business under section 110 of Companies Act, 2013 read with Rule 22 of Companies (Management and Administration) Rules, 2014.

The major issue related to Closing of Financial Year. The statute states that AGMs are required to be held within six months of the close of the financial year subject to time between two consecutive AGMs cannot exceed 15 months. Financial year for most companies in India closes on March 31, unless the companies have got a separate relaxation of the rules from the Ministry of Corporate Affairs to have another year end keeping in the mind that MNCs typically close their financial year on December 31 to align with global practices. As many of companies have already sent out notices for shareholder meetings where the meetings were earlier scheduled to be held during the lockdown phase, are being postponed. Although most Indian companies do not include such a provision in their Articles of Association (AoA), during such unforeseen times, it is generally possible for a board to decide to postpone a meeting. If postponement is not possible, a company's AOA will likely allow adjournment of a meeting, which will have the same practical effect. The AOA usually allow meetings to be adjourned either by the chairperson with the consent of a quorate meeting or by the chairperson unilaterally if no quorum is present. Companies can also go with delaying in holding their AGMs. The COVID-19 pandemic may significantly reduce accessibility, communication and physical meetings to conduct statutory audits. It may cause delays to audit-related activities, including the impossibility to conduct on-site audits and inspections, and exercising the relevant access rights.

3.3 Virtual or hybrid AGMs

Among the measures introduced by the Government, certain rules introduce the possibility for the meetings of companies to be held exclusively in digital form without requiring the physical presence of their members⁸ and will therefore be able to conduct such meetings in a manner that protects the health and safety of their shareholders and board members. It is advocated that companies must allow shareholders to participate via a two-way teleconferencing or webex. Currently, the top 100 companies by market capitalization are required to have a webcast of their AGMs, but this is a one-way transmission. Although the Ministry of Corporate Affairs has allowed board meetings and board committee meetings to be held via video conferencing, it has not extended this to shareholder meetings. The Companies Act, 2013, requires physical quorum to constitute a valid meeting. UK-incorporated listed companies are permitted to hold hybrid (a combination of physical and electronic) or virtual AGMs. The US Securities and Exchange Commission (SEC) has also released a guidance, which permits US-based companies to opt for virtual or hybrid meetings. Allowing companies to hold a virtual meeting, especially for listed companies where the shareholder base is large, is now a necessary requirement for social distancing. The regulators (Mainly SEBI and Ministry of Corporate Affairs (MCA) need to allow companies to do so. The other option would be for companies to conduct a hybrid AGM. A Hybrid meeting allows the attendees to decide whether they'd prefer to attend the meeting in person or online, this could be from the comfort of their home, office or mobile device. Alternative options would be "Postponement of AGM", "Call and adjourn AGM" and "Delay of AGM" if your Articles of Association (AOA) do not permit a hybrid or virtual meeting.

3.4 Business continuity and recovery

During the COVID19 outbreak, most of companies are facing difficulties to maintain business continuity. Most of companies would be facing difficulties from suppliers' end. It means suppliers are incapable to supply components which are crucial to the company's manufacturing or provision of services. In turn it would lead to Business Distress/Financial Distress of Companies. Mehran, H., Morrison, A.D. and Shapiro, J.D., (2011) concluded that If a corporate fail, the fallout can be restricted to the stakeholders. If a bank fails, the impact can spread rapidly through to other banks with potentially serious consequences for the entire financial system and the macroeconomic. Moreover, in case a bank crashes then it does not crash alone, it also takes away the lifelong investment and savings of its entire account holders too. The failure of banks can create huge consequences to financial system of the country concerned as a whole. So, Business continuity is a biggest issue that corporate is facing. Hence corporates should be proactively addressed, especially in light of the duty that directors have to exercise reasonable care, diligence and skill, and this involves assessing and minimizing the risks in similar extreme situations.

3.5 Dividend and liquidity management

Now, another issue surfacing would be regarding dividend, liquidity and working capital requirements during COVID19 outbreaks and lockdown. There are few issues like company recently declared dividends which have still not been distributed or Corporates are currently deciding about dividend distributions. Directors need to consider not only the position of the company when a dividend is proposed but also when it is made. Where the company is no longer competent to pay a dividend, it is advocated that directors should halt any dividend and communicate as appropriate to the market. The assessment of whether a dividend is appropriate should include consideration of current and likely operational and capital needs, contingency planning and the directors' legal duties, both in statute and common law. Bearing the current uncertainty and adverse market conditions in mind, it might be prudent to take a step back and gauge market, public and stakeholder reaction. In this sense it is also important to act in a manner which is in sync with both internal (management, employees etc.) and external sentiment. Liquidity and working capital requirements may naturally come under strain at such time and consideration will need to be given to cash flow management, banking arrangements and refinancing as well as available assistance/incentives including moratoria.

3.6 Capital allocation and maintenance

One of the central pillars of corporate governance is capital allocation, and where companies decide to focus their funding. Over recent years we have seen companies using increasing amounts of cash to re-purchase stock rather than investing in their businesses or bolstering up their balance sheets. In the S&P 500, 50% of all free cash flow is now used to re-purchase stock.

At a time when balance sheets are under immense pressure and companies face significant unexpected costs, including how they dedicate resources to ensuring the welfare of their staff, management should review the appropriateness of their share buyback programmes both at this time and in the longer term. Although there is an expectation that certain sectors will receive government assistance, the most likely outcome for distressed companies will be the use of emergency capital raising through deeply discounted rights issues or placing. In these circumstances, we would like companies to minimize the dilution of existing shareholders by honoring their pre-emptive rights and giving them the right to purchase further shares before others in the market. India has witnessed that few corporates are exploring share repurchase. Fairfax backed Qness Corp is exploring share buyback on 25th March, 2020. Delta Corp to consider share repurchase on 28th March, 2020. Sterlite Technologies approves buyback of shares up to Rs145 crores on dated 24th March, 2020. Motilal Oswal Financial Services okaus Rs150 crore share buyback plan dated 21th March, 2020. Sun pharma

has announced Rs1700 crore buyback on 17th March,2020.¹⁰ These are buybacks that may give solid assured returns during COVID 19 outbreaks and lock down. It can be seen that all the buyback decisions were announced during the lockdown period and proved that positive reduction in equity would lead to increase in shareholders return.

3.7 Disclosure

Disclosure which is an essential ingredient of CG is the foundation of any structure of CG Bhasin, M. (2012). With respect to regulated entities and companies listed on a regulated market which are subject to various laws and regulations aimed at securing investor protection, adequate disclosure without delay of information which should be made known to the public should remain a top priority. Proactive boards of such companies should thus continue assessing the situation, communicating with regulators and providing public disclosure where it is needed or warranted as new information constantly emerges. Cautious assessments should be made to analyze the extent of the negative impact of COVID-19 related developments and to determine any corrective action that might be needed to mitigate such impact as far as possible, with constant disclosure of significant developments to the general public. In fact, Ministry of Corporate Affairs (MCA) deployed a new simple web-based form w.e.f. 23rd March; 2020 focusing a purely confidence disclosure and building measure to assess the readiness of the companies to deal with COVID-19 threat in India.

3.8 Executive pay and incentives

It is advocated that Companies need to consider as consequence of the COVID 19 outbreaks Shareholders will not generally look favorably on executives receiving pays and incentives following a year where shareholders have lost out, even though the impacts of the virus are non-controllable from Corporate ends.

Remuneration committees (An essential practice of CG) may make adjustments to schemes to permit rewards to executives who exhibit outstanding skill in navigating their company through the hard period ahead.

Close attention should be on individual company circumstances, including whether companies are consistent in their treatment of staff and executives (like self-quarantine).

For companies seeing an exceptional increase in demand for their services like Pharma, as a consequence of the virus and of related government measures, Remuneration committees should treat this as a windfall effect and be prepared to adjust pay downwards if appropriate.

3.9 Risk management and internal control

Corporate governance also comprises risk management; therefore, a key professional mandate of management is to ensure that risk is not diversified or spread to the detriment of the institution. Relocation of staff and the inaccessibility of some business locations may lead to risk management processes and internal controls becoming impracticable or otherwise relaxed. Boards should monitor such changes carefully, introducing alternative mitigating controls where necessary and practicable to support the operation of an effective control environment.

4.0 New Relief Measures and Initiatives during COVID-19 relating to Corporate Governance

4.1 Special Measures under Companies Act, 2013 and Limited Liability Partnership Act, 2008 in view of COVID-19 outbreak, dated 24th March, 2020:

No additional fees shall be charged for late filing during a moratorium period.

BOD meetings stand extended by a period of 60 days till next two quarters i.e. till 30th September as per section 173 of Companies Act,2013

The Companies (Auditor's Report) Order, 2020 shall be made applicable from financial year 2020-21, instead of being applicable from the financial year 2019-20

An additional period of 180 more days is allowed to file declaration for Commencement of Business for newly incorporate companies.

4.1 Spending of CSR funds for COVID-19

It is clarified by the Ministry of Corporate Affairs, that spending of CSR funds for COVID-19 is eligible CSR activity. Funds may be spent for various activities related to COVID-19 under item nos. (i) and (xii) of Schedule VII relating to promotion of health care, including preventive health care and sanitation, and, disaster management. Further, as per General Circular No. 21/2014 dated 18th June, 2014, items in Schedule VII are broad based and may be interpreted liberally for this purpose. It is further clarified that any contribution made to the PM CARES Fund shall qualify as CSR expenditure under the Companies Act, 2013.

4.2 Relaxations from compliance with certain provisions of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 (LODR) due to the COVID -19 virus pandemic

Compliance Certificate under Reg. 40(9) from Practicing Company Secretary on timely issue of share certificates gets extended till may 31st, 2020 (period of relaxation – 1 month).

Relaxation of holding AGM and meeting of Board/Committee(s) as earlier discussed.

Extension of timeline for filings under Regulation 7(3) with 1 month, Regulation 13(3) relating to Statement of Investors Complaint for 3 weeks, Regulation 24A relating to Secretarial Compliance report for 1 month, Regulation 27(2) relating to Corporate Governance report for 1 month, Regulation 31 relating to Shareholding Pattern for 3 weeks, Regulation 33 relating to Annual Financial Results for 1 month.

Relaxation of publication of advertisements in the newspapers under Regulation 47 gets exempted till 15th May, 2020.

4.3 “Companies Fresh Start Scheme, 2020” and “Revised LLP Settlement Scheme, 2020”

In pursuance of the Government of India's efforts to provide relief to law abiding companies and Limited Liability Partnerships (LLPs) in the wake of COVID 19, the Ministry of Corporate Affairs, has introduced the “Companies Fresh Start Scheme, 2020” and revised the “LLP Settlement Scheme, 2020” which is already in vogue to provide a first of its kind opportunity to both companies and LLPs to make good any filing related defaults, irrespective of duration of default, and make a fresh start as a fully compliant entity. It's a one-time waiver of additional filing fees for delayed filings by the companies or LLPs with the Registrar of Companies during the currency of the Schemes, i.e. during the period starting from 1st April, 2020 and ending on 30th September, 2020.

5.0 Conclusions

This research reveals that rapid outbreak of the corona virus first and foremost a human tragedy. It has impacted not only human, there is also a significant commercial impact being felt globally. As viruses know no borders, the impacts will continue to spread. In fact, 94 percent of the Fortune 1000 is already seeing COVID-19 disruptions. COVID-19 pandemic come with inherent commercial risks impacting on business operations due to disruptions to Meetings (AGM, EGM, BOD Meeting and NCLT convened meetings), Administration, Business Continuity, Dividend and Liquidity management, Disclosure, Capital Allocation and Maintenance and lastly Risk Management and Internal Control. Among the measures introduced by the Government, certain rules introduce the possibility for the meetings of companies to be held exclusively in digital form without requiring the

physical presence of their members and will therefore be able to conduct such meetings in a manner that protects the health and safety of their shareholders and board members. Regulators should allow companies to conduct a hybrid AGM (i.e. Virtual Meeting). COVID-19 has compelled Companies to step up on building their technology infrastructure. It is imperative that directors and managers are proactive in ensuring the appropriate strategies are put in place to anticipate and to mitigate the potential commercial impacts of a pandemic, and to ensure compliance with their duties and legal obligation. Its duty of Board to make sure that Corporate Governance should not be simply sets of rules or “Check the box” framework. Management should review the appropriateness of their share buyback programmes and proved that positive reduction in equity (i.e. Free cash flow) would lead to increase in shareholders return. Company and its remuneration committee should emphasize on Executive Pay matters as it is very sensitive during COVID 19 outbreak which is stipulated in the introduction of this article. Corporate honchos are worried about well-being of their employees and business. Indian Government has initiated various relief measures under Companies Act, 2013 and Limited Liability Partnership Act, 2008 and announced relaxations from compliance with certain provisions of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 (LODR) due to the COVID -19 virus pandemic towards Corporate Governance which has discussed earlier of this article. Major two important announcement first spending of CSR funds for COVID-19 is eligible CSR activity covered under Schedule-VII of Companies Act,2013 and Secondly introduced the “Companies Fresh Start Scheme, 2020” and revised the “LLP Settlement Scheme, 2020” to provide a first of its kind opportunity to both companies and LLPs to make good any filing related defaults, irrespective of duration of default, and make a fresh start on clean slate as a fully compliant entity. That added feather towards Ease of doing Business in India. Martin Hirt, Sven Smit, Chris Bradley, Robert Uhlener, Mihir Mysore, Yuval Atsmon, and Nicholas Northcote (2020) advocated that Corporate need to think and act across five horizons namely “Resolve, Resilience, Return, Reimagination and Reform” to battle against COVID-19. COVID pandemic is considered as a systemic risk which is not controllable from risk point of view. Given these ongoing uncertainties, a recent McKinsey briefing note frames this as a situation calling for a scenario planning approach, and suggests three fundamental planning scenarios, labelled as: “quick recovery”, “global slowdown” and “global pandemic and recession”. Scenario planning is important for both governments and companies, but it remains far from clear which of these scenarios, if any, will prevail. In nut shell, Investors, companies and other stakeholders will need to work together in a constructive way in order to navigate through the current crisis of COVID19.

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Determinants of Occupational Stress in Information Systems Professionals Post COVID-19: A Factor Analysis Approach

Bandla Prathyusha* and Chalasani S. Durga Prasad**

ABSTRACT

The life of every individual has changed overnight with the arrival of COVID-19. The various surveys conducted at State and National Level stated that COVID-19 is not only disrupting organisations and institutions but also disrupting the work and personal lives of the employees. The invisible enemy made everyone alter the mode of communication with one another and made them to get engaged with different methodologies which lead to a new normal have caused occupational stress among employees. Occupational Stress is taking a toll on the mental, physical and emotional health and productivity of employees. The current study was planned to examine the various occupational stressors and to identify those stressors that influence Information Systems Professionals working in Hyderabad city. The primary data was collected using Occupational Stress Index (OSI) by stratified random sampling method from 1064 information systems professionals belonging to the Large, Medium, Small, and Start-up IT companies in Hyderabad. The factor analysis affirmed a twelve-factor model of occupational stressors in the Information Systems Professionals which confirms that the instrument used for the current research for assessing occupational stress has the high insightful/analytical capacity/ability for identifying areas requiring key concentration in the IT sector.

Keywords: Occupational Stress, COVID-19, Information Systems Professionals, Factor Analysis, Hyderabad, Categories of IT Companies.

1.0 Introduction

1.1 Analytical review of key technologies in ICT domain

The majority of employees knew what they were expected to do while working from office/workplace/factory suddenly didn't have clarity on how to quantify the productivity while working from home. They started introspecting about the contribution and value that they are creating/should create in new normal post-pandemic has added stress to their daily lives. Information Systems professionals are experiencing high levels of stress as many of them have lost their jobs or are working for reduced hours. Occupational stress is identified a serious medical problem, which has serious emotional, physical and psychological implications on employees wellbeing. Pre COVID-19 around 80% of working professionals in India have complained that they are experiencing stress, anxiety and depression and this percentage have increased to around 90% during and post COVID-19 as employees were unprepared for the pandemic, job separation, salary reductions, working from home etc., Irrespective of age, gender, income, experience and designation every information system professional is experiencing stress due to above stated factors. While some level of stress is acceptable but high/chronic stress has become a common ailment that leads to issues such as anxiety, depression, high blood pressure, blurred vision, insomnia, skin rashes, migraines, and heart problems start affecting employee productivity and wellbeing. Combating the stress appears to be a key focal point for individuals and organizations.

*Corresponding author; Assistant Professor, Department of H&S, VNRVJiet, Bachupally, Hyderabad, Telangana, India. (Email: prathyusha_b@vnrvjiet.in)

**Director, Department of HR&OB, VJIM, Bachupally, Hyderabad, Telangana, India. (Email: chsdurgaprasad@gmail.com)

Automation of business processes using artificial intelligence, IoT (Internet of things), surge in IT (Information Technology) and its applications and growing demand for high quality digitised services and products (P.S.Manjula, 2015) has created an unprecedented demand for Information Systems Professionals around the world as well as in Hyderabad. The Information Technology (IT) Sector is the fastest growing sector in Telangana. Telangana IT/ ITES exports reached to Rs. 1,28,807 crores in 2019-20 when compared to Rs. 1,09,219 crores from the previous year 2018-19 at the rate of 17.93% against 8.09% all India. The sector provided direct employment to 5,82,126 professionals in 2019-20 in comparison to 5,43,033 professionals in 2018-19, there is an increase of 7.2% against the national growth rate of 4.93%. The growth story is phenomenal in the last quarter of FY 2019 -20 (Jayesh Ranjan, 2020). According to the white paper prepared by Hyderabad Software Enterprises Association (HYSEA), CBRE, KPMG and Telangana Government and released by Minister for IT and Industries, Telangana expects a growth of 10% for the FY 2021 in IT sector in Telangana. But this is subjected to second and third wave of COVID-19. The recent survey conducted by HYSEA stated that 38% of the IT companies which took part in the survey believe that their revenues will be negative or remain flat. The report also stated that the number of layoffs were less during and post COVID-19 and the Telangana State Government has set-up a “Layoff Redressal Committee” and gave counseling several professionals and organisations during COVID-19 times.

2.0 Literature Review

(Devi.T, 2011) examined the impact of high levels of stress on organisational level outcomes, its impact on behavior, mind, body and emotions and recommended the coping strategies to be implemented at organisational level among 200 Information Technology professionals belonging to technical and middle level of management from six IT companies. The major stressors identified were organisational changes, fear of job loss, emphasis on competition, lack of employee control, increasing technology, Workload, organization culture and push of multi-tasking. The stress coping strategies suggested were like finding triggers and stressors, stress management programs supportive organizational culture, physical activities, life style modification programs, proper job design, stress counseling and to participate in spiritual programs.

(Rani, 2013) identified that relationship with peers and superiors, working hours, programmes related to women development and role ambiguity were the factors that contribute to occupational stress among women IT professionals. Adoption of more stress coping strategies by the individuals and organisations was given as a suggestion.

(B.Prathyusha C. M., 2014) studied about the health problems faced by the software professionals which was carried among 90 software professionals in Hyderabad city. The study revealed that prolonged working hours and sitting; and the continuous viewing of the computer screens/monitors are crucial factors affecting the health of the software professionals. The study also mentioned the practices followed by the professionals to cope up with the occupational stress and health problems.

(B.Prathyusha C. M., 2014) identified the coping strategies used by the software professionals to handle stress and investigated gender wise differences with regard to coping strategies by software professionals. The data was collected using a structured questionnaire from 100 software professionals belonging to different IT companies in Hyderabad and the sampling technique adopted was convenience sampling. The results showed that diet, sleeping for long hours, exercise, yoga, art of living, and meditation are some of the popular stress coping strategies adopted by the software professionals.

(Misra, 2015) studied about the different predictors of stress and stressful work conditions among 50 software employees of age between 30-40 years working in 4Soft, Oracle, Satyam and Accenture in Hyderabad during the last five years. The results were that the employees who worked in

these companies from past five to eight years experienced stress due work pressure and working hours and have high levels of dissatisfaction

(B.Prathyusha C. M., 2015) conducted a survey using PLSS (Professional Life Stress Score) developed by David Fontana to assess the professional life stress among 150 software professionals belonging to different IT companies in Hyderabad. The data was collected by using convenience sampling method. The results showed that there the software professionals were experiencing moderate to high level of Professional Life Stress.

(B.Prathyusha C. M., 2016) measured occupational stress using Occupational Stress Index (OSI) given by Srivastava A. K. and Singh A. P. among 500 IT Professionals working in different IT companies in Hyderabad. The data collected was analysed using descriptive statistics and the results proved that the IT Professionals were experiencing high levels of stress.

(K.D.V.Prasad, 2016) conducted study to identify the factors causing occupational stress and its effect on job performance among 90 women and 110 men on the causes of occupational stress and its effect on performance at the workplace of IT companies. NASSCOM listed companies and the employees working more than 12 hours and were only considered for the study. The results indicated that women were experiencing high levels of stress when compared to men, the factors causing stress among them were same and were suffering from severe back and neck pain due to long sitting hours.

(Vimala Thomas, 2019) conducted a cross sectional study on occupational stress among Information Technology professionals working in Hyderabad. The study revealed that around 46%, 33%, and 21% of the professionals are experiencing low, moderate and high stress levels.

There were very fewer studies and it is also noticed that no holistic and exclusive study was conducted to determine factors affecting occupational stress among IS professionals in Hyderabad pre or post COVID-19. It involves a special mention that the studies conducted by the researchers prior to this study have done survey mostly in National Association of Software and Service Companies (NASSCOM) listed top five companies or in Indian based IT companies but not delved into and across the categories (Large, Medium, small and Start-ups) of IT companies. Hence, the present research is a pioneer study that endeavored to bridge this research gap.

3.0 Objectives

1. To examine or evaluate the various occupational stressors and to identify those stressors that are effecting the Information Systems Professionals post COVID-19.

4.0 Research Methodology

4.1 Sources of data

Structured questionnaire was used to collect primary data from Information Systems Professionals in Hyderabad. The researcher adopted a standardized questionnaire of Occupational Stress Index (OSI) developed by Professors S.K.Srivastava and A.P.Singh (Srivastava A.K., 1984) consisting of 46 statements.

For this standardized questionnaire, Cronbach's alpha-coefficient was found to be 0.90 and Reliability coefficient determined by Split-half (odd-even) method was 0.937. Secondary data was collected from journals, newspapers, internet and business magazines.

4.2 Sample

The sample for the study consisted of 1064 information systems professionals from categories of IT companies using proportionate stratified random sampling. Four categories of IT companies (Large, Medium, Small and Start-up) were considered into four strata. Using Simple Random Sampling Technique, the sample is taken from each stratum. Stratification was done on the principles

that the strata are homogenous within themselves and categories of IT companies are non-overlapping in order to gain a fastidiousness in estimation of characteristics of population.

Table 1: Break up of Categories of IT companies (Strata)

| S. No. | Category | Turnover | Number of professionals |
|--------|----------|-----------------------------|-------------------------|
| 1 | Large | More than 200,00,00,000 | More than 1000 |
| 2 | Medium | 10,00,00,000- 200,00,00,000 | 301-1000 |
| 3 | Small | 50,00,000- 10,00,00,000 | 51-300 |
| 4 | Start-up | Upto 50,00,000 | 0-50 |

Source: ICT Policy 2016

4.3 Tools

To analyse the data the tools adopted were Factor analysis and Principal Component Analysis.

5.0 Results and Discussions

To identify the stressors which are influencing the information systems professionals, factor analysis was carried on 46 variables. The following table 2 shows the descriptive statistics (mean and standard deviation) related to sources of stress.

Table 2: Descriptive Statistics (Mean and Standard Deviation) Related to Sources of Stress

| Item code | Statement | Mean | Standard Deviation |
|-----------|--|------|--------------------|
| Var1 | I have to do a lot of work in this job | 3.98 | .829 |
| Var2 | The available information relating to my job-role and its outcomes are vague and insufficient. | 3.02 | 1.095 |
| Var3 | My different officers often give contradictory instructions regarding my works. | 2.84 | 1.055 |
| Var4 | Sometimes it becomes complex problem for me to make adjustment between political / group pressures and formal rules and instructions | 3.12 | 1.121 |
| Var5 | The responsibility for the efficiency and productivity of many employees is thrust upon me. | 3.54 | .983 |
| Var6 | Most of suggestions are heeded and implemented here. | 2.48 | .875 |
| Var7 | My decisions and instructions concerning distribution of assignments among employees are properly followed. | 2.47 | .854 |
| Var8 | I have to work with persons whom I dislike. | 3.09 | 1.108 |
| Var9 | My assignments are of monotonous nature. | 3.08 | .983 |
| Var10 | Higher authorities do care for my self-respect. | 2.58 | 1.036 |
| Var11 | I get less salary in comparison to the quantum of my labor/work. | 3.74 | 1.105 |
| Var12 | I do my work under tense circumstances. | 3.24 | 1.102 |
| Var13 | Owing to excessive workload I have to manage with insufficient number of employees and resources. | 3.04 | 1.059 |
| Var14 | The objectives of my work-role are quite clear and adequately planned. | 2.37 | .885 |
| Var15 | Officials do not interfere with my jurisdiction and working methods. | 2.90 | 1.218 |
| Var16 | I have to do some work unwillingly owing to certain group /political pressures. | 3.08 | 1.068 |
| Var17 | I am responsible for the future of a number of employees. | 3.16 | 1.003 |
| Var18 | My co-operation is frequently sought in solving the administrative or other work related problems at higher levels. | 2.71 | .957 |

| | | | |
|-------|--|------|-------|
| Var19 | My suggestions regarding the training programmes of the employees are given due significance. | 2.56 | .864 |
| Var20 | Some of my colleagues and subordinates try to defame and malign me as unsuccessful. | 2.77 | 1.028 |
| Var21 | I get ample opportunity to utilize my abilities and experience independently. | 2.55 | .979 |
| Var22 | This job has enhanced my social status. | 2.36 | .925 |
| Var23 | I am seldom rewarded for my hard labor and efficient performance. | 3.26 | 1.011 |
| Var24 | Some of my assignments are quite risky and complicated. | 3.56 | .969 |
| Var25 | I have to dispose off my work hurriedly owing to excessive workload | 3.12 | 1.029 |
| Var26 | I am unable to perform my duties smoothly owing to uncertainty and ambiguity of the scope of my jurisdiction and authorities. | 2.94 | 1.015 |
| Var27 | I am not provided with clear instructions and sufficient facilities regarding the new assignments entrusted to me | 2.88 | 1.071 |
| Var28 | In order to maintain group conformity sometimes I have to do/ produce more than the usual. | 3.68 | .836 |
| Var29 | I bear the great responsibility for the progress and prosperity of this organisation/ department/ project. | 3.81 | .857 |
| Var30 | My opinions are sought in forming important policies of the organisation / department/ project. | 2.79 | 1.031 |
| Var31 | Our interests and opinion are duly considered in making appointments for important posts. | 2.76 | .948 |
| Var32 | My colleagues do co-operate with me voluntarily in solving administrative and other work related problems. | 2.21 | .853 |
| Var33 | I got ample opportunity to develop my aptitude and proficiency properly. | 2.42 | .975 |
| Var34 | My higher authorities do not give due significance to my post and work. | 2.88 | 1.008 |
| Var35 | I often feel that this job has made my life cumbersome. | 3.02 | .957 |
| Var36 | Being too busy with official work I am not able to devote sufficient time to my domestic and personal problems. | 3.21 | 1.142 |
| Var37 | It is not clear that what type of work and behaviour my higher authorities and colleagues expect from me. | 2.89 | .987 |
| Var38 | Employees attach due importance to the official instructions formal working procedure. | 2.48 | .792 |
| Var39 | I am compelled to violate the formal and administrative procedures and policies owing to group/ political pressures. | 2.56 | .924 |
| Var40 | My opinion is sought in changing or modifying the working system, implements and conditions. | 2.81 | .902 |
| Var41 | There exists sufficient mutual co-operation and team-spirit among the employees of this organisation. | 2.31 | .918 |
| Var42 | My suggestions and co-operation are not sought in solving even those problems for which I am quiet competent. | 2.91 | .999 |
| Var43 | Working conditions are satisfactory here from the point of view of our welfare and convenience. | 2.46 | .892 |
| Var44 | I have to do such work as ought to be done by others. | 3.31 | .938 |
| Var45 | It becomes difficult to implement all of a sudden the new dealing procedures and policies in place of those already in practice. | 3.51 | .983 |
| Var46 | I am unable to carry out my assignments to my satisfaction on account of excessive load of work and lack of time. | 3.24 | 1.128 |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaigyanic Parikshan Sansthan, Varanasi, 1984.

Kaiser-Meyer-Olkin (KMO) and Bartlett's Test result is shown in the Table 3. 0.882 is the value of the KMO measure of sampling adequacy which indicates that the sample data for conduct of factor analysis for the 46 variables is appropriate. To find the presence of correlation among the variables the statistical tool used was the Bartlett's test of Sphericity. There is a significant relationship among the variables as the p-value (Sig.) is 0.00. The test statistic value of chi-square with 1035 degrees of freedom (df) is 14766.935.

Table 3: KMO and Bartlett's Test

| | | |
|--|--------------------|-----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .882 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 14766.935 |
| | df | 1035 |
| | Sig. | .000 |

Source: Primary data

Communality value ranges from 0 to 1. The value '0' means no variance and value '1' means total variance explained by common factor and if the variance is less than 0.5, it can be removed from the further study. Table 4 exhibits communalities table. Variables like Var8, Var10, Var16, Var22, Var23, Var24, Var28 and Var43 are removed for further analysis as all these variables have the value of variance to be below 0.5. Remaining all variables are considered for further analysis.

Table 4: Communalities

| Item code | Initial | Extraction |
|-----------|---------|------------|
| Var1 | 1.00 | .638 |
| Var2 | 1.00 | .580 |
| Var3 | 1.00 | .578 |
| Var4 | 1.00 | .636 |
| Var5 | 1.00 | .523 |
| Var6 | 1.00 | .624 |
| Var7 | 1.00 | .604 |
| Var8 | 1.00 | .462 |
| Var9 | 1.00 | .557 |
| Var10 | 1.00 | .387 |
| Var11 | 1.00 | .526 |
| Var12 | 1.00 | .546 |
| Var13 | 1.00 | .587 |
| Var14 | 1.00 | .523 |
| Var15 | 1.00 | .600 |
| Var16 | 1.00 | .484 |
| Var17 | 1.00 | .573 |
| Var18 | 1.00 | .553 |
| Var19 | 1.00 | .546 |
| Var20 | 1.00 | .589 |
| Var21 | 1.00 | .563 |
| Var22 | 1.00 | .485 |
| Var23 | 1.00 | .399 |
| Var24 | 1.00 | .487 |
| Var25 | 1.00 | .616 |
| Var26 | 1.00 | .596 |

| | | |
|---|------|------|
| Var27 | 1.00 | .616 |
| Var28 | 1.00 | .466 |
| Var29 | 1.00 | .618 |
| Var30 | 1.00 | .627 |
| Var31 | 1.00 | .627 |
| Var32 | 1.00 | .689 |
| Var33 | 1.00 | .596 |
| Var34 | 1.00 | .580 |
| Var35 | 1.00 | .574 |
| Var36 | 1.00 | .592 |
| Var37 | 1.00 | .599 |
| Var38 | 1.00 | .609 |
| Var39 | 1.00 | .530 |
| Var40 | 1.00 | .529 |
| Var41 | 1.00 | .578 |
| Var42 | 1.00 | .546 |
| Var43 | 1.00 | .496 |
| Var44 | 1.00 | .615 |
| Var45 | 1.00 | .682 |
| Var46 | 1.00 | .664 |
| Extraction Method: PCA (Principal Component Analysis) | | |

Table 5 : Total Variance Explained

| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|----------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 7.909 | 17.194 | 17.194 | 7.909 | 17.194 | 17.194 | 3.577 | 7.776 | 7.776 |
| 2 | 4.809 | 10.455 | 27.648 | 4.809 | 10.455 | 27.648 | 3.009 | 6.541 | 14.317 |
| 3 | 1.932 | 4.2 | 31.849 | 1.932 | 4.2 | 31.849 | 2.801 | 6.089 | 20.407 |
| 4 | 1.651 | 3.589 | 35.438 | 1.651 | 3.589 | 35.438 | 2.522 | 5.482 | 25.889 |
| 5 | 1.487 | 3.233 | 38.67 | 1.487 | 3.233 | 38.67 | 2.327 | 5.059 | 30.948 |
| 6 | 1.435 | 3.12 | 41.791 | 1.435 | 3.12 | 41.791 | 2.12 | 4.608 | 35.556 |
| 7 | 1.33 | 2.892 | 44.683 | 1.33 | 2.892 | 44.683 | 2.04 | 4.434 | 39.991 |
| 8 | 1.225 | 2.663 | 47.346 | 1.225 | 2.663 | 47.346 | 2.03 | 4.413 | 44.404 |
| 9 | 1.177 | 2.559 | 49.905 | 1.177 | 2.559 | 49.905 | 1.686 | 3.666 | 48.07 |
| 10 | 1.088 | 2.365 | 52.27 | 1.088 | 2.365 | 52.27 | 1.482 | 3.222 | 51.292 |
| 11 | 1.029 | 2.237 | 54.507 | 1.029 | 2.237 | 54.507 | 1.312 | 2.853 | 54.144 |
| 12 | 1.019 | 2.215 | 56.722 | 1.019 | 2.215 | 56.722 | 1.186 | 2.577 | 56.722 |
| Extraction Method: PCA (Principal Component Analysis) | | | | | | | | | |

The above table 5 exhibits the items of Principal Component Analysis (PCA) using varimax rotation. Factor analysis is conducted on all the 46 variables, on the criteria that Eigen value is greater than one. All the 46 variables were reduced to 12 components as shown in the Fig.1 (Scree Plot) which together explain 57% of total variance.

More than 56.723% of the variance have been explained by the first twelve components, which proves that the variables chosen for the study are relevant. Rotated Component Matrix shown in Table 6 indicate how each factor correlates with each item. For easy reading and understanding of the below table the values are suppressed to 0.4.

Figure 1: Scree Plot

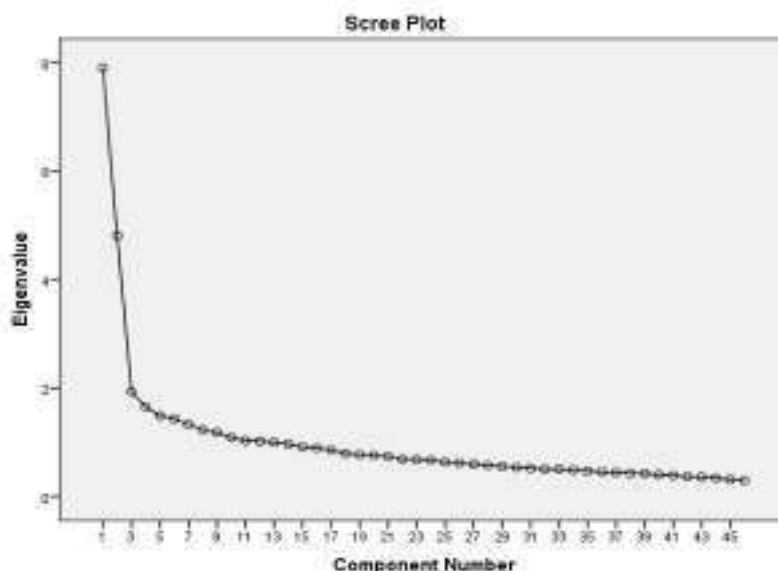


Table 6: a. Rotated Component Matrix

| | Components | | | | | | | | | | | |
|-------|------------|------|------|------|-------|------|------|------|------|----|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Var1 | .672 | | | | | | | | | | | |
| Var 2 | | .637 | | | | | | | | | | |
| Var3 | | | .681 | | | | | | | | | |
| Var4 | | | | .478 | | | | | | | | |
| Var5 | | | | | .520 | | | | | | | |
| Var6 | | | | | | .773 | | | | | | |
| Var7 | | | | | | | .583 | | | | | |
| Var9 | | | | | | | | .773 | | | | |
| Var11 | | | | | | | | | | | | .621 |
| Var12 | | | | | | | | | | | .641 | |
| Var13 | .454 | | | | | | | | | | | |
| Var14 | | .405 | | | | | | | | | | |
| Var15 | | | .672 | | | | | | | | | |
| Var17 | | | | | -.548 | | | | | | | |
| Var18 | | | | | | .490 | | | | | | |
| Var19 | | | | | | | .705 | | | | | |
| Var20 | | | | | | | | .819 | | | | |
| Var21 | | | | | | | | | .460 | | | |
| Var25 | .603 | | | | | | | | | | | |
| Var26 | | .647 | | | | | | | | | | |

| | | | | | | | | | | | | |
|--------|------|------|------|--|--|------|------|------|------|------|------|--|
| Var27 | | | .637 | | | | | | | | | |
| Var29* | | | | | | | | | | | | |
| Var30 | | | | | | .535 | | | | | | |
| Var31 | | | | | | | .744 | | | | | |
| Var32 | | | | | | | | .523 | | | | |
| Var33 | | | | | | | | | .530 | | | |
| Var34 | | | | | | | | | | .424 | | |
| Var35 | | | | | | | | | | | .576 | |
| Var36 | .661 | | | | | | | | | | | |
| Var37 | | .409 | | | | | | | | | | |
| Var38 | | | .777 | | | | | | | | | |
| Var39* | | | | | | | | | | | | |
| Var40 | | | | | | .524 | | | | | | |
| Var41 | | | | | | | | .434 | | | | |
| Var42 | | | | | | | | | .605 | | | |
| Var44 | .618 | | | | | | | | | | | |
| Var45 | | | .806 | | | | | | | | | |
| Var46 | .751 | | | | | | | | | | | |

a. Rotation converged in 16 iterations.
 Var29* and Var39* are having values less than 0.4
 Rotation Method: Varimax with Kaiser Normalization
 Extraction Method: Principal Component Analysis.

The following are the measures and item loadings of the twelve factors in order of their importance.

5.1 Role overload

The first component accounted for 17.194% of the total variance. This component had significant loading of 6 statements. Table 7 shows the factor loadings of these variables.

Table 7: Component 1-Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|---|-------------|
| Var1 | I have to do a lot of work in this job | .672 |
| Var13 | Owing to excessive workload I have to manage with insufficient number of employees and resources. | .454 |
| Var25 | I have to dispose off my work hurriedly owing to excessive workload | .603 |
| Var36 | Being too busy with official work I am not able to devote sufficient time to my domestic and personal problems. | .661 |
| Var44 | I have to do such work as ought to be done by others | .618 |
| Var46 | I am unable to carry out my assignments to my satisfaction on account of excessive load of work and lack of time. | .751 |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaiyanic Parikshan Sansthan, Varanasi, 1984

The component is named as "Role Overload" as all the statements are positively loaded as shown in table 7, it proves that the occupational stress is caused to Information Systems professionals due to excessive workload.

5.2 Role ambiguity

This component accounts for 10.456% of the total variance and has significant loading of four statements. Table 8 shows that the factor loadings of these variables.

Table 8: Component 2-Significant Loadings of Variable

| Item code | Statement | Loading |
|-----------|---|-------------|
| Var2 | The available information relating to my job-role and its outcomes are vague and insufficient. | .637 |
| Var14 | The objectives of my work-role are quite clear and adequately planned. | .405 |
| Var26 | I am unable to perform my duties smoothly owing to uncertainty and ambiguity of the scope of my jurisdiction and authorities. | .647 |
| Var37 | It is not clear that what type of work and behaviour my higher authorities and colleagues expect from me. | .409 |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaigyanic Parikshan Sansthan, Varanasi, 1984.

The component is named as "Role Ambiguity" as all the statements describe that the occupational stress is caused due to ambiguity and uncertainty of the job roles performed.

5.3 Role conflict

This component accounts for 4.21% of the total variance and has significant loading of five statements. Table 9 shows the factor loadings of these variables.

Table 9: Component 3-Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|--|-------------|
| Var3 | My different officers often give contradictory instructions regarding my works. | .681 |
| Var15 | Officials do not interfere with my jurisdiction and working methods. | .672 |
| Var27 | I am not provided with clear instructions and sufficient facilities regarding the new assignments entrusted to me. | .637 |
| Var38 | Employees attach due importance to the official instructions formal working procedure. | .777 |
| Var45 | It becomes difficult to implement all of a sudden the new dealing procedures and policies in place of those already in practice. | .806 |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaigyanic Parikshan Sansthan, Varanasi, 1984.

The component is named as "Role Conflict" as all the statements describe that the occupational stress is caused due to sudden changes in the procedures and policies, for not providing clear instructions regarding new assignments and job roles being ill-defined.

5.4 Political pressures

This component accounts for 3.590% of the total variance and has four statements, out of four, only one statement is taken into consideration. Remaining statements are removed from the study as Var39 has factor loading to be less than 0.4 and Var16 and Var28 have the value of variance to be below 0.5. Table 10 shows the factor loadings of these variables. The component is named as "Political Pressures" as all the statements describe that the occupational stress caused is due to make adjustment between formal rules and instructions and group/ political pressures.

Table 10: Component 4-Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|--|-----------------------|
| Var4 | Sometimes it becomes complex problem for me to make adjustment between political / group pressures and formal rules and instructions | .478 |
| Var39 | I am compelled to violate the formal and administrative procedures and policies owing to group/ political pressures. (Loading is less than 0.4) | Not considered |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaigyanic Parikshan Sansthan, Varanasi, 1984.

5.5 Persons responsibility

This component accounts for 3.234% of the total variance and has significant loading of three statements, out of three, only two statements are considered. Var39 is removed from the study as it has the factor loading to be less than 0.4. Table 11 shows the factor loadings of these variables.

Table 11: Component 5- Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|--|-----------------------|
| Var5 | The responsibility for the efficiency and productivity of many employees is thrust upon me. | .520 |
| Var17 | I am responsible for the future of a number of employees. | -.548 |
| Var29 | I bear the great responsibility for the progress and prosperity of this organisation/ department/ project. (Loading is less than 0.4) | Not considered |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaigyanic Parikshan Sansthan, Varanasi, 1984.

The component is labelled as “Persons responsibility” as the stress is caused due to the responsibility of productivity and efficiency of many employees is upon the Information System professional and the negative loading of var17 indicates that the extent of stress is reduced when the responsibility of the future of number of employees is in the hands of Information Systems professional.

5.6 Under participation

This component accounted for 3.13% of the total variance and has significant loading of four statements. Table 12 shows the factor loadings of these variables.

Table 12: Component 6-Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|---|---------|
| Var6 | Most of suggestions are not heeded and implemented here. | .773 |
| Var18 | My co-operation is frequently sought in solving the administrative or other work related problems at higher levels. | .490 |
| Var30 | My opinions are sought in forming important policies of the organisation / department/ project. | .535 |
| Var40 | My opinion is sought in changing or modifying the working system, implements and conditions. | .524 |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaigyanic Parikshan Sansthan, Varanasi, 1984.

The component is named as “Under Participation” as all the statements describe that the occupational stress is due to the suggestions and opinions are not sought out from Information systems professionals for solving the problems or in changing the policies.

5.7 Powerlessness

This component accounts for 2.894% of the total variance and has significant loading of three statements. Table 13 shows the factor loadings of these variables.

Table 13: component 7-Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|---|---------|
| Var7 | My decisions and instructions concerning distribution of assignments among employees are properly followed. | .583 |
| Var19 | My suggestions regarding the training programmes of the employees are given due significance. | .705 |
| Var31 | Our interests and opinion are duly considered in making appointments for important posts. | .744 |

Source: Primary data. and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaiyanic Parikshan Sansthan, Varanasi, 1984

The component is named as "Powerlessness", as all the statements elucidate that the occupational stress in Information Systems professionals is caused due to not being involved in suggestions related to training programmes, opinions related to appointments for important positions and decisions relating to distribution of assignments.

5.8 Poor peer relations

This component accounts for 2.664% of the total variance and has four statements, out of which three statements are considered. The statement Var8 is not considered for further study as the value of variance below 0.5. Table 14 shows the factor loadings of these variables.

Table 14: Component 8- Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|--|---------|
| Var20 | Some of my colleagues and subordinates try to defame and malign me as unsuccessful. | .819 |
| Var32 | My colleagues do co-operate with me voluntarily in solving administrative and other work related problems. | .523 |
| Var41 | There exists sufficient mutual co-operation and team-spirit among the employees of this organisation. | .434 |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaiyanic Parikshan Sansthan, Varanasi, 1984.

This component is named as "Poor Peer Relations" as all the statements describe that the relationship with colleagues and subordinates lead to occupational stress.

5.9 Intrinsic impoverishment

This component accounts for 2.558% of the total variance and has four statements. Table 15 shows the factor loadings of these variables.

Table 15: Component 9- Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|---|---------|
| Var9 | My assignments are of monotonous nature. | .773 |
| Var21 | I get ample opportunity to utilize my abilities and experience independently. | .460 |
| Var33 | I got ample opportunity to develop my aptitude and proficiency properly. | .530 |
| Var42 | My suggestions and co-operation are not sought in solving even those problems for which I am quiet competent. | .605 |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaiyanic Parikshan Sansthan, Varanasi, 1984

This component is named as “Intrinsic Impoverishment” as all the four statements describe that the occupational stress is caused due to monotonous assignments, cooperation and suggestions of the employee are not sought in solving problems.

5.10 Low status

This component accounts for 2.364% of the total variance and has three statements, out of which only one variable is considered. The statements Var10 and Var22 are not considered for further study as the value of variance is less than 0.5. Table 16 shows the factor loading of the variable.

Table 16: Component 10- Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|---|---------|
| Var34 | My higher authorities do not give due significance to my post and work. | .424 |

Source: Primary data and A. K. Srivastava and A. P. Singh, ‘The manual of Occupational Stress Index’, Manovaigyanic Parikshan Sansthan, Varanasi, 1984

This component is labelled as “Low Status”, as the statement describes that the occupational stress is caused due to higher officials not giving due respect and significance to the professional work and the designation.

5.11 Strenuous working conditions

This component accounts for 2.238% of the total variance and has four statements, out of which two variables are considered. The statements Var24 and Var43 are not considered for further study as the value of variance is less than 0.5. Table 17 shows the factor loadings of the variables.

Table 17: Component 11-Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|---|---------|
| Var12 | I do my work under tense circumstances. | .641 |
| Var35 | I often feel that this job has made my life cumbersome. | .576 |

Source: Primary data. and A. K. Srivastava and A. P. Singh, ‘The manual of Occupational Stress Index’, Manovaigyanic Parikshan Sansthan, Varanasi, 1984

This component is named as “Strenuous Working Conditions” as the above statements describe that the stress is caused due to the working conditions.

5.12 Unprofitability

This component accounts for 2.216% of the total variance and has two statements, out of which only one variable is considered. The statement Var23 is not considered for further study as it has the value of variance less than 0.5. Table 18 shows the factor loadings of the variable.

Table 18: component 12-Significant Loadings of Variables

| Item code | Statement | Loading |
|-----------|--|---------|
| Var11 | I get less salary in comparison to the quantum of my labor/work. | .621 |

Source: Primary data and A. K. Srivastava and A. P. Singh, ‘The manual of Occupational Stress Index’, Manovaigyanic Parikshan Sansthan, Varanasi, 1984.

This component is named as “Unprofitability”, as the above statement describes that the

occupational stress is related with remuneration (increments and salaries).

Table 19 shows factor loadings based on factor analysis for the factors influencing occupational stress among Information Systems professionals.

Table 19: Factor Loadings

| Components | Item | Factor Loading |
|------------------------------|--|----------------|
| Role Overload | I am unable to carry out my assignments to my satisfaction on account of excessive load of work and lack of time. | .751 |
| Role Ambiguity | I am unable to perform my duties smoothly owing to uncertainty and ambiguity of the scope of my jurisdiction and authorities. | .647 |
| Role Conflict | It becomes difficult to implement all of a sudden the new dealing procedures and policies in place of those already in practice. | .806 |
| Political Pressures | Sometimes it becomes complex problem for me to make adjustment between political / group pressures and formal rules and instructions | .478 |
| Persons Responsibility | The responsibility for the efficiency and productivity of many employees is thrust upon me. | .520 |
| Under Participation | Most of suggestions are heeded and implemented here. | .773 |
| Powerlessness | Our interests and opinion are duly considered in making appointments for important posts. | .744 |
| Poor Peer Relations | Some of my colleagues and subordinates try to defame and malign me as unsuccessful. | .819 |
| Intrinsic Impoverishment | My assignments are of monotonous nature. | .773 |
| Low Status | My higher authorities do not give due significance to my post and work. | .424 |
| Strenuous Working Conditions | I do my work under tense circumstances. | .641 |
| Unprofitability | I get less salary in comparison to the quantum of my labor/work. | .621 |

Source: Primary data and A. K. Srivastava and A. P. Singh, 'The manual of Occupational Stress Index', Manovaijyanic Parikshan Sansthan, Varanasi, 1984.

6.0 Limitations

The present study has certain limitations like:

- This research was conducted only among 12 selected Information Technology companies. in Hyderabad, Telangana State.
- This study is based purely on the feelings/ attitudes/opinions of the respondents which can change/vary from situation to situation, time to time while answering the questionnaire.
- Present research concentrations only on identification of occupational stressors experienced by the Information Systems professionals post COVID.

7.0 Conclusions

In conclusion, a twelve factor model of occupational stressors was confirmed using factor analysis in the Information Systems Professionals in post COVID-19 which proves that the scale adopted for the present research has high analytical capability for measuring occupational stress and for identification of areas which require key focus in the Information Technology sector/ industry.

Majority of Information Systems Professionals are adopting individual strategies to overcome the occupational stress post COVID-19 by reading books and newspapers, gardening, meditation and yoga, watching television and movies with families, spending time with family members, cooking

etc., It is not only the individual strategies help in overcoming the occupational stress.

It is very important that the IT companies also understand the needs of its employees and provide what is best for them which can help the Information Systems professionals to overcome the stress in a better way during post COVID. Constant appraisal programs, challenging assignments, recognition, awards and rewards, proper definition of the job roles, providing job security, frequent town hall meetings and appreciation from the superiors should be provided to reinstate and motivate them to feel “**work and home**” instead of “**work from home**”.

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An Expensive Price to Pay: How Article XXI(b) Protects International Hegemony at the Cost of Good Governance

Abhijit Vasmatkar*, Suma Dadke** and P. Sriya***

ABSTRACT

In 2020, the Trump Administration's decision to impose 25% tariffs on aluminum and 10% tariffs on steel derivatives took effect. Despite widespread outrage from the international community, which is evidenced by the multitude of retaliatory measures and complaints against the U.S. before the World Trade Organisation, it is certainly not the first time that the International Hegemon U.S. has subverted international trading regulations. Presently, the U.S. has invoked the security exception under Article XXI of the General Agreement on Tariffs and Trade of 1994. These tariffs were defended by the Trump Administration as a measure to protect the viability of their domestic industries to meet the state's national defence requirements. The security exception, which as the name suggests, is an exception carved out for states that allows them to take any action it considers necessary for the protection of its essential security interests. It has, thus, largely been a self-judged provision used by states to justify trade decisions that protect their national interest. Two questions arise in this context: whether the existence of this exception serves to perpetuate international hegemony due to the sensitive aspect of state sovereignty it covers in its self-judging character, and whether this then transforms it into a tool to challenge good governance. The WTO as a governing body is founded on the ideals of good governance, however, it has been ineffective in regulating the exploitation of its provisions by powerful and developed states due to non-recognition of such principles explicitly. If status quo remains, where states misuse the provisions of GATT increasingly and repeatedly and the WTO remains unable to discharge good governance and hold such states accountable, it may result in monumental changes in the world order including the eventual collapse of the multilateral international trade regime. This paper explores the relationship between good governance and the WTO and how the security exception functions within this context. It examines the nature and usage of said exception by the U.S. and how this has created a pressing issue for the multilateral trade regime. It proposes an exception to the exception as a reinforcement to ensure that there is a check and balance of measures imposed under Article XXI as a possible solution. The proposed exception is of a qualifying nature that lays down international standards that must be met to retain the self-judging character of the national security exception, failing which measures would be open to judicial scrutiny.

Keywords: *International trade, good governance, International hegemony, National security exception, State sovereignty, Tariffs, WTO.*

1.0 Introduction

By the end of the Cold War era, consensus was that international organizations lacked institutional depth and existed to serve the interests of the rich and powerful instead (Kentikelenis & Voeten, 2020; Mearsheimer, 1995). In this background of global dissatisfaction and the failure of the International Trade Organization, the World Trade Organization was institutionalised as a product of one of the most successful trade negotiations of the time, the Uruguay Round, on the ideals of liberal trade and economy, international cooperation and global good governance.

*Corresponding author; Assistant Professor, Department of Law, Symbiosis Law School, Pune, Maharashtra, India. (Email: abhivasmatkar@gmail.com)

**Student Researcher, Department of Law, Symbiosis Law School, Pune, Maharashtra, India. (Email: 17010125232@symlaw.ac.in)

***Student Researcher, Department of Law, Symbiosis Law School, Pune, Maharashtra, India. (Email: 17010125121@symlaw.ac.in)

The term ‘good governance’ was first used while discussing the need for institutional reform and efficiency in the public sector within Sub-Saharan African countries (Kaufmann et al., 1999). It can be traced back to the development of the normative concept of ‘governance’ by the World Bank, which was defined as “*the manner in which power is exercised in the management of a country’s economic and social resources for development*” (World Bank, 1992). This concept has evolved over the years, and today when viewed from the perspective of international economic relations, good governance is understood as having three dimensions (Christie et al., 2013):

- i) The usage of rules, resources and power in the functioning of institutions;
- ii) participation in terms of equal representation and equal access to decision making and inclusion; and
- iii) factors ensuring transparency, accountability and fair administration.

Time and time again, the World Trade Organization has reiterated its commitment to the twin ideals of good governance and sustainable development. Notably, however, when it comes to acting on such commitments the WTO seems to favour one twin over the other (Weiss & Steiner, 2007) – while sustainable development is explicitly provided for as an objective in the preambulatory paragraphs of the Marrakesh Agreement, 1994 and regularly invoked by the Appellate Body (US – Import Prohibition of Certain Shrimp and Shrimp Products), the principles of good governance are merely alluded to and decidedly more obscure.

It may be argued that while the concept of good governance is hardly visible in the WTO’s broader framework, the organization itself is a rules-based system (Mayer, 1981; Keohane, 1984; Jackson, 1989) rooted in the elements of participation, transparency and accountability. The origin of the consensus rule that WTO negotiations are based on lies within the principle of participation, and the effort to reduce the economic hierarchy between the developed and developing nations alike is aimed at ensuring accountability and effectiveness in the regime (Woods, 1999, p. 52). The establishment of the Dispute Settlement Body with the objective of delivering unbiased decisions on trade issues, as well as its model of functioning, is based on the principle of accountability, framed on the idea that the world economic order is accountable not to powerful nations, but to the international trading regime instead (Woods, 1999, p. 44). The requirement that tariff measures be reasonable, internally consistent, transparent and non-discretionary points to procedural element of principle of fairness seen within the regulations of the WTO, while the demand for equal distribution of power to ensure equitable outcomes of WTO measures points to the substantive element of the principle (Woods, 1999, p. 46). Essentially, the broad idea of good governance, intrinsic within the WTO, entails equal representation and powers amongst the world with no one country being able to act as an unaccountable hegemon (Botchway, 2001, p. 177). It stands to reason then, that the WTO stands against the notion of international hegemony.

Unfortunately, it would seem that the lack of explicit recognition of good governance principles in the WTO’s legal framework, and particularly within the General Agreement on Tariffs and Trade, 1994, has fostered a consequent lack of any semblance of good governance in the multilateral trade system. In fact, it may very well be true that there exist certain provisions in GATT itself that have been used in an attempt to subvert the principles of participation, transparency, accountability and fair administration.

The multilateral trading regime has experienced several devastating setbacks in 2020, however in reality, the regime was already in shambles due the paradigm shift from multilateralism to multipolarity. This shift can be attributed to the growing flavour of ‘economic nationalism’ over the past decade and the United States of America, particularly under the Trump Administration, has been the most recent country to embrace the phenomenon with its short-sighted foreign policy, pronounced trade wars and abuse of power to suit the country’s own interest that all served to spell severe ramifications for the rest of the world. This policy orientation is not a consequence of Trump’s

presidency, and can be seen within the moderate democrat administrations of Obama and Biden as well. In fact, the Appellate Body crisis started to build up in 2011 when the reappointment of Jennifer Hillman was blocked, followed by the unilateral decision to block the appointment of Seung Wha Chang in 2016 (United States Blocks Reappointment of WTO Appellate Body Member, 2016). Economic nationalism is on the rise with protectionist measures increasing rapidly, threatening liberalised trade. This is also a direct consequence of two issues: the rise in regional trade or, Mega-Regionalism, and the abuse and misuse of the WTO regulations and provisions, such as Article XXI(b), by powerful nations and trade giants.

Article XXI(b), or popularly referred to as the national security exception (hereinafter referred to as NSE) is an example of this. Not only has it been used with increasing frequency in recent years, resulting in an arguable absence of transparency and accountability by virtue of the nature of this provision, its invocation has been accompanied by a host of unsavoury suspicions and hostile retaliation. While this is worrisome, what is even more unsettling is how the NSE itself is being used with impunity by powerful Member States to serve their own hegemonic ends, thereby actively undermining WTO's claim of good governance. It is, perhaps, obvious at this juncture that the discussion around NSE cannot be continued without the study of the one country which has invoked it multiple times in the past decade. In other words, the United States of America has once again assumed centre stage.

In 2017, the Trump Administration directed the initiation of an investigation into steel imports and their effect on U.S. national security (U.S. Department of Commerce, 2017).

In 2018, the Trump Administration imposed 25 per cent tariffs on steel products and 10 per cent tariffs on aluminium products ("Adjusting Imports of Steel into the United States," 2018).

In 2020, the Trump Administration imposed 25 per cent tariffs on steel derivatives and 10 per cent tariffs on aluminium derivatives ("Adjusting Imports of Derivative Aluminum Articles and Derivative Steel Articles Into the United States," 2020).

Section 232 of the Trade Expansion Act, 1962, empowers the President to regulate imports on the grounds of national security, beginning with an investigation by the Department of Commerce and ending with a recommendation, based upon which the President may issue proclamations adjusting imports. So far, only imports of steel and aluminium products and derivatives have been adjusted under this law, however, it is speculated that restrictions on automobiles and their parts ("Adjusting Imports of Automobiles and Automobile Parts Into the United States", 2019) and well as on uranium and titanium sponges follow closely ("Notice of Request for Public Comments on Section 232 National Security Investigation of Imports of Titanium Sponge," 2019). This move of the then Administration invited harsh criticism, both domestically and internationally.

On the domestic front, the very constitutionality of Section 232 (American Institution for International Steel, Inc. v United States, 2019) is being challenged in federal court along with the tariffs themselves (Severstal Export GMBH v. United States, 2018), and Congress is deliberating measures to limit the President's powers in this respect, in the aftermath of Trump's affinity for tariffs (Fefer et al., 2018). More importantly, this situation draws attention to the complications arising on the international front: although the U.S. imposed such tariffs under Section 232, it also invoked Article XXI(b) to justify the imposition.

These tariffs were defended by the Trump Administration as a measure to protect the viability of domestic industries to meet national defence requirements which is linked to protecting U.S. national security interest. Nevertheless, this move has been the cause of outrage and retaliatory measures including from the European Union, China and India (Fefer et al., 2018, p. 28). It has also resulted in numerous complaints against the U.S. before the WTO (Fefer et al., 2018, pp. 39-41), as it is seen not only as yet another violative act by the U.S. but also as a threat to the multilateral trading regime – a threat that still holds under the Biden Administration.

This article, while briefly touching upon these tariffs and their legitimacy under NSE, aims to answer this question: whether the very existence of the NSE serves to perpetuate international hegemony due to the sensitive aspect of state sovereignty it covers in its self-judging character,

thus, not simply becoming the perfect clause to exploit, but also the tool to challenge good governance and what this ultimately means for the WTO as well as the continued existence of liberalised multilateral trade.

For the purpose of this article, the researchers will be restricting their study of the exploitation of this exception to this particular instance of steel and aluminium tariffs levied by the U.S.

2.0 An Analysis of Article XXI(b) of GATT

The NSE can be invoked to justify violations of member obligations assumed under GATT, creating a caveat in the system. Article XXI(b) allows for countries to take any trade-related measures that it considers necessary for the protection of its essential security interests related to *fissionable materials, traffic of arms or ammunition, any material directly or indirectly involved in supply for the military establishment, measures taken during any emergency in international relations or during the time of war*. The essential keywords that warrant deliberation are “it considers necessary” and “essential security interests”, “supply for the military establishment” and “emergency in international relations”.

By and large dormant for decades, this clause, predominantly an affirmation of the recognition of the sovereignty of members (Federer, 2018; Alexandroff & Sharma, 2005), has become the centre to many disputes and virtually the ideal provision to exploit the WTO multilateral trade system. The NSE was created to ensure the sovereignty of states over their national security, as is reflected by the text. It has a clear discretionary nature, conferring upon states the absolute power in matters of determining essential security interests, and it is this nature that lends the provision of a self-judging character. This can further be substantiated by drawing a comparison with the exception clause under Article XX, where the subjective term “considers necessary” is absent, and whose invocation has been examined objectively by the DSB, creating a general rule that the absence of unjustified discrimination is to be established by the invoking member state (EC – Measures Affecting Asbestos and Products Containing Asbestos, 2001).

Due to lack of WTO judicial precedent on the NSE clause until 2019, the primary tool of interpretation has been state practice, a *lex specialis* of GATT treaty interpretation (Alford, 2011, p. 708). Individual interpretation of member states can be broadly classified into two competing interpretations, the *ultra vires* and the *intra vires* perspective (Federer, 2018). The *ultra vires* perspective argues that the sole judge of the NSE invocation is the invoking member and that DSB has no right to adjudicate on the security interests of a sovereign WTO member which, it is contended, is substantiated by the intention behind the clause: to ensure sovereign liberty over their essential security interests (Federer, 2018; U.N. Conference on Trade and Employment, 1947). The *intra vires* interpretation, further divided into two sub-classes, argues that the NSE falls within the jurisdiction of WTO Dispute Settlement Body. Where the first sub-class argues that the review power of the DSB is limited to whether the good faith requirement attached to invocation has been met with, the second sub-class argues that the invocation in its entirety is open to judicial scrutiny (Alford, 2011). This view is supported by the language used by the drafters of the text and the accepted rule that no member state can unilaterally justify violation of longstanding GATT principles (Federer, 2018, p. 230). Viewed from the lens of good governance, this *intra vires* interpretation is reflective of the principles of transparency, accountability and fairness. Unfortunately, the majority view and reigning state practice is that NSE is a self-judging clause, however, a strong minority argues that the invocation can be objectively reviewed based on whether the measure was taken in good faith and has

any objective nexus to essential security interests (Akanke & Williams, 2003).

This also happens to be the view taken by the DSB in the very recent, and first of its kind, ruling on the NSE in 2019 (Russia – Measures Concerning Traffic in Transit, 2019). Ascertaining the DSB’s jurisdiction over disputes on the invocation of the NSE, the body defined certain key terms of the article and chalked out the limits of the Article. Despite upholding the historic, and currently protested, self-judging character of the NSE, the DSB stated that such discretion is limited to what the state deems are its security interests and the WTO cannot scrutinise what interests pertain to the quintessential functions of the state. However, in rejecting Russia’s claim that the NSE is non-justiciable altogether, the DSB held that the invocation can be reviewed where there is evidence of absence of good faith and where the nexus between the measure and the security interest is implausible. The same stance was mirrored in the Saudi Arabia dispute regarding the invocation of the security exception (Saudi Arabia – Measures Concerning the Protection of Intellectual Property Rights, 2020) under the TRIPS agreement.

The researchers submit that the majoritarian *ultra vires* interpretation is exactly what is creating a fissure in the framework of GATT, as it has allowed the NSE to morph into an anti-transparency, anti-accountability and anti-fairness weapon that can be wielded at will. This is evidenced by the way U.S. has been employing the NSE to further its agenda at the expense of others, and thus requiring urgent attention. The multilateral trading system appears to be crumbling from within, a gradual destruction brought on by the very international hegemony it sought to counter and yet seemingly perpetuates.

3.0 The U.S. and the National Security Exception – A Close Friendship

Much of Trump’s electoral campaign consisted of assuring people he would “make America great again” (Simoes, 2017). It was evident since then that should he assume office, his America First policy would bring about dramatic changes in the way America dealt with the rest of the world. His attempts to “put American steel and aluminum back into the backbone of the country” (Whitehouse, 2017) were what we began to see shortly after his inauguration in the form of extreme tariffs. It was the promise of a politician being honoured. It is for this reason, among others, that it appears that the reason behind these measures was political, and not exactly pertaining to national economic security interests. In fact, economists are contending that these tariffs hurt American economic interest, particularly those of the manufacturing sector quite severely (Fajgelbaum et al., 2020).

What may have begun as a promise to voters, and arguably retained that character as does any promise made by a politician hoping to be re-elected, quickly turned into an irrational display of power by someone who thinks trade wars are “good and easy” (Griswold, 2019). Although the Administration defended the imposition of tariffs saying its domestic industries need to be self-sufficient in the interest of its national security, i.e., in case a war breaks out the U.S. must be able to manufacture enough weaponry on its own and currently it is dependent on imports to do so – these tariffs have been applied selectively. The application against U.S. allies including the EU does not bode well for international relations, but that fact that Argentina, Australia, Brazil, Canada, Mexico and South Korea are exempt from the tariffs on derivative steel products, and Argentina, Australia, Canada and Mexico are exempt from the tariffs on derivative aluminium products (Fefer et al., 2018, p. 9), has led to many states regarding this act as *malafide*. Indeed, the EU and other members have filed complaints against the U.S. in the WTO (Fefer et al., 2018, p. 43). However, the one who is suffering the brunt of these restrictions is growing superpower China – a state Trump often accused of employing “unfair trade practices” (Whitehouse, 2018). Trump’s acts were presumably in an attempt to pressure China into revising its policies on intellectual property protection, technology transfers, industrial subsidies and market access (Guohua, 2019a) – something he has been consistently

criticising.

China has not taken these restrictions lying down – the U.S. is now staring at retaliatory tariffs in return (Guohua, 2019a), and Chinese complaints before the WTO (Fefer et al., 2018, p. 39). This has the potential to turn into a full-blown trade war quickly, if not already presenting as one. There appears to exist a political vendetta against China, originating well before Trump, which has resulted in several U.S.-China clashes before having reached this point where the U.S. is formulating policies that have a strong undercurrent of ‘beggar thy neighbour.’ Often credited to Adam Smith, the beggar thy neighbour policy refers to a policy that is enacted by one state in an attempt to resolve its economic issues but also worsens another state’s economic issues (Smith, 2007). Protectionist policies such as trade barriers including tariffs, quotas and sanctions are examples of this. 25 per cent tariffs on aluminium and steel are *certainly* examples of this. Such policies were sought to be prevented by the institution of GATT, an agreement that embodies principles of free trade.

The crux of the problem, however, is not that one does not recognise what the U.S. did under the Trump Administration specifically, although that in itself is extremely concerning. Retaliatory beggar thy neighbour policies that result in a trade war will affect developing countries the most, destroying multilateral trade and world economies. The problem is that International Hegemon United States of America has always been doing this – flouting norms of international trade with impunity to further its interests, economic or otherwise, regardless of the detriment to others (Jordan, 2019). Over and over it has bent rules to suit its purpose, always hidden behind the farce of “the greater good,” parading as environmental concerns (US – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, 2018; US – Import Prohibition of Certain Shrimp and Shrimp Products, 2001) or moral duties and no amount of world pressure or WTO rulings have resulted in changed behaviour. Thus, in a sense, Trump merely furthered the legacy of a superpower interested in preserving power, and Biden seems in no particular hurry to undo said legacy.

4.0 A System in Need of Changing

It is apparent that a global trade war rooted in preserving power and establishing supremacy is beneficial to none – especially developing states. The implications for the multilateral trading regime should the U.S. continue indulging in such behaviour, made not only possible but also convenient by the NSE, are dire.

Today, once again, the legitimacy of the multilateral trade system is being contested by developing nations who feel inadequately consulted within international organisations which are catering to the interests of the powerful (Woods, 1999, p.41). A classic example of this is how China is still eligible for the Special and Differential Treatment despite being the world’s third largest economy (Cimino-Isaacs et al., 2021). One of the consequences of this dissatisfaction is, harkening back to the 90s, the rise in the number of Regional and Free Trade Agreements over the years, that has led to a sense of multipolarity within the sphere of global trade, weakening the WTO (Garzon, 2017, p. 102). It is becoming increasingly common for states to develop bilateral and plurilateral RTAs such as the EU-Singapore Free Trade Agreements, or the Comprehensive and Progressive Agreement for Trans-Pacific Partnership. There are currently 342 RTAs in force, 7 of which entered into in 2021 (WTO Database, 2021). This positive trend in the creation of RTAs suggests that there may come a time where the WTO becomes defunct, indeed it is already viewed as obsolete by some (Creamer, 2019), what with the flagrant abuse of its provisions and its inherent inability to counter wilful misuse. This may exacerbate brewing discontent further and lead to the ultimate collapse of the system.

The WTO is already plagued by a plethora of issues including the debacle of the Doha Development Agenda (Araujo, 2018, p. 245) and the crippling of the appellate body by the U.S.

resulting in its stagnation since December 2019 (Cimino-Isaacs et al., 2021). U.S.' continued blocking of the appointment of judges to the appellate body has created a situation where there is, effectively, no grievance redressal mechanism left to members. This is not to say that the U.S. would abide by unfavourable rulings of the appellate body, in all likelihood as evidenced by history, it will not. While a change in the U.S. Administration may seem like a ray of hope for numerous issues like immigration, on the trade front, Biden's approach and goals appear to be much the same as his predecessor. Granted, Biden provides a more diplomatic and civilized approach to negotiations, but the economic nationalistic perspective still colours his core policy (Sloan, 2020). Even if Biden decides to extend cooperation to the WTO in an effort to salvage the situation, he has no plans to do so until the current global pandemic has been tackled by the nation whose timeline, based on the statistics, cannot be predicted at this point. Further, with more and more states beginning to prioritise their interests and protect and promote regional trading regimes – it means the end of an era that was built on the principles of free trade. This has been aggravated by the COVID-19 pandemic, which has shifted focus to domestic interests and slowed down the ministerial negotiations (Cimino-Isaacs et al., 2021), ultimately pointing towards the question of the continued relevance of the body itself. The NSE, compounding these issues, is a polarising provision that is sabotaging the WTO's very existence.

However, as much as a systemic change seems warranted, any radical change must be approached with caution. Propounded by Sir Charles Kindleberger, the Hegemonic Stability Theory contends that for the world to remain stabilized, there is a need for one stabiliser – a hegemon, if you will – committed to the ideals of a liberal trade regime including free trade and peace (Brawley, 2004). Arguing in favour, Robert Gilpin cites hegemony, liberal ideology and common interests as the key factors essential for the formation and expansion of a liberal trade regime and market. The theory predicts the decline of the hegemony eventually, where the hegemon gets weary of 'free-rider nations' and begrudges its economic partners who enjoy similar benefits with lesser input from their side, so to speak (Schubert, 2003 as citing Gilpin, 1987).

This precisely resembles the current scenario with the U.S. Although the framing of the 1994 GATT is mostly credited to the U.S., it no longer holds the same values of the liberal economy as it did back then and its policies now are nationalistic. The Trump Administration made its discontent with the regime clear, threatening to withdraw from the WTO if "they don't shape up" and going as far as to call the treaty "the worst trade deal ever made." (Jordan, 2019, p. 177). The WTO system, U.S. claims, has enabled the rise of countries like China at the cost of millions of manufacturing jobs in the U.S (Johnson, 2020). Therefore, any radical change to reform the system and the NSE clause particularly, might have very well been the straw that breaks the camel's back. While the Biden Administration has now replaced Trump in office, it is evident that his position on the WTO is not dissimilar, although perhaps not as extreme (Sloan, 2020). It has been categorically stated that the U.S. would be less willing to cooperate if its interests are not prioritised (Guohua, 2019b). Thus, it may lead to the withdrawal of the U.S. from the WTO regime and although such withdrawal may not lead to the abolishment of the WTO directly, it will significantly weaken the already crumbling system, maybe fatally.

Given the current state of affairs, there is no one clear successor to the seat of International Hegemon. The baton may pass to China, which has slowly begun its hegemonic journey, with increased contribution to the global economy and quantitatively ahead of the U.S. since 2013 (Lisewski, 2020) or to the EU, the current trade giants of the world alongside the U.S. However, it is also true that international trade and economy is not a relay race – such major transitions, more accurately the vicious battle for hegemonic dominance, disrupt the world order and create a flux. If the WTO were to collapse, and with-it GATT, there will exist a vacuum in the sphere of international trade where there would be no global trade facilitating and regulating body. In the long term, this

implies that smaller developing states would be left to defend themselves, with no institution to champion their cause and protect them from exploitation from developed states in unbalanced negotiations. The descent into multipolarity would become more rapid and intensive, attributed to numerous conflicting trade blocs with zero cooperation amongst them. A glimpse of this future is already visible, with an increasing number of states opting for Mega-Regionals, such as the Trans Pacific Partnership (TPP), and the Regional Comprehensive Economic Partnership (RCEP). RCEP alone accounts for 30 per cent of global GDP (McDonald, 2020) and TPP over 40 per cent (McBride et al., 2021). The numbers are so high and so many trade partners have entered into RTAs that even if the WTO shattered, their trade lines would remain intact, albeit presenting as cut-throat warring wolf-pack model of global trade with incredibly high stakes. Moreover, should trade wars break out, which is neither a foreign nor a far-fetched notion, there would be no impartial body to help end the trade crisis before it disrupts the world economy drastically. This also means that states would have to resort to their measures of dispute settlement that are fraught with diplomatic tension, politically motivated agendas and selfish interests. Ultimately, the cumulative effect of all these contributing factors would then trigger economic crises and threaten the ideals of sovereignty.

However, it is not merely in the interest of the world for world order to remain as is with a functional WTO with U.S. backing. U.S.' withdrawal might hurt the U.S. more than the WTO. The U.S. has only 20 FTAs in force with relatively smaller nations, and the recent withdrawal from the TPP (Office of the U.S. Trade Representative, 2017) and the abandonment of Transatlantic Trade and Investment Partnership (TTIP) negotiations, coupled with unregulated trade relations without GATT principles might be counter-productive for the U.S. as 60 per cent of the U.S. trade is outside the purview of its FTAs (Costa & Cimino-Isaacs, 2016). It would also lose its Most Favoured Nation status with 163 members and the country would become a less attractive base for manufacturing, thus increasing cost of U.S. production and diminishing its competitiveness which essentially comes down to an increased price burden on the consumers (Brown & Irwin, 2018).

The U.S. has lost too many lives, jobs and opportunities to the COVID-19 pandemic, and like several other states, now faces a disrupted supply chain and high unemployment rate (Weinstock, 2020). Although backing out of the WTO may seem beneficial to its economic nationalism and in dealing with its economic crisis, it would further cripple the U.S. economy and expose it to the danger of tariff hikes and more stringent restrictions from Member States, who are no longer bound by MFN obligations and other protections that the WTO offers. This would also then contribute to a faster hegemonic decline which may spell unimaginable and unmitigable disaster for the rest of the world.

5.0 The Road Ahead

As established, the need for a systemic change is imminent and extremely necessary, beginning with the self-judged national security exception that has turned into a dangerous tool foretelling ruin. However, a delicate balance must be struck between creating real change while also not disturbing the current system too severely lest we run the risk of unleashing trade instability and the breakdown of the multilateral trade system.

The researchers believe that what is required is a regulatory character to the framework of the NSE that will ensure transparency in application and clarity in interpretation. Such character would be falling in line with the *intra vires* interpretation of the NSE, thereby strengthening the WTO's supposed commitment to good governance as well, without interfering with state sovereignty enforced through the provision. This can be done by way of modification of the clause itself that involves laying down a set of qualifications that test the veracity of the invocation for members states to be eligible to claim the NSE for their proposed trade measures.

The researchers propose carving out an exception within the exception as a means of

reinforcement within the Article XXI(b) to ensure equilibrium between sovereign security concerns and independence and prevent the possible misuse of GATT.

Article XXI(b)

“Nothing in this Agreement shall be construed

(b) to prevent any contracting party from taking any action which it considers necessary for the protection of its essential security interests

(i) relating to fissionable materials or the materials from which they are derived;

(ii) relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment;

(iii) taken in time of war or other emergency in international relations; or...”

Provided that, the self-judging character shall be extinguished where one or all of the qualifications for the invocation have not been met in the interest of transparency, accountability and fairness.

Explanation 1. – In Clause b, “**qualifications**” include:

(a) The measure imposed under this exception

(i) must be uniformly applied to all nations in consonance with Article I. Where certain member states are exempted, a statement of reason for such exclusion must be provided by the invoking member to all contracting parties, subject to judicial scrutiny upon institution of complaint by the aggrieved member;

(i) Should the statement of reason provided by the invoking member relate to exceptions available under Articles XXIV and XX, then such measure imposed must satisfy the requirements of such articles.

(ii) must aim to impart a higher degree of benefit upon the invoking member than the degree of disadvantage created to another member;

(iii) must be in consonance with the standard and principles of good faith;

(iv) must be proportionate to the threat to national security of the invoking member. Where tariff measures are being sanctioned, they must be in quantitative proportion to the security interest aimed to secure;

(v) must have a prima facie plausible nexus with the security interest aimed to secure.

The researchers are aware of the difficulty that accompanies modifying a treaty, especially one as complex as GATT. However, it is necessary that GATT, being an extremely important instrument in international trade falling under the ambit of the WTO, explicitly recognises the principles of good governance. It is desirable that this loophole in the current system is reformed appropriately, particularly to combat international hegemony. Considering the recent trend of judicial pronouncements by the WTO in regards of the NSE, it is hoped that Member State acceptance and willingness to formulate a remedy – this specific remedy, would be strengthened through precedent.

Article XXI(b) is enabling powerful states to violate free trade norms and introduce policies best suited to their interests and in the process, exploit developing states that are bound by GATT norms. The cumulative effect of this is the ever-widening gap between the developed and developing member states. If remain unchecked, the consequence will be the inevitable decline of the WTO as well as its standing as a paragon of good governance, with members repudiating obligations. They may resort to protectionist policies, or devise an alternate trade regime rather than remain part of a

pseudo system that panders to superpower interests and where the authority of members to twist existing provisions to their advantage is not curtailed – such a development might trigger recession eventually and liberal economic principles may be at stake. Global cooperation is not enough, the need of the hour is good governance – what meets the eye today is an appalling lack of governance at all from the WTO, made possible by the simultaneous lack and presence of certain provisions in GATT used by Member States to their advantage and the WTO's ultimate disadvantage. If such practice of twisting provisions to undermine good governance continues to go unaddressed and remains non-remedied, the future for multilateral international trade and economies looks inarguably bleak.

The WTO must take concrete steps to save the world from a polarised trade regime and must push for more decisive negotiations and consequential reforms. This, it is submitted, begins with introducing a well-balanced reform to the NSE framework to combat the impunity with which superpowers navigate international trade and its hegemonic set up, while still respecting state sovereignty.

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A Study on the Influence of Customer Relationship Management on Service Quality and Customer Loyalty: A Study Conducted among Hotels in Tamil Nadu and Kerala

S. Franklin John* and Vimala.K.V. **

ABSTRACT

India is one of the largest restaurant industries in the world. It attracts venture capitalists, marketing Gurus social media specialists and experienced chefs across the world. According to Indian Restaurant Congress, Indian food service industry is worth nearly 75 thousand crore and it is growing at a healthy compounded annual growth rate of 17%. This food service industry is likely to reach 1, 37,000 crore by 2015. For many years the food business seen as a tempting and lucrative opportunity reflected to the fact opening a restaurant tops the wish list of many people in India. Due to the demand and expectations of the customers and government norms made the industry move towards organizing on its own. But still 70% of the current food service industries are in unorganized sector. According to the president of Franchise India, expects the organized food service industry will grow at a rate of 20-25% per annum. If this is the scenario, we want to understand what a customer really expects from a restaurant, the answer will help the owner to develop a sustainable innovative restaurant. We are trying to develop a modal between service quality and customer loyalty to understand how these can be used for innovation and sustainability of the restaurant in the industry. The research will cover selected restaurants in Palakkad and Coimbatore for the purpose. The outcome of the study will throw some light on this industry which will be helpful for the upcoming entrepreneurs in this food service industry.

Keywords: Customer Relationship Management, Service Quality, Customer Loyalty.

1.0 Introduction

Customer relationship management is an approach to manage a company's interaction with current and potential customers. It uses data analysis about customers' history with a company to improve business relationships with customers, specifically focusing on customer retention and ultimately driving sales growth. CRM is a process or methodology used to learn more about customers needs and behavior in order to develop stronger relationship with them. The ultimate goal is to transform customer relationships into greater profitability by increasing repeat purchase rates and reducing customer acquisition costs.

The food processing industry in India is a sunrise sector that has gained prominence in recent years. Availability of raw materials, changing lifestyles and relaxation in policies has given a considerable push to the industry's growth. This sector is among the few that serves as a vital link between the agriculture and industrial segments of the economy. Strengthening this link is of critical importance to improve the value of agricultural produce; ensure remunerative prices to farmers and at the same time create favorable demand for Indian agricultural products in the world market. A thrust to the food processing sector implies significant development of the agriculture sector and ensures value addition to it. The Indian food processing industry holds tremendous potential to grow, considering the still nascent levels of processing at present. In the current times, restaurants have taken over the task for social gatherings, offering novelty and convenience at the same time. Independent outlets therefore continue to dominate the industry in India.

*Corresponding author; Professor, Department of Management, VJIM, Hyderabad, Telangana, India. (Email: franklinjoh@gmail.com)

**Research Scholar, Department of Management, Nehru College of Management, Coimbatore, Tamil Nadu, India. (Email: subirakesh@gmail.com)

Service quality is a comparison of expectations with performance. A business with high service quality will meet customer needs whilst remaining economically competitive. Improved service quality may increase economic competitiveness. This aim may be achieved by understanding and improving operational processes; identifying problems quickly and systematically; establishing valid and reliable service performance measures and measuring customer satisfaction and other performance outcomes.

The concept of customer loyalty has been considerable attention in the marketing literature over the past few years. In any industry, as the competition is becoming intense, the need for retaining the existing customers has become a top priority for all business. Researches show that it costs five times more to acquire a new customer than to retain an old one.

2.0 Scope of the Study

The scope of the study confined to provide a better understanding to identify the role of CRM on customer loyalty and service quality in hotel industry. Based on the results it is understood that CRM is considered to be among the best strategies and practices for hotels to improve their performance and ultimately to ensure their long-term business survival. It is also found that Regular guests are offered personalized services and privilege cards to avail special facilities and discounts. CRM helps in getting a holistic view of the customer and helps in offering customized products and enhanced value depending on the worth of the customer.

3.0 Objectives of the Study

- To study the influence of the State on Service Quality, CRM and Customer loyalty Dimensions.
- To study the influence of the Frequency of Visits to restaurants on Service Quality, CRM and Customer loyalty Dimensions.

3.1 Limitations of the study

The study has covered a very small portion of the population. Hence generalization of the study may not be possible. Due to time constraints the sample were collected only from 2 restaurants in Coimbatore and four from Palakkad.

4.0 Review of Literature

According to Siddhartha Bhattacharya, Dr. Partha Pratim Sengupta, Ramakant Mishra, (2011) states that aiming at establishing a concrete understanding of the relationship of customer satisfaction and image of the firm with customer loyalty. Taking into consideration the fierce competitive market which the restaurant sector is witnessing the researchers believe that the current study will serve as a significant help to both academician and marketers equally. The investigation was carried out to understand which variables of customer satisfaction and image positively determine customer loyalty towards in the fast food market. The study used a data collected from fast food outlets in the city of Chennai with the implications from the findings being loyalty is positively influenced by image of the restaurant and customer satisfaction towards housekeeping, food & beverages, reception and price”.

According to Mohammad Haghghi, , Ali Dorosti, , Afshin Rahnama and Ali Hoseinpour, (2012) identifies the factors affecting customer loyalty in the restaurant industry. Data was collected using questionnaire distributed in 10 randomly selected branches of Boof Chain Restaurant in Tehran. In each branch, 40 customers were selected for the study. Ultimately, the research sample consisted of

268 customers. Structured equation modeling was used for data analysis and hypothesis testing. The obtained results show that food quality, service quality, restaurant environment, and perception of price fairness had a positive impact on customer satisfaction, but the impact of restaurant location on customer satisfaction was not confirmed. Also, food quality, service quality, and perception of price fairness had a positive effect on customer trust. The results show that food quality is the most important factor affecting customer satisfaction and trust in Boof Chain Restaurants.

Mohammad Haghighi, Ali Dorosti, Afshin Rahnama and Ali Hoseinpour (2012), present research was to investigate the factors affecting customer loyalty in the restaurant industry. Data was collected using questionnaire distributed in 10 randomly selected branches of Boof Chain Restaurant in Tehran. In each branch, 40 customers were selected for the study. Ultimately, the research sample consisted of 268 customers. Structured equation modeling was used for data analysis and hypothesis testing. The obtained results show that food quality, service quality, restaurant environment, and perception of price fairness had a positive impact on customer satisfaction, but the impact of restaurant location on customer satisfaction was not confirmed. Also, food quality, service quality, and perception of price fairness had a positive effect on customer trust. The results show that food quality is the most important factor affecting customer satisfaction and trust in Boof Chain Restaurants. Customer satisfaction had a positive impact on customer loyalty, but the effect of customer trust on customer loyalty was not confirmed.

According to Francis Buttle, (1996) "SERVQUAL: review, critique, research agenda", European Journal of Marketing, Vol. 30 Iss: 1, pp.8 – 32, found out that Since its launch in 1985, SERVQUAL has become a widely adopted technology for measuring and managing service quality. Recently, a number of theoretical and operational concerns have been raised concerning SERVQUAL. Reviews these concerns and proposes a research agenda.

5.0 Research Methodology

A structured questionnaire was developed and tested for collection of data. For the research, the researcher focuses on primary data. A stratified random sampling is used for sample selection. The respondents were met and collected data in person when they were coming out of the restaurant for the study. The collected data was analyzed and using one way-ANNOVA analysis variance.

5.1 Analysis and interpretaion

Table 1.1: One way-ANOVA between the State on Service Quality, CRM and Customer Loyalty Dimensions

| Dimensions | ANOVA | | | | | |
|----------------|------------|------|------|----------|-------|------|
| | State | Mean | Sd | Df | F | Sig |
| Reliability | Tamil Nadu | 3.45 | .759 | 1 894 | 1.072 | .301 |
| | Kerala | 3.40 | .753 | | | |
| | Total | 3.43 | .757 | | | |
| Responsiveness | Tamil Nadu | 3.29 | .765 | 1 893 | .026 | .872 |
| | Kerala | 3.28 | .795 | | | |
| | Total | 3.29 | .776 | | | |
| Tangibility | Tamil Nadu | 3.55 | .776 | 1 894 | 1.587 | .208 |
| | Kerala | 3.48 | .734 | | | |
| | Total | 3.53 | .761 | | | |
| Assurance | Tamil Nadu | 3.48 | .706 | 1 893 | .125 | .724 |
| | Kerala | 3.46 | .741 | | | |
| | Total | 3.47 | .719 | | | |

| | | | | | | |
|-----------------------------|------------|------|------|----------|-------|------|
| Empathy | Tamil Nadu | 3.43 | .688 | 1 894 | 1.415 | .235 |
| | Kerala | 3.37 | .794 | | | |
| | Total | 3.41 | .729 | | | |
| Key customer focus | Tamil Nadu | 3.45 | .691 | 1 894 | .326 | .568 |
| | Kerala | 3.42 | .734 | | | |
| | Total | 3.44 | .707 | | | |
| Technology | Tamil Nadu | 3.59 | .645 | 1 894 | 1.069 | .301 |
| | Kerala | 3.54 | .691 | | | |
| | Total | 3.57 | .662 | | | |
| Business process | Tamil Nadu | 3.27 | .717 | 1 894 | 1.361 | .244 |
| | Kerala | 3.22 | .768 | | | |
| | Total | 3.25 | .736 | | | |
| Knowledge Management | Tamil Nadu | 3.48 | .704 | 1 894 | .038 | .845 |
| | Kerala | 3.47 | .744 | | | |
| | Total | 3.47 | .719 | | | |
| Behavioural | Tamil Nadu | 3.29 | .732 | 1 894 | 3.016 | .083 |
| | Kerala | 3.20 | .774 | | | |
| | Total | 3.26 | .749 | | | |
| Attitudinal | Tamil Nadu | 3.61 | .697 | 1 894 | .779 | .378 |
| | Kerala | 3.57 | .696 | | | |
| | Total | 3.59 | .696 | | | |

Interpretation: From the above analysis of one way ANOVA between the State with the dimensions of Service Quality ,Customer Relationship Management and Customer Loyalty, it is interpreted that all the calculated F values are less than the table value. Hence we accept the null hypothesis at 95%confidence level.

Table 1.2 One way-ANOVA between the Frequency of Visits to Restaurants on Service Quality, CRM and Customer Loyalty Dimensions

| ANOVA | | | | | | |
|----------------|---------------------|------|----------------|----------|-------|------|
| Dimensions | Frequency of visits | Mean | Std. Deviation | df | F | Sig |
| RELIABILITY | Less than 2 Times | 3.12 | .835 | 4 891 | 5.446 | .000 |
| | 2-4 Times | 3.41 | .861 | | | |
| | 5-7 Times | 3.48 | .691 | | | |
| | 8 and above Times | 3.34 | .829 | | | |
| | 5 | 3.55 | .569 | | | |
| | Total | 3.43 | .757 | | | |
| RESPONSIVENESS | Less than 2 Times | 3.07 | .964 | 4 890 | 3.822 | .004 |
| | 2-4 Times | 3.21 | .866 | | | |
| | 5-7 Times | 3.37 | .692 | | | |
| | 8 and above Times | 3.28 | .855 | | | |
| | 5 | 3.38 | .584 | | | |
| | Total | 3.29 | .776 | | | |
| TANGIBILITY | Less than 2 Times | 3.46 | .823 | 4 886 | 4.295 | .002 |
| | 2-4 Times | 3.49 | .674 | | | |
| | 5-7 Times | 3.53 | .785 | | | |
| | 8 and above Times | 3.31 | .756 | | | |
| | 5 | 3.66 | .801 | | | |
| | Total | 3.53 | .761 | | | |
| Dimensions | Frequency of visits | Mean | Std. Deviation | df | F | Sig |
| ASSURANCE | Less than 2 Times | 3.27 | .833 | 4 | 2.893 | .021 |

| | | | | | | |
|--------------------|-------------------|------|------|----------|-------|------|
| | 2-4 Times | 3.45 | .845 | 890 | | |
| | 5-7 Times | 3.51 | .658 | | | |
| | 8 and above Times | 3.42 | .814 | | | |
| | 5 | 3.56 | .475 | | | |
| | Total | 3.47 | .719 | | | |
| EMPATHY | Less than 2 Times | 3.09 | .737 | 4 891 | 7.166 | .000 |
| | 2-4 Times | 3.44 | .791 | | | |
| | 5-7 Times | 3.42 | .655 | | | |
| | 8 and above Times | 3.25 | .786 | | | |
| | 5 | 3.53 | .636 | | | |
| Total | 3.41 | .729 | | | | |
| KEY CUSTOMER FOCUS | Less than 2 Times | 3.22 | .832 | 4 891 | 5.668 | .000 |
| | 2-4 Times | 3.55 | .780 | | | |
| | 5-7 Times | 3.42 | .676 | | | |
| | 8 and above Times | 3.25 | .695 | | | |
| | 5 | 3.46 | .567 | | | |
| Total | 3.44 | .707 | | | | |

| ANOVA | | | | | | |
|----------------------|---------------------|------|----------------|----------|-------|------|
| Dimensions | Frequency of visits | Mean | Std. Deviation | Df | F | Sig |
| Technology | Less than 2 Times | 3.38 | .727 | 4 891 | 6.328 | .000 |
| | 2-4 Times | 3.61 | .684 | | | |
| | 5-7 Times | 3.60 | .611 | | | |
| | 8 and above Times | 3.33 | .782 | | | |
| | 5 | 3.65 | .565 | | | |
| | Total | 3.57 | .662 | | | |
| Business Process | Less than 2 Times | 3.22 | .773 | 4 891 | 2.094 | .080 |
| | 2-4 Times | 3.22 | .824 | | | |
| | 5-7 Times | 3.15 | .716 | | | |
| | 8 and above Times | 3.39 | .718 | | | |
| | 5 | 3.30 | .627 | | | |
| | Total | 3.25 | .736 | | | |
| Knowledge Management | Less than 2 Times | 3.27 | .833 | 4 891 | 2.725 | .028 |
| | 2-4 Times | 3.45 | .845 | | | |
| | 5-7 Times | 3.50 | .658 | | | |
| | 8 and above Times | 3.44 | .825 | | | |
| | 5 | 3.56 | .468 | | | |
| | Total | 3.47 | .719 | | | |
| Behavioral | Less than 2 Times | 3.21 | .788 | 4 891 | 2.711 | .029 |
| | 2-4 Times | 3.20 | .829 | | | |
| | 5-7 Times | 3.16 | .741 | | | |
| | 8 and above Times | 3.39 | .744 | | | |
| | 5 | 3.34 | .631 | | | |
| | Total | 3.26 | .749 | | | |
| Attitudinal | Less than 2 Times | 3.50 | .703 | 4 891 | 2.240 | .063 |
| | 2-4 Times | 3.53 | .754 | | | |
| | 5-7 Times | 3.71 | .703 | | | |
| | 8 and above Times | 3.56 | .718 | | | |
| | 5 | 3.63 | .603 | | | |
| | Total | 3.59 | .696 | | | |
| Cognitive | Less than 2 Times | 3.37 | .786 | 4 | 1.382 | .238 |
| | 2-4 Times | 3.33 | .796 | | | |
| | 5-7 Times | 3.36 | .659 | | | |

| | | | | | | |
|----------------------|----------------------------|-------------|-----------------------|-----------|----------|------------|
| | 8 and above Times | 3.40 | .849 | 891 | | |
| | 5 | 3.47 | .483 | | | |
| | Total | 3.39 | .700 | | | |
| Affective | Less than 2 Times | 3.22 | .784 | 4 891 | 1.680 | .152 |
| | 2-4 Times | 3.37 | .728 | | | |
| | 5-7 Times | 3.41 | .651 | | | |
| | 8 and above Times | 3.24 | .794 | | | |
| | 5 | 3.36 | .615 | | | |
| | Total | 3.35 | .697 | | | |
| ANOVA | | | | | | |
| Dimensions | Frequency of visits | Mean | Std. Deviation | Df | F | Sig |
| Word of Mouth | Less than 2 Times | 3.25 | .748 | 4 891 | 2.413 | .048 |
| | 2-4 Times | 3.47 | .809 | | | |
| | 5-7 Times | 3.39 | .633 | | | |
| | 8 and above Times | 3.40 | .719 | | | |
| | 5 | 3.50 | .465 | | | |
| | Total | 3.44 | .677 | | | |
| Complaining Behavior | Less than 2 Times | 3.26 | .839 | 4 891 | 1.498 | .201 |
| | 2-4 Times | 3.36 | .853 | | | |
| | 5-7 Times | 3.25 | .719 | | | |
| | 8 and above Times | 3.30 | .813 | | | |
| | 5 | 3.41 | .558 | | | |
| | Total | 3.34 | .748 | | | |
| Trust Commitment & | Less than 2 Times | 3.01 | .702 | 4 891 | 2.575 | .036 |
| | 2-4 Times | 3.27 | .975 | | | |
| | 5-7 Times | 3.12 | .702 | | | |
| | 8 and above Times | 3.23 | .906 | | | |
| | 5 | 3.26 | .590 | | | |
| | Total | 3.22 | .801 | | | |
| Price | Less than 2 Times | 3.09 | .859 | 4 891 | 6.422 | .000 |
| | 2-4 Times | 3.37 | .916 | | | |
| | 5-7 Times | 3.43 | .743 | | | |
| | 8 and above Times | 3.22 | .876 | | | |
| | 5 | 3.56 | .754 | | | |
| | Total | 3.39 | .842 | | | |
| Corporate Image | Less than 2 Times | 3.12 | .652 | 4 891 | 7.011 | .000 |
| | 2-4 Times | 3.45 | .704 | | | |
| | 5-7 Times | 3.45 | .521 | | | |
| | 8 and above Times | 3.35 | .682 | | | |
| | 5 | 3.51 | .423 | | | |
| | Total | 3.43 | .602 | | | |

6.0 Interpretation

- 1) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Reliability dimension of service quality , the calculated F value is 5.446 (Sig =0.000) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
- 2) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Responsiveness dimension of service quality ,the calculated F value is 3.822 (Sig =0.004) that is greater than the table value. Hence we the reject null hypothesis at

- 95%confidence level.
- 3) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Tangibility dimension of service quality , the calculated F value is 4.295 (Sig =0.002) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
 - 4) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Assurance dimension of service quality , the calculated F value is 2.893 (Sig =0.021) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
 - 5) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Empathy dimension of service quality , the calculated F value is 7.166 (Sig =0.00) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
 - 6) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Key Customer Focus dimension of CRM , the calculated F value is 5.668 (Sig =0.000) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
 - 7) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Technology dimension of CRM , the calculated F value is 6.328 (Sig =0.000) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
 - 8) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Business Process dimension of CRM , the calculated F value is 2.094 (Sig =0.080) that is less than the table value. Hence we accept the null hypothesis at 95%confidence level.
 - 9) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Knowledge Management dimension of CRM , the calculated F value is 2.725 (Sig =0.028) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
 - 10) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Behavioral dimension of Customer Loyalty , the calculated F value is 2.711 (Sig =0.029) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
 - 11) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Attitudinal dimension of Customer Loyalty , the calculated F value is 2.240 (Sig =0.063) that is less than the table value. Hence we accept the null hypothesis at 95%confidence level.
 - 12) The table of one way ANOVA between the frequency of visits to the restaurant with the Cognitive dimension of Customer Loyalty , the calculated F value is 1.382 (Sig =0.238) that is less than the table value. Hence we accept the null hypothesis at 95%confidence level.
 - 13) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Affective dimension of Customer Loyalty , the calculated F value is 1.680 (Sig =0.153) that is less than the table value. Hence we accept the null hypothesis at 95%confidence level.
 - 14) The analysis between the frequency of visits to the restaurant with the Word of Mouth of Customer Loyalty , the calculated F value is 2.413 (Sig =0.048) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
 - 15) The ANOVA table between the frequency of visits to the restaurant with the Complaining Behavioral dimension of Customer Loyalty , implies that the calculated F value is 1.498 (Sig =0.201) that is lesser than the table value. Hence we accept the null hypothesis at

95%confidence level.

- 16) Analysis of one way ANOVA between the frequency of visits to the restaurant with the Trust and Commitment dimension of Customer Loyalty , the calculated F value is 2.575 (Sig =0.036) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
- 17) From the above analysis one way ANOVA between the frequency of visits to the restaurant with the Price dimension of Customer Loyalty , the calculated F value is 6.422 (Sig =0.000) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.
- 18) It is evident from the analysis of variance between the frequency of visits to the restaurant with the Corporate Image dimension of Customer Loyalty , the calculated F value is 7.001 (Sig =0.000) that is greater than the table value. Hence we reject the null hypothesis at 95%confidence level.

7.0 Conclusion

All the service industries invariably of their businesses have accepted service quality as one of the major factor which affects the satisfaction level of customers. A satisfied customer will bring or introduce new customers to the business .When compared to other service industries restaurant industry has discussed less on service quality on the business. When this study was started we had a small doubt, is service quality prevailing in un - branded restaurants? Because branded restaurants have their own standards of service delivery. These un- branded restaurants are run by family members based on their own wish and they will have their own idea of running business. And we thought that there will be a great difference between two states on service perceived. Fortunately the study has shown us customers are expecting and perceiving the service quality dimension invariably of the state which they belongs to. It was a welcome finding of this study except tangibility dimension all other dimensions are accepted equally by respondents of both the states.

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Comparative Study on HRM Practices During Covid-19 In Automotive Companies

Ramar Veluchamy*, Karishma Sanghai** and Komal**

ABSTRACT

Research Objective: To compare employee engagement practices during COVID 19 in automobile companies Ashok Leyland, Hyundai, Volvo, and Toyota. It focuses on the activities of HR professionals to engage and motivate employees. Since employees are working from home, employee engagement and relations have suffered to a great extent and it has become important for the companies to develop HR practices for greater employee satisfaction and productivity. **Research Gap:** It is important to maintain harmony within the organization during such times. **Research Methodology:** The data collected through respondents are analyzed through Binomial regression. **Findings:** Companies have suddenly adopted new means of working like work from home and e-management, which are new to them. COVID 19 forced HR professionals to innovate, the companies will try to retain employees. **Recommendations:** Several activities such as virtual-meetups, learning and development, online courses, online employee feedback, video lunch, and online family engagement activities are conducted. Such activities keep employees happy and lead to enhanced performance. Yet technology utilization and e-management will lead the future of HRM. Data security, payroll management will be a challenge for future-proofing HRM.

Keywords: HR practices in Automobile, HR in COVID 19, Employee engagement in Pandemic, Comparative study on HRM.

1.0 Introduction

Associations need new systems to stay serious in a consistently evolving climate. In this day and age, HR rehearses assume a significant part in acquiring serious strength and improving execution. A few HR works on including operational execution measures or theoretical execution estimates assume a part. HR departments during Coronavirus show that top associations keep up for HR is high in the midst of the Covid pandemic. One of the primaries ascribes of the HRM of Toyota is the rank-based compensation system. The degree of pay ascends with the position and the capacity level of the creative workers is consistently overhauled in the association. TMC has been tolerating the "wage dependent on business evaluation" to add a section of dispute upgrading the prerequisites of the position-based pay framework. Regardless, the position-based pay framework stays as the essential portion of Toyota's compensation structure. TMC has built up its HRM reasonably for the institutional conditions, for example, the openwork market of Europe. The turnover speed of the labor force in the abroad plant in Europe is fundamentally higher than that of the nearby plant. In Toyota's U.K. plant lacks of the hybridized work relationship have been uncovered. The plant had neglected to feasibly deal with the U.K's. practices, for example, determination, pay structure, work relations that are not comparable to those of Japan. (Datt,2002) Hyundai Engine gathering keeps a limiting framework position, having around 66% of the local market which joins imported vehicles similarly as vehicles made in Korea.

*Corresponding author; Assistant Professor, Department of MBA, Xavier Institute of Management and Entrepreneurship, Phase 2, Electronic City, Bengaluru, Tech Mahindra Building, India. (Email: drvramar@gmail.com)

**Student, Department of MBA, Xavier Institute of Management and Entrepreneurship, Tech Mahindra Building, Bengaluru, India. (Email: karishma26blr@xime.org; komal26blr@xime.org)

HMC has developed its own creation structure with full use of computerization and informatization rather than acquiring by creation workers' fitness, because of opposing work relations. Japanese Creation Framework is portrayed as mastery propelling work relationship with mechanization (for instance "robotization with a human touch").

"In India, after the advancement of financial strategies, the privatization of State endeavors is turning into a hotly debated issue for banter." ("Venkata Ratnam, 1995"). "As of late, the privatization of various ventures like the rail lines, power, ports, streets, scaffolds, and air terminal activities has been started." ("Budhwar, 2001; Datt and Sundharam, 1999"). HR rehearses in the State-had attempts (public district) would be more maintained and facilitated than experiences in the private region. Trade affiliations are now solid in India when showed up contrastingly according to England.

Indian Vehicle Industry has created far in excess of the years. With the climb in the compensation of general inhabitants, there has been strong interest in the whole cases. In any case, with improvement, there come challenges. The new spate of thing audits has shaken the assurance of the business somewhere or the other. The issues and inconveniences identified with the Auto business have a human estimation also.

Vehicle undertakings need amazing HR heads to create and care for gatherings. The (HR) office manages all delegate-related activities like specialist selection and decision, Quality staffing, laborer account, the chiefs, and agent capacity headway getting ready.

As the pandemic bombshells old news and throws the monetary point of view into weakness, the auto business is at the cutting edge. Indisputably the most compelling regions are critical creation communities and home to enter participates in the region's overall creation organization. Regular substitute blueprints help enable operational reasonability following events like calamitous occasions, advanced scenes, and power outages, among others. They don't generally consider the vast detaches, extended school terminations, and travel limits that are being started in countries around the world to help stem the spread of the contamination. With creation terminations delivering results, auto associations need to remain drawn in and deft to all the more promptly investigate this crisis.

Covid's impact on the vehicle store organization may be liberal. Countries that have been vivaciously influenced by the erupting, explicitly, China, Japan, and South Korea, address a basic bit of overall vehicle manufacturing. China's Hubei area, the pandemic's point of convergence, is one of the country's key auto-creation living spaces.

The more significant the store organization, the more critical the impact of the scene is most likely going to be. Automakers with overall stock ties are most likely going to see level 2 and especially level 3 suppliers by and large affected by pandemic-related interferences. While many significant auto extraordinary stuff producers (OEMs) have second, online detectable quality into high-level suppliers, the test is created at lower levels.

The quick elevating of the Coronavirus scene occurred with continue to go a long time of the essential quarter. For relationships in hard-hit regions, for example, Italy, France, and Spain, that has prompted operational impedances that conceded their capacity to settle spending diagrams. Also, some auto affiliations are persistently worried about the likelihood that the money-related effect of the pandemic may cause setting off occasions for generosity and obviously ceaseless resource impediments, the recoverability of receivables, remaking works out, or possibly liquidity issues. To fuel the condition, key record staff might be straightforwardly affected by the pollution or compelled to move their spotlight to coordinate its effect on the business. Lessened efficiency of the money social affair could cause the essential uptick in the volume of work to move past in the coming weeks really overwhelming.

Major worldwide vehicle OEMs and suppliers should carefully consider their cash, liquidity, and working capital methods considering the scene's impact on the world economy and credit markets.

The overall pandemic achieved by the novel Coronavirus comes when both the Indian economy and the vehicle business were anticipating a recovery. While the GDP advancement gauges were north of 5.5%, Covid may achieve a negative impact of 1-2% on the typical improvement rates. The incomparable degree of impact depends upon the range of advancing lockdown and the impact brought about by this pandemic.

The start of Covid in India will conversely influence the vehicle business. It is evaluated that there will be an overall pay impact of at any rate \$1.5 - 2.0 bn every month across the business. Even after we open up, a further diminishing in explorer vehicle demand is typical with discretionary spending accepting a lower need. This will be joined with changes to BS-VI norms that will grow the expense of ownership.

Residence region and bicycle solicitation could see a dive anyway expected to skirt back in the U style. Business vehicles are depended upon to show some adaptability, yet this is reliant upon the public authority continuing to place assets into tremendous structure projects and the liquidity available within the transportation zone.

As the current lockdown moves toward its end and associations expect to reestablish undertakings, it will sufficiently be a fortnight of wanting to commence business exercises. This would be across parts of delegate responsibility, cash, and liquidity the chiefs, bargains, and displaying reclamation and operational movement. Clearly, as the business will fight to recuperate monetarily, express assistance can offer a shock. There has as of now been some assistance with BS-IV stock liquidation through the Hon'ble High Court. Extension of prohibition on head and interest portion will give further assistance. Additional assistance will be relied upon to surrender plans for recording returns like GST return, TDS portions, EPF stores. Further, widen credit on Friendly Government helps Cheat and treats it as CSR costs on the treatment of delegates for Covid. License transient overdraft and premium guide to regulate working capital essentials; Enable the financial region to give channel financing to business/association. Offer confined period waiver on demurrage on ports, rail course stations, etc for stuck/in-transit materials and assurance need task of rail course, collaborations establishment to unclog stock organization. The Indian vehicle industry has recently seen an irksome two or three quarters and this pandemic drove lockdown couldn't have been even more inadequately organized. Regardless, a masterminded and purposeful response, both brisk and medium to long stretch will ensure a Rakish shape recovery. As essential as industry movement will be the assistance needed from the government and regulators to catalyze this reclamation. Taking everything into account, the current situation is a call for action by the entire posse on these furious events.

1.1 Future-proofing human resource management

Over the recent years, HR work has encountered extreme changes, especially in the manner in which representatives work, learn, and convey. The speed of progress has been dramatic, with ventures pushing for digitalization. Nonetheless, nobody would have envisioned that a solitary worldwide occasion, the Coronavirus episode, would quicken one of the best working environment changes of our occasions. Digitalization is critical, as it will help organizations empower their inside capacities with joint effort and profitability instruments for workers and improve operational productivity with light-footed business coherence plans. The quickening can be attributed to the desperation to help representatives working distantly so the business can run as easily as could really be expected and give an unrivaled worker experience in the midst of the frenzy and vulnerability. With organizations attempting to get by notwithstanding, what is likely, probably the harshest downturn to date, it's crucial to comprehend the progressions that will be achieved by this worldwide pandemic. These progressions will be encouraged by more up-to-date advancements, for example, Man-made reasoning (artificial intelligence), Web of Things (IoT), and robotization, and power

organizations to reevaluate their current designs and rules. Incorporating policy changes for the next normal, ensuring uninterrupted workflow, utilizing the power of virtual learning, focusing on social and well-being, developing new talent acquisition and workforce management practices, Using analytics to track workforce and engagement-related data, Keep employees motivated, Emphasize financial wellness, Automate tasks, humanize processes are some of the processes.

2.0 Literature Review

Korean Production System is portrayed as an expertise saving work associated with a more serious level of computerization. Hyundai Production System is described by the blend of adaptable creation innovation and ability saving work organization. The instruction program of HMC demonstrates that the organization isn't keen on creating aptitudes for its representatives. HMC has kept a pay framework dependent on rank in light of the fact that the trade guild has battled against the reception of "wage dependent on occupation assessment." The pay of creation laborers has expanded by the position. Hyundai has attempted to build the mathematical adaptability of the abroad plant with the preemptive work of the executives. The exhibitions of the abroad plant have just overwhelmed those of the homegrown plant inside the brief period. It got quite possibly the best car plants in Europe.[1] Public uniqueness characterizes the sorts of reconciliation between parent organizations and IJVs, yet these coordinated efforts don't really mirror a particular public institutional inclination. Assessment of 87 IJVs proposes that IJV the board has a serious level of authoritative independence in the execution of an organization's errand-related sources of info paying little mind to the public foundation of the unfamiliar accomplice. The presence of an organization's errand-related impacts on HRM rehearsals assumes a critical relevant job where the significant ascribes are the innovation, the board improvement, and the viable utilization of an IJV's assets. IJV the board has a serious level of authoritative and administrative self-governance in the execution of the organization's undertaking related control of exercises paying little mind to the public foundation of the unfamiliar accomplice. [2]

"The Indian associations are currently playing a more co-employable job and are less assailant. According to the 1991 statistics, the absolute labor force in India was 306.8 million (Budhwar, 2001). Out of this, more than 90% of the labor force is utilized in the chaotic area. Formal strategies and works relating to HRM are by and large missing in this area, which is for the most part outside the domain of enactment, the worker's organization development, and expert administration (Venkata Ratnam, 1996: 28). Large organizations tend to follow more formal and structured HR practices (Jackson et al., 1989). The major HRM rehearsals inspected in the examination fall into general classifications of enlistment, remuneration preparing, and improvement and representative correspondence." [3]

"The main HRM practices studied were General climate, OCTAPACE culture (The eight dimensions of OCTAPACE culture are openness, confrontation, Trust, Authenticity, pro-action, autonomy, collaboration and experimentation which are essential for a strong and successful organization) Selection, job definition, career planning, training, performance appraisal, and compensation. On the off chance that the organizations don't zero in on its human resource management, the objectives remain unaccomplished as well as endures. In this way, associations should pay attention to their human asset, the executive's obligation regarding the upgrade of their representative's exhibition, and the achievement of their objectives. The investigation of HRM practices and its effect on organizational performance in the example study association recommends they face a number of difficulties to guarantee the expert and authoritative responsibility of authorities to offer quality types of assistance to the individuals." [4]

Strategic human resource management is defined as "every one of those exercises influencing

the conduct of people in their endeavors to detail and execute the essential requirements of the business." Since strategic HRM is worried about the connection between human assets, the board and vital administration in the firm it alludes to the general heading the association wishes to seek in accomplishing its goals through individuals. "With the expanding acknowledgment of the capability of HR in giving upper hand, associations have started to think about representatives as significant 'resources' or 'speculations'. This view has gotten huger in the present information economy that relies upon the expertise and information on the labor force. Consequently from a daily schedule, regulatory and responsive capacity, the HR work today has developed to being proactive and key. The essential human asset structure approaches detailed by Ulrich and Lake target utilizing or potentially adjusting HR practices to fabricate basic hierarchical abilities that empower an association to accomplish its objectives. This system offers explicit instruments and ways to distinguish how a firm can use its human asset rehearses. The business system, authoritative capacities and human asset rehearses have been given as the three significant components in this structure." [5]

Talent management and managerial competencies affect engagement level and engaged employees are a key to the long-term profitability, good performance, and success of an organization. Many talent management and managerial tools are used in MNC's and private companies which keep employees relatively more engaged physically, cognitively, and emotionally. However, employees are found to be highly engaged in Multinational companies in comparison to Private IT companies. High workforce planning, talent acquisition, talent deployment, talent retention shows highly engaged employees. Inefficient management competency like lack of initiation, innovation, strategic thinking, result orientation, planning and organizing, and decision making makes employees disengaged. Talent management software and competence-based management methodology capture appropriate statistics. Also, employee engagement surveys are a useful tool to find engagement levels. [6] In the machinery, electrical, automotive and food industry there exists a high degree of relation with HR practices in Konya. Where senior management has a very high correlation, mid-tier and first-tier management have lower levels of correlation. Training on job skills among all other parameters like an incentive to meet targets, feedback on performance, communication of strategy, facility for interaction, activities among teams, behavior and attitude, and manufacturing and human resources fit were found to have the highest relationship affecting organizational commitment. However, time, budget, geographical location, manager's unwillingness to support research, remained a limitation in the study. [7] Cross country comparative studies are a challenge for HRM researchers and Comparative study may be done to find out differences in HRM practices in MNC in one or more countries, or cross country study of HRM system, policies and practices at micro and macro levels, study of self-expatriate and expatriate in different countries in individual levels, and global talent management systems. [8]

"Globalization and diversification of workforce made the path for the success of Indian and South Korean IT companies. Along with it, employing knowledge workers and the best of best talents with high technical knowledge, intensive training, showing they are valued and retaining them for long increased commitment to the organization. Providing performance-based incentives, rewards based on profits, and contributions became a driving factor for employees. The physical and social work environment plays a significant role in enhancing the organizational commitment of employees. However, this considers only (1) different levels of globalization; (2) talent development; (3) employee turnover issues; and (4) challenges in their different paths to globalization aspects of it. Further analysis could be done in other areas like – employee engagement for retention, team members performance management, organizational structure, work-life balance, online training and mentoring, etc." [9] Enrollment and determination, Human asset arranging, Preparing and Advancement Projects, Composed Set of working responsibilities, Customary Execution Examination, Development Plans, and Procedures, The board are the variables contemplated in an investigation to analyze the effect of HR practices and Innovation on little assembling organizations

with or without ISO accreditation. HR the board rehearses, HR experts, preparing and improvement, development plan methodology and examination were given more significance in ISO ensured firms in contrast with those without affirmation. Enrollment and determination, Composed Expected set of responsibilities, and Human asset arranging have arisen as the significant human asset the board rehearses followed by both little assembling firms with and without ISO affirmation.[10]

“Information of talent management (TM) by theoretically and experimentally exploring the characteristics of TM and gender orientation incorporation in ability advancement in the German setting. It is broken down under conditions TM might be viewed as comprehensive regarding gender, and we recommend that comprehensive TM can be estimated by the level of gender inclination and the unfair danger in certain TM components. Thusly, sex consideration in TM can be viewed as high, whenever recognized TM components, for example, ability definition, hidden vocation direction, the substance of the ability advancement programs, the TM approach, and certain parts of the ability choice cycle are planned in a manner that similarly underpins all capable representatives to contribute completely and viably to the association free of their gender and additionally gender cliché esteem direction.” [11] The 5P'S are purpose, principles, process, people, and performance which are the significant elements of an association. The Purpose incorporates the association's main goal, vision, objectives and targets, systems, estimation, and input. Principles are the managing methods of reasoning, suspicions, or mentalities about how the association ought to work and lead business by and through trustworthiness base, morals, and guiding principle. Processes are the change of contributions to yields, the method of achieving the undertaking by representatives. People incorporate representatives, clients, providers, and others. The Performance includes the control and input of activities taken toward the hierarchical turn of events. Execution input is the method of dynamic for future bearing. The linkage among purpose, principles, process people, and performance are indistinguishable. HRM is going through tremendous changes because of pandemic and critical developing difficulties turning out to be significant issues in dealing with an association. The pandemic circumstance may drive numerous organizations to develop work techniques to keep the business on and lead to adjust to innovation as better as could reasonably be expected. Innovation usage and the executives will lead the eventual fate of HRM work altogether. However, information security, finance the board, and the line of executives will be a test for the association. [12]

Shuck and Vollard (2010) have characterized representative commitment as "the passionate, psychological and conduct condition of the worker, with an accentuation on the ideal authoritative result". Worker commitment is characterized as a trait of the connection between an association and its representatives. Worker commitment is a critical component of representative and association's prosperity. It predicts worker execution, hierarchical achievement, and monetary execution of the association. It is found from the examination that the association should give its representatives the opportunity to establish a climate helpful for a devoted proficient life that moves their work. Workers are a significant resource for any association. On the off chance that they need more existence to join work and delight at work, at that point dis-commitment may found between representatives.[16] “For representatives' encounters of person-environment fit (P-E fit), or the degree of coinciding between the qualities they have and those of the climate (Kristof, 1996). P-E fit hypothesis sets that people are pulled into and chosen by associations whose workplaces mirror similar qualities, societies, and work highlights as their own significant convictions, qualities, and wants (Kristof-Brown and Guay, 2011). In view of these cycles, representatives who enter associations where their P-E fit is expanded commonly thrive and experience increased degrees of fulfillment, commitment, and by and large prosperity. The social and progressive evaluations set up to fight the current pandemic have extended laborers' impressions of melancholy and social dismissal. Despite the fact that the drawn-out ramifications of COVID-19 are as of now obscure, there is little motivation to accept its effect on hierarchical everyday routine will be short-experienced.”[17]

There is a connection between Covid and its employees. It is conceivable to make reference to that feeling of trepidation can create with a representative who is right now solid having realized that there is an infection called Corona. Here dread methods a troublesome inclination the representative has when the individual believes that the person is in peril inferable from the Corona. There are sure feelings of dread that will or may produce inside a sound representative. It is contended that the worker will get a couple or a few numerous kinds of fears and as a result the person gets distressing. This pressure can be marked as Stress by Corona (SBC). SBC and the ordinary pressure do assault the emotional well-being of the representative. An excessive amount of pressure, additionally called a strain, can prompt various negative physiological results, (for example, brought down insusceptibility, expanded danger of coronary illness), conduct outcomes, (for example, expanded smoking and liquor utilization) just as negative mental ones, (for example, uneasiness, lower enthusiastic prosperity). [18] Effects on American Work, Workers, and Workplace (SHRM National Study of the Changing Workforce, 2020) shows that as of March 16, more than 1/4 (27%) of American specialists have gotten no data from their work environment about plans identified with the Coronavirus. Almost 72% of the labor force is telecommuting, working a changed timetable, or rehearsing social removal in the work environment. Just as 1 out of 5 laborers accept they will confront outrageous monetary difficulty or negative results if the emergency continues. One zone of concern is ability obtaining virtual enrolling apparatuses have hit an unequaled high in utilization particularly regarding video meeting and new representative virtual onboarding where volumes have almost significantly increased by certain sources like HireVue.[20]

During the pandemic lockdown, the eliminated working issues were seen by the prepared experts. The agents being squashed away revolve around their circumstances for around 7-8 hours, while telecommuting fuses colossal obstructions, for example, youth care, family unit errands, and henceforth, workers need to play out the administered assignments around evening time. HRM should assist the labor force with figuring everything out in space and plans for working distantly, thinking about the individual contracts or conditions to keep up the balance among fun and genuine stuff. However managing the web can be useful for affiliations, it's most essential weight is the nonattendance of socialization. The HR administrators don't have to screen intently the representatives' work exercises during distant functioning as they can perform assignments freely with an obligation. The labor force has expanded necessity to shield wellbeing, and workers' wellbeing and security is likewise definitive for organizations to make authoritative qualities and long haul brands. Consequently, considering representative's work-life balance during digitalization measures is critical.[23] After early on stock and gathering interferences, the business is right now experiencing an interesting shock with an uncertain recovery plan in light of shelter set up rules. With limited space to lessen fixed costs, some OEMs have low liquidity to control through a critical stretch of missing salaries. Reduces in market capitalization will presumably stimulate industry mix and without ensuring extra financing, a couple of players risk leaving the business. Changes in customer direct, for instance, remarkable movability tendencies and online shopping presumptions, may remain after the crisis. To deal with the interference, associations need to execute exercises on multiple courses of occasions specifically A snappy response to investigate the emerging condition with an accentuation on guaranteeing individuals, A reset of current business activities to conform to new money related genuine elements, A re-energizing of essential plans to emerge more grounded after the crisis. [25] Points that employers across all jurisdictions will want to consider in connection with COVID-19. The best HR practices during Covid-19 are to Keep up-to-date with accurate information, know where your employees are and where they have been, provide a safe platform for employees to raise concerns, and communicate with your employees. [27]

HR heads in associations have the decision to adjust between genuine work and fun during Coronavirus, and representatives generally experienced lower tension on schedule and were

adaptable, with the work from home plan incapacity. In any case, HR faces a great deal of pressing factors at work (21%) and couldn't keep a suitable congruity among genuine and fun occasions (18%) during the emergency. Most affiliations give no or under 1 hour of game plan to their agents every week and there are truly moderate to free ties between specific execution and remuneration augmentations or movements in the midst of Covid. Most of the HR chiefs (70%) gather that the top association has focused on the importance of HRM in the midst of the Covid. [28] Preparing empowers the workers to get to know occupations and increment their fitness, aptitudes, and information. It assists the recently selected workers with being beneficial in the base measure of time. Paul and Anantharaman (2003), show that preparation can have positive and huge impacts on the association's presentation in explicit areas (steel and programming businesses). The association should guarantee that appropriate preparation is bestowed before every advancement. Prominent mentors from the corporate world must be acquired to improve the nature of preparation. After the preparation programs, booklets of the equivalent in detail ought to be given for future reference.[29]

“The effective associations consider the HRM rehearses as a vital factor that directly affects the worker's presentation. HRM rehearses on SPSS (Statistical Package for the Social Sciences) is done by the Pearson connection. Pearson correlation for the Employee Performance with Compensation ($r=.775$), Career Planning ($r=.796$), Performance Appraisal ($r=.790$), Training ($r=.781$), and Employee Involvement ($r=.876$) show a positive relationship. The results indicate that all the variables are statistically significant at $p<.05$. HRM practices such as Compensation, Career Planning, Performance Appraisal, Training, and Employee Involvement have a positive impact on employee's level of performance. Therefore, it is demonstrated that independent variables contribute positively towards the change in the dependent variable.” [30] WFH is a working game plan where a specialist satisfies the fundamental obligations of his/her work while staying at home, utilizing data, and interchanges innovation (ICT). There are various advantages related to WFH, including the decrease in driving occasions; more noteworthy self-governance and adaptability in the association of work; a superior work-life balance; expanded inspiration and diminished turnover; and improved profitability and productivity. Furthermore, diminished travel related to WFH prompts a decrease in fossil fuel by-products. As indicated by a new review led by the Society for Human Resource Management (SHRM), 71 percent of bosses are attempting to conform to far off work; 65 percent of businesses state keeping up worker confidence has been a test; and more than 33% of businesses are confronting troubles with organization culture, representative profitability and leave guideline.[32]

Enable agile and distributed workforce Organizations that work in complex, multilayered, grid structures are probably going to have encountered difficulties to working viably during the pandemic because of a continuous presentation of new guidelines and rules requiring organizations and representatives to every now and again adjust activities to brief period to save. Investigating hybrid working choices preceding the COVID-19 pandemic, far-off working was a far-off idea for some associations and representatives, with most of the organizations offering this choice to under 25% of their labor force. At the point when lockdowns were set up during the pandemic, organizations had to turn too far off working, basically overnight in some cases.[33] Individuals' capacities assume a critical job in the reaction to the COVID-19 emergency. Non-Pharmaceutical intercessions are connected to empowering agents that make the mediation less expensive or encourage its prosperity all the intercessions speak to a type of social removing that influences people groups' capacity to associate with others in work, school, shopping, diversion, and public activity. The empowering agents may lessen the human advancement misfortunes related to COVID-19 limitations in different measurements, opening elective capacities: admittance to merchandise and ventures, admittance to pay to create exercises, admittance to instruction, and admittance to public activity and amusement openings. The greater part of the empowering agents is identified with upgraded abilities—the new necessities of the 21st century which are inconsistent disseminated across the

populace. As recorded by the 2019 Human Development Report, holes have been broadening in the course of recent years.[34]

3.0 Research Methodology

The researcher employed an in-depth interview with Human Resources personnel from Ashok Leyland, Hyundai, Volvo, and Toyota, and other automotive companies. The research process is followed strictly from data collection to data analysis for this study. HR personnel has been approached in a simple random sampling manner and a Personal interview with each HR was taken individually through video conferencing and recorded. The HR's belong from a varied geographical region including Southern cities of India like Chennai and North like Delhi. Each HR personnel has an experience of minimum 8 years of experience in the Automobiles industry as an HR. All video recording and interview notes were closely analyzed and recommendations, conclusions have been drawn accordingly. The researchers conducted interviews with HR professionals using the questionnaire. Only automotive companies are selected for the research.

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Enhancing Employee Well-being: Issues and Concern for Virtual Work Style

K. M. Akanksha* and Mamta Gaur**

ABSTRACT

The demand for virtual work is augmenting day by day. In the cognizance of a recent event which is pandemic demand of virtual work is the epicentre of all business. Many organizations want to adopt this policy to abate the cost of physical location. Despite the demand for virtual work employee well-being is also a growing concern for businesses. Employee well-being is a crucial part and if look at from a business perspective, the contribution of every employee is related to the success of an overall organization. India has limited amount of resources, with the help of sustainable policies we can use resources prudently. Most of the working employees are facing health issues in this new working style. In this paper dimensions of well-being are the most important part of the paper, which is Physical, Mental and social. The purpose of this paper is to study well-being and its effect on an employee in a virtual working style. The present study helps to understand the effect of well-being on an individual as well as an organization. The nature of this study is conceptual and descriptive. A significant part of this study emphasizes on causes of well-being at virtual work which will help to cope with well-being problems. This paper will help to gain insight into the practices to enhance the well-being of the employees at virtual work.

Keywords: *Virtual Work, Well-being, Well-being Dimension, Organization, Virtual work style.*

1.0 Introduction

Virtual employees are individual who spent the majority of their work time away from their office. Employee included in this group were customer service work, sales, software development, Human Resources, Management and training. In term of managing virtual work employee, a number of advantages and challenges have been identified.

The management process of virtual working includes both positive and negative aspects. Positive aspects are such flexibility, low operating cost and Less Absenteeism. Negative aspects on the other hand are isolation and lack of Work ambience. So, Negative issues create substandard well-being in employee. The overall effect of negative issues affects individual's employee as well as the organization.

A virtual working employee also feels socially isolated from their colleges because face to face interaction aid employees to build their social relationship among peers. Evidence also suggests that long term virtual work style negativity affects the relationship among the co-workers. Demand of virtual work is augmenting day by day. Most of the Businesses are planning to go for this robust plan because technology allows them to work from any place, which offers flexibility to the employee and abate the cost for employer. Virtual work environment has pros and cons so, employee well-being is a crucial part which can help overcome the cons of this concept. If we look at it from business perspective then contribution of every employee is directly related to the success of the organization. Virtual work is not only in demand but holds a better, future scope.

*Corresponding author; Student, Department of School of Business, Galgotias University, Noida, Uttar Pradesh, India. (Email: thakurakanksha32@gmail.com)

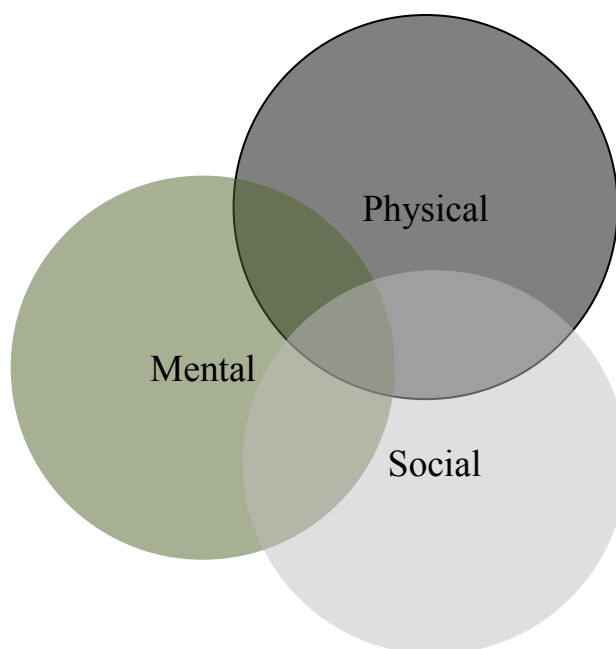
** Professor, Department of School of Business, Galgotias University, Noida, Uttar Pradesh, India. (Email: mamtagaur@galgotiasuniversity.edu.in)

Despite the demand for virtual work, employee well-being is also a growing concern for businesses. Virtual work policy can take its toll on employee's mental health and well-being as this drastic change can cause a feeling of isolation. Employee well-being helps the organization to improve the well-being of the workforce to enhance productivity. Most of the countries are trying to support virtual work policy because we have a limited amount of resources so, prudent use will lead to success.

2.0 Why Virtual Work has gained attention?

In cognizance of the recent event of a pandemic, work from home has been operated. For some employee this pattern is new and they are not able to balance personal and professional life. Due to low social connectivity, stress and physical health affected the performance of employees. This policy has gained attention in some businesses because of its less operating cost and future perspective. Virtual work has cons and pros such as it provides flexibility to the employees but it has some degrading effect on well-being. Due to its future perspective, it has gained attention.

2.1 Well-being dimension at virtual work



2.1.1. Physical well-being-

A balance of physical activity and nutrition that permits you to stay active and your body functions at its best. Physical wellness is not just the absence of illness due to hectic lifestyle, the chaos of labour, appointments, errands we barely notice our body gets exhausted which hampers the power of the body to take care of health, quality of life that helps us to perform our day to day activities. Physical well-being helps the body to stay away from illness, fatigue and risk of injuries. Physical wellness depends on healthy habits which help to stay body salubrious. If the employee will maintain good physical well-being then it will make them productive and self-esteemed.

2.1.2. Mental well-being-

Definition of Mental well-being isn't universal. It has different perception depends on individual, group, culture. Mental well-being is a crucial part of an employee's life because all the work done by the employee affects the overall organization. On an individual basis, the Mental well-

being of employees in virtual work gets affected a lot. It is key to augment the productivity of the employees. To understand this domain, we need to classify this domain into two major components:

- Cognitive Well-being: Cognitive well is the process of gaining knowledge and comprehension. The process consists of thinking, knowing, remembering, judging and problem-solving. Some people have this ability on the other hand it can be developed. But some factors can deteriorate this ability i.e. stress, anxiety etc.
- Emotional well-being: Emotional health is the ability to accept and manage feelings through challenge and change. It includes emotional intelligence and emotional regulation.

2.1.3. Social well-being

Social well-being means social connections and relationships. So, an employee needs to have a good social connection. The reason behind social connections is its human nature Social well-being focuses on social connectivity and supporting the social system in the workplace. Social connectivity at the workplace help to eradicate stress and negative effect of work pressure. social well-being individual need to build Gratitude, kindness, and communication. Social skills make it easier for us to have positive interactions with others, helping us to feel less lonely, angry, or disconnected. When we have developed our social well-being, we feel more meaningfully connected to others.

Causes of substandard well-being at virtual work

1. Employee isolation
2. The paucity of work ambience
3. Mental stress Augmentation
4. Less communication among colleges
5. Less physical movement
6. Lack of Motivation and Employee Engagement
7. Overlapping of personal and professional life
8. No proper assessment of employees i.e. competency, performance and achievement.

3.0 Literature Review

In research on Remote work and well-being, conducted on work from home during the pandemic and find how their health affected by loneliness, exhaustion, stress, and anxiety. In the result found that these are certainly related to certain personality traits and work context.

Mamta Gaur, N. Akbar Jan and A.K.Subramani in their research Impact Of Organizational Climate On Organization Citizenship Behaviour With Respect To Automotive Industries At Ambattur Industrial Estate, Chennai identified that Employees in the organizations have various attitudes that affect their behaviour in the organization. Organizational climate is the important determinant which may have the impact on their psychological environment and work-related attitude, whereas Organizational citizenship behaviour has a determinant role in the organizational process and in changing the traditional environment into a dynamic and efficient environment as one of the new concepts of organizational behaviour management which puts emphasis upon employees and climate of the organization.

Mamta Gaur, N. Akbar Jan and A.K.Subramani in their research Factors Impelling Job Satisfaction identified a major challenge faced by all IT organizations is job satisfaction among its employees, it would be beneficial for organizations and managers to make conscious efforts to develop human resource policies that are in alignment to the needs of the employees to motivate the employees. The job satisfaction is derived by well-being of the individual. The findings of this study have also pointed out that the key items in HR practices such as financial rewards, career advancement opportunities, working environment, training and development activities and

interpersonal relationship are having positive association with the employees' job satisfaction in the selected IT companies. It is imperative for IT companies and their managers to review their practices to strengthen the bond between employees and the organization, maintain good levels of motivation, increase job satisfaction (wellbeing) that would result in increase in commitment and minimize employee turnover.

Richard Gravelling (2020) conducted a study on "The Mental health of workers in the digital era" on how technical innovation affecting the mental well-being of workers and found that two most problem of muscle skeletal disorders and problems related to psychological are most prominent. Such a burn out psychological stress, psychological overload and fatigue.

Mamta Gaur conducted a study on Strong Social Impact and Creating Wealth of Wellness for its Customers & Consumers-a Focus Area to Sustain and Excel in International Business Competition- A case of Tupperware and found that as India experiences boom times, Tupperware has figured out how to share in the boom. The lessons from its success—focusing on a core business competency with a strong social impact in all spheres of well-being of individual, physical as well as social, promoting women economic and social empowerment, adapting to local costs, capitalizing on domestic talent, staying committed, and matching resources with the market's potential—could help multinationals in any industry win in Asia's emerging markets. Today, Tupperware is rated among India's top 3 percent of brands across all categories and segments by Super brands, a well-respected and independent organization, this status could be achieved only because of its strong well-being social impact.

Mamta Gaur and Narges Ebrahimi in their work on Understanding Workplace Relationships - With Special Reference to Superior-Subordinate Relationship – An Important Dimension Having Impact on The Success, Growth and Performance of the Employees and Organization highlighted that Workplace relationship is a very vital phenomenon at the workplace, particularly, the relationship between a leader/superior & his subordinates. A conscientious leader/superior can have a major impact on the performance of his subordinates. To get maximum performance out of his subordinates, he, therefore, has to set an example before them which they can emulate. An effective leader recognizes each person as an individual with different values & beliefs. He recognizes that influences, such as, childhood experiences, ethnic background & religious heritage determine an individual's well-being, personality, values & beliefs. This also ensures productive work on the part of the employees, so essential in today's fiercely competitive environment.

4.0 Methodology

The objective of this paper are:

1. To understand the concept of well-being and the effect of virtual work,
2. To understand the effect of virtual working style on the well-being of the individual as well as organization.

The paper is based on secondary data collected from the past work of various researchers, books, articles, journals etc. Descriptive and Conceptual approach used to analyze the data.

5.0 Data Analysis & Findings

The effect of degrading well-being, on Individual and Organization:

5.1 Individual

5.1.1 Stress

The role of stress is massive in anyone's well-being. Workplace stress can be two types,

physical and psychological. Causes of physical stress includes noise, poor lighting, poor work layout, and bad working postures. Psychological factors are most dominating in the well-being of employee which includes high job demands, poor job control, poor work design and structure, less social connectivity and job insecurity. Stress of virtual work, not only affects the employees but also has unfavorable consequence on the organization's performance also. The effects of job-related strain are evident in employee well-being.

5.1.2 Health issues

Working days are exhausting, and due to the lack of time management and other issues employees are not able to take care of proper, health. Such as high blood pressure, Allergies, High cholesterol, Back pain, Gastrointestinal disease, Headache, these are the most common health issues among the employees. Ignorance of these small issues can lead to detrimental effects. Some people forget to take an adequate amount of hydration due to hectic schedule and the virtual work environment doesn't provide any reminder on the other hand the physical working environment has regular breaks to relax and work on somebody requirements.

5.1.3 Unhealthy habits

This is the most common issue in the employee due to hectic schedule. Unhealthy eating habits can deteriorate physical well-being. Most of the employees engaged in alcohol and smoking habits. Which can affect the productivity level of the employees. One of the small Unhealthy habits can lead to serious consequences i.e. If someone has stress or work pressure, they opt for any such habit as smoking which harmful for well-being.

5.1.4 Emotional exhaustion

Personal and Professional life at the same place leads to emotional exhaustion. Which includes feeling Ove, emotionally drained, lacking energy, empty & unmotivated and unable to meet your daily demands. You may feel an increase in irritability, notice increased conflict in your relationships, or feel like you want to crawl into your bed and never get out. You feel stuck, exhausted and hopeless.

5.5.1 Isolation

Friendships and social interactions are basic psychological requirements for human well-being. With virtual work, employees "lose that incredible ability to gather and unite", So virtual work can't provide the original atmosphere of work. The biggest hurdles of isolation can when things aren't going according to the plan, there is no one to help you to gain the perspective. You can become a less effective worker as co-workers find you less approachable and stop collaborating. Isolation has more cons because if one is lonely then they start to lose their social skills and for any organization, social connectivity is a crucial part. Every organization seeks the best teamwork among their employees.

5.1.6 Lack of work environment

Employees are not able to switch off the work. Not knowing how to balance work and life because in a Physical working environment there is fix time and routine that every employee has to follow except in some cases. Virtual work provides flexibility in work but without prudent use of time management, it can make things complicated. Employees need to concentrate and focus to produce required results which are good as compare to the physical work environment. It also doesn't provide good working condition such as less disturbance, no unwanted noise, etc. In-office environment every employee has the same goal and purpose which isn't present in virtual work. Lack of equipment and security is a hurdle among virtual employees such as High-speed internet, sensitive company information access, fax/ printer machine and other equipment.

5.2 Organization



5.2.1 Low productivity

For any organization, productivity is the key to competitive advantage. It will be a risk for any organization in productivity with all temptation such as mental pressure, emotional exhaustion and other diseases. They can create a distraction and hamper the productivity of the virtual working employee. Productivity is subjective which can differ from person to person. But in general, terms degrading well-being is the most dominating factor which can hamper the productivity of the individual. If the productivity is not up to the marks then the organization will not get their desired result of work. For the employee amid work pressure and hectic schedule, it is difficult to cope with these problems. It is the responsibility of the employer to keep track of their employees and the factors which is responsible for it.

5.2.2 Less employee engagement

Employee engagement is also a looming factor in the virtual era. Most organizations are trying to introduced different policy to engage their employees. Virtual working style is not able to engage the employees in their organization. Mentally well-being is the factor that hampers employee engagement because happiness at work is what every want. Virtual work policy needs to improve eradicate stress and fatigue to improve engagement.

5.2.3 Health Insurance cost

Health cost employee takes a good amount of the overall turnover of the organization. Companies invest lots of money on employee’s health expenditure without making any particular efforts to make sure their employees stay healthy. Many companies do not invest much in employee’s health because there isn’t any tangible return.

6.0 Recommendations and Suggestions

Integrative solution of Well-being in a comprehensive manner: -

| Physical | Mental | Social |
|---|---|--|
| a) Nourishment: <ul style="list-style-type: none"> • Healthy diet plan • Hydration • Healthy eating habit b) Physical fitness: <ul style="list-style-type: none"> • Exercise • Physical movement | a) Cognitive: <ul style="list-style-type: none"> • Time management • Sleep • Relaxing techniques b) Emotional: <ul style="list-style-type: none"> • Personal & professional life balance • Counselling • Meditation | a) Social connectivity <ul style="list-style-type: none"> • Manage relationship with Connectivity |

6.1 Practical Strategies

6.1.1. Physical activity

- Offer a customized plan to the employees according to their requirements. Combine activities that consist of physical activity and relaxation.

e.g. Yoga and Meditation

Aerobics and Meditation

- A reminder of the stretch break for those who sit a lot in virtual working. It will help to circulate blood and eradicate fatigue.
- Provide fitness membership and discounts to good performers.
- Design unique plans for substandard performance and engage employees in well-being activity.
- Provide an Exercise or Yoga plan for the employee as well as family. To increase the engagement of employees in health activities.

6.1.2. Nutrition knowledge

- Provide a diet plan to the employee, so that they can have knowledge about adequate diet.
- Provide seminar or webinar sessions to enhance nutrition knowledge.
- Send health food information to the employee via video.
- In a week send health tip through email.

6.1.3. Other strategies

- Conduct an annual or quarterly health sponsorship program for the employee. To augment the well-being participation.
- Annually reward to fit employee.
- Mind relaxation is crucial so, mandate to attend daily 15 minutes Meditation during a virtual video conference.

7.0 Conclusion

Virtual workstyle is the new normal in the cognizance of recent events. With the help of technology, an organization can utilize its resources prudently. To cope with well-being at virtual work organization can opt for some techniques. The well-being of the organization is directly related to the well-being of an employee. If the organization will enhance the well-being of employee then, they can augment productivity and engagement. Well-being at virtual work provides advantages to an individual in staying happy, competent and satisfied in their roles. In the above research well-being of employee can help the organization as well as employees to perform better.

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Impact of Expert System in Detecting Breast Carcinoma among Women Worldwide with Anxiety due to COVID -19

Jaya Lakshmi Vakiti*

ABSTRACT

Breast carcinoma is one of the most often detected cancer in female, every year there we can see more than two million new diagnoses throughout the world. The anxiety with Breast cancer is one of the deadliest and COVID-19 catastrophe has now annexed yet another level to this anxiety. Breast cancer detection is difficult when the woman is in her thirties' and has just began planning a future for herself. Women are generally treated at a later, more advanced stage with poor diagnosis. If it continues then by 2030, this dangerous disease will cause most deaths among women in world than any other disease. The Breast Cancer Detection and medicament Technologies industry has expertise astonishing advancements in 2020 with different crucial techniques and improvements boosting the digital health market. Machine learning and Artificial Intelligence predict disease risk from Breast Carcinoma. There are different methods used in detecting carcinoma at early stages with expert systems such as Computed tomography laser mammography, computer-aided detection, Magnetic Resonance Imaging, Microwave Imaging, Electrical Impedance Scanning, Digital Tomosynthesis Mammography, Sonography, Digital Infrared Imaging etc. An extensive advance in healthcare practice is the incorporation of Clinical Decision Support Systems (CDSSs) to help and assist medical workforce in clinical decision-making, hence developing the quality of decisions and complete patient care while reducing costs. The utilization and operation of CDSSs in Breast Carcinoma care in present situation is gradually increasing. Although there may be variation in how certain CDSSs are developed, the decisions they suggest, and how they are used in medical practice. The Expert System which helps decision-making in Breast Carcinoma treatment is provided along with certain advantages, risks and Challenges for development.

Keywords: *Breast Carcinoma, anxiety, Expert System, Artificial Intelligence, Digital Mammography, COVID-19.*

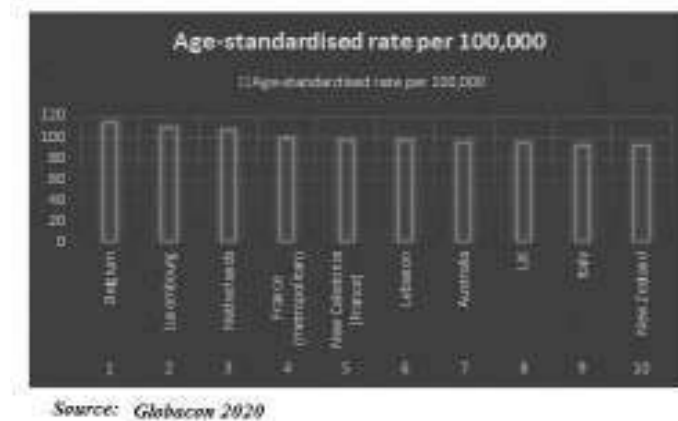
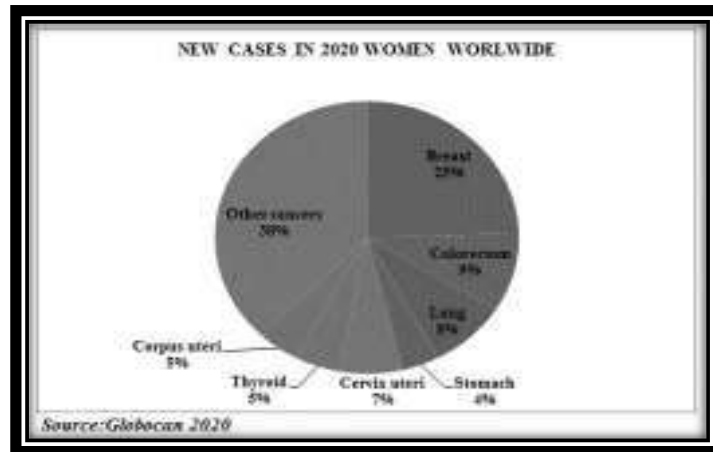
1.0 Introduction

Expert Systems can study how human brain envisage, grasp, choose and work, when it attempts to solve problems. Various tools and techniques are used in Expert Systems like artificial neural networks, psychology economics statistics, mathematics probability computer science, information engineering etc. Novel technologies are being developed and are more advanced in the detection and diagnosis of breast carcinoma. Medical expert-based systems are computer systems that have been instructed and trained with actual cases to perform sophisticated tasks. Some notable systems include Mycin for infectious diseases, and Internist-1, QMR and DXplain, Oncoin Quantx, e-morph koios medsol, IASST-IHC for general internal medicine.

Breast cancer testing programs are presently executed in most advanced countries and have been shown to rise earlier stage breast carcinoma recognition leading to developed diagnosis and reduction in death rates. Mammography is the most important screening tool for breast cancer for decades with more than billion women being scanned each year around the world.

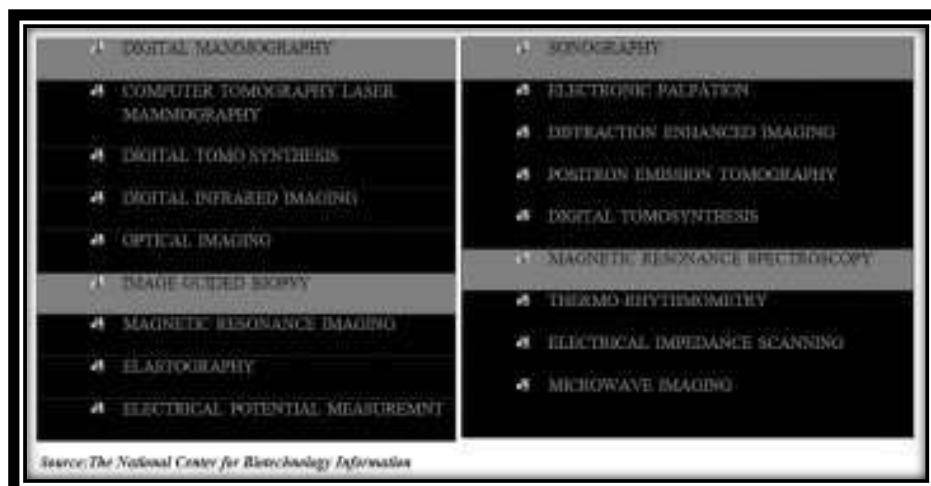
*Assistant Professor, Department of Management Studies, Nalla Malla Reddy Engineering College, Hyderabad, Telangana, India. (Email: jayalakshmivakiti@gmail.com)

The use of artificial intelligence (AI) in medical imaging, various innovative algorithms based on deep learning have been established and applied to digital mammography. Initial investigations have proved that the use of expert systems or AI systems as contemporaneous readers for analysing mammograms can increase efficiency of the doctors in terms of sensitivity and time. Medical expert systems usually include a knowledge base and rule based inference to generate a differential diagnosis.



2.0 Types of Expert System in Breast Carcinoma Health care

Breast cancer Detection



2.1 Digital mammography

It is a method for storing x-ray images in digital format contradiction to x-ray film. The images are shown on a computer screen to identify the Carcinoma. The digital images may give better results when compare to regular mammography.



2.2 Computer tomography laser mammography

It observes the blood circulation of tumours, and the most advantage of this Tomography laser mammography is there will be no breast compression and women feel comfortable while using this type of system. This expert system is designed especially for women who have heavy or dense breasts.

2.3 Digital tomosynthesis mammography

It involves rotating the x-ray machinery in a circle around the breast while taking several images .The method reduces the risk of imbricating structures from a particular angle will abstruse a carcinoma, likely generating abnormalities more noticeable. Presently, the most substantial obstacle to the acceptance of the tomographic technology is the amount of time that it takes to rebuild the image.

2.4 Digital infrared imaging

To do this imaging they increase circulation to the cells by transferring chemical signals to keep present blood vessels open, convert inactive vessels, and produce novel ones .The increased vascular movement repeatedly results in an rise in outward temperatures of the breast near the position of tumour, which can be seen through thermo graphic devices.

2.5 Optical imaging

It is a technology used to see the haemoglobin level, identifying possible malignancies. Imaging the absorption of near-infrared light in breast tissue can quantify the haemoglobin level and amount of blood providing variance between the solid vasculature usually connected with carcinoma and healthy tissue.

2.6 Image guided biopsy

It play a vital part in assisting physicians do breast biopsies, particularly of abnormal regions that cannot be handled but can be imaged on a regular mammogram and also with ultrasound. By use of a computer and perusing devices to get information about the exact place of the image in three magnitudes. A needle is then injected into the breast and a tissue sample is acquired for a complete analysis to test the sample.

2.7 Magnetic resonance imaging

Without use of radiation it involves a strong magnet associated to a computer generates complete images of the breast. Every MRI produces number of images of the breast from all angles. A radiologist then investigates the images to detect abnormal sections that may need further examination. While doing the test the patient lie down on her stomach on the perusing board. The breast hangs into a depression on scanning board which comprises coils that identify the magnetic signal. Clinical trials are being done to decide if MRI is appreciated for screening certain women at high threat for breast carcinoma.

2.8 Elastography

Plotting the mechanical properties such as rigidity or pliability of breast nerve can detect abnormalities that are frequently linked with cancer tumour. This type of cancer discovery is termed as Elastography. Elastography combines mechanical pulsations with imaging modalities like magnetic resonance. So imaging the actions of the breast tissue in reaction to mechanical pulsations can determine abnormalities in the pliability of the breast tumours that may not be spotted by mammography.

2.9 Electrical potential measurement

This method associated to electrodes applied to the skin to take dimensions of electrical potential at different places on the breast. The variance in electric charge is calculated in regions of doubtful conclusions in comparison with electrodes located in a different place on the chest. The irregular development of cancer cells may result in an ionic rise with potassium pushing out of the cells and sodium pushing into cells.

2.10 Sonography (Ultrasound)

Sonography is an imaging system in which high-frequency sound waves are echoed from internal tissues. Their resonances gives an image called a sonogram. Ultrasound is not now used for routine breast cancer screening as it does not constantly notice certain initial signs of cancer such as micro calcifications, a calcium deposits in the breast that cannot be fingered but can be seen on a regular mammogram, and are the most common gauge of ductal carcinoma.

2.11 Diffraction enhanced imaging

In this a silicon crystal is located between the object being studied and the digital indicator where the image is recorded and the crystal diffracts a specific wavelength of x-ray giving two images. The first one is related to x-ray absorption and the second one is related to refraction. Refraction is a procedure where light, including x-rays, diverges in direction slightly due to variances in the thickness of the material it passes through. Hence the combination of these two images give more detail in the nerve and tissue.

2.12 Positron emission tomography (PET)

It is a technique by which cellular and molecular measures can be evaluated. Radioactive tracers injected into the blood to plot the underlying biochemistry. It tests create live computerized pictures of chemical changes of a tissue. An injection is given to a patient that contains sugar and radioactive material. This can be absorbed by cells with higher metabolism, such as tumours. However, this test is limited in identifying metastatic cancer that has moved from the breast to another place in the body. This scans are more precise in noticing larger and more antagonistic tumours linked with metastatic cancers than they are in finding smaller tumours.

2.13 Magnetic resonance spectroscopy (MRS)

This method can calculate the metabolism of pathological specimens and find biochemical variations, which closely connected with the existence of tumours. This method is costly and unverified, and therefore restricted to academic medical research centres.

3.0 Thermorhythmometry

It depends upon similar principles as infrared thermography to support find breast cancer, the method uses a different approach. Here the probes are located on the breast that tests the skin temperature frequently to find differences which may related to neoangiogenesis and carcinoma. To find abnormal levels that could be missed with tests that only observe the breast for a particular time, possibly missing cautionary signs that are only evident by examining the circadian temperature of patients.

3.1 Electrical Impedance Scanning

Various tissues have various levels of electrical resistance Electrical impedance is lower in cancerous breast tissue compared to healthy breast tissue. So electrical impedance scanning devices are used along with regular mammography to support notice breast carcinoma. This scanning device contains of a scanning probe and a computer screen that shows two-dimensional pictures of the breast. It will not emit radiation but very small amount of current, is transferred into the body. The current moves through the breast, where it is tested by the scanning probe and displays as bright white spots on a computer screen. The scanner sends the picture right to a computer, permitting the physician to move the probe around the breast to get the best interpretation of the place where it is being examined.

3.2 Microwave Imaging

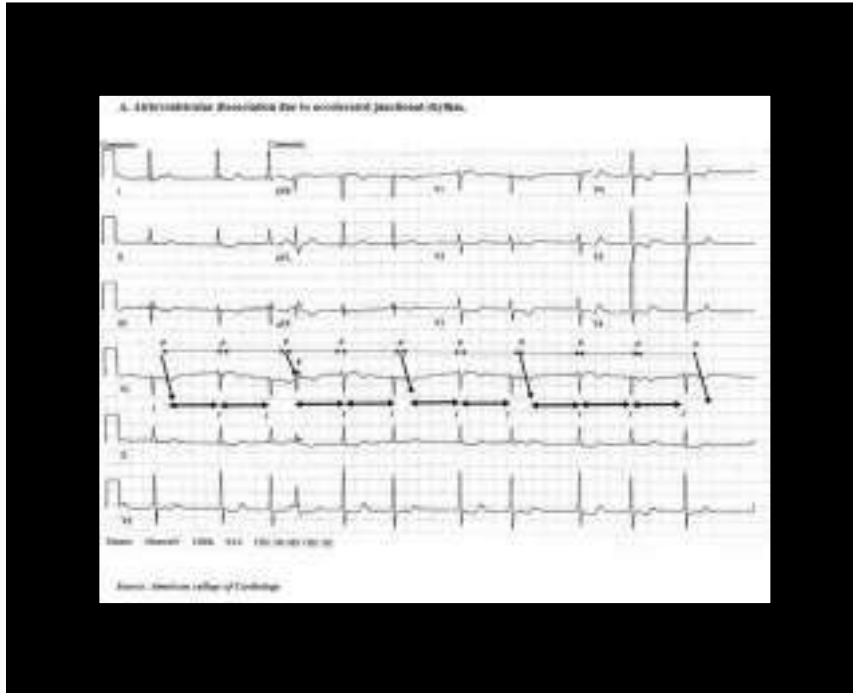
Recording the variances in the electrical properties can be proficient by using low-energy microwaves. Because there will be heavy water content in tumours when we observe with a healthy tissue, variances in breast tissue can be analysed by changes occurred in electrical properties. But micro calcifications, indicates of early breast cancer, can be found much smaller with mammography. Breast cancers have the possibility to show more contrast at microwave frequencies than at the x-ray frequencies which are used for mammograms.

4.0 COVID-19 Anxiety on Breast Carcinoma suffering Women

The COVID-19 disease has resulted severe impacts on people worldwide at different levels and especially on the Women Health. The medical care research and development is anticipated to show a sudden deterioration of women health in lockdown period. Severe stress, fear of death worsen the Breast carcinoma patient's metabolism rate and it can be assumed from the present circumstances brought about by the COVID-19 that the expert system techniques or methods applied on a women may provide how much anxiety and depression they are facing when they exposed to the information regarding this COVID-19 pandemic. The scientists are estimated to slowly improve post-COVID-19, which will current eye-catching chances for expert systems across regions of the world in the next few years to help the doctors in treating the patient's best possible way and reducing the risk of dying. There are various techniques that support people lessen anxiety and depression.

Scientists instructs a computer or expert system to calculate electrocardiograms to predict irregular heartbeat of people. Researchers developed a neural network to study electrocardiogram to find patients at high risk of dying. Expert System can observe electrocardiogram test results, to determine patients at increased threat of irregular heartbeat. This gives more indication that we are on

the margin of a change in medicine where expert systems will be functioning with doctors to advance patient care.



Anxiety and overthinking are frequently used words in present situation as many people are suffering from this kind of stress. But there is no successful application of expert system technology in developing people emotions.

5.0 Recent Developments of Expert System in Medical Care Sector

5.1 India-made MRI Machine by Arjun Arunachalam at Voxelgrids

This device can be transported to any place in India, as well as to remote areas, and possibly take medical imaging to the underserved parts. Peenya hub a healthcare modernization by a small firm promises to give high quality medical imaging, medical diagnosis and treatment accessible to places of India that are medically underserved. MRI machine created by Voxelgrids Innovations Private



Limited is totally made in India and reduces some of the primary risks linked with common use of MRI in terms of size time and cost.

5.2 OncoStem Development of CanAssist Breast

CanAssist Breast is a prognostic expert system introduced by OncoStem that categorises the patients as low or high-risk based on the patient's threat of breast cancer reappearance over five years. It gives information regarding the risk of reappearance of early-stage, breast carcinoma patient's receptor-positive of hormone. This test examines acute biomarkers in the tumour to measure the danger of reappearance, and assists doctors or oncologists to identify treatment procedure.

5.3 LungXpert by Sasikala Devi

Sasikala Devi, senior assistant professor at SASTRA Deemed University, developed LungXpert, which helps doctors to have early detection of common heart and pulmonary diseases.

5.4 SigTuple Technologies

SigTuple Technologies that has leveraged expert systems including robotics and data science to advance smart screening solutions, to make healthcare inexpensive as well as precise and accessible for all.

5.5 Artivatic.ai by Layak Singh

Artivatic.ai won the challenge in the medical care sector with their invention DARVIN, which is devoted to healthcare. This DARVIN, platform designed for hospitals, healthcare institutions, insurance companies, patients, clinics and more.

6.0 Conclusion

Expert systems that have been trained with live cases to perform complicated tasks. A number of medical expert systems techniques are there and can act as assistants to doctors, clinicians, assisting in laboratory analysis. This clinical examination proved that the concurrent use of this expert systems techniques improved the diagnostic performance of doctors in the recognition of breast carcinoma without delaying their workflow. Expert systems are helpful for decision making issues and very essential for healthcare prognosis. The expert systems is proficient in facing, challenging decisions and issues.

Even tremendous technology introduced in market the cases and deaths rates is gradually increasing from many decades because of lack of awareness about the technology or self-testing and not taking proper precautions. There can be conducted lots of programs especially in rural areas to get awareness of deadliest diseases and early detection by this expert systems may help many women in the world and may reduce the breast cancer risk.

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Impact of Social Issues in Marketing

Ramar Veluchamy*, Rajat Gupta**, Raj Sagar*** and Ravisankar Chowdhury****

ABSTRACT

We aim to gain insights into whether the social issue in marketing changes the buying behavior. Here we have tried to establish the correlation among which social factors drive the change in the customer's buying patterns. Brands are now focusing more on social issues to build emotional connections with their customers. Some cases which are prominently used are poverty, gender inequality, environment-related issues and awareness. The paper explores how corporations use social problems in their brand promotions and strategies to reach out to consumers. It discusses how these aspects influence the company's sales and income and whether or not this has an effect on the company's brand image. Often firms combine social concerns with their marketing campaigns to appeal to consumers emotionally and boost consumer experience.

Keywords: *Buying behavior, Social issues in marketing, Social issues in advertisements, Consumer buying decision.*

1.0 Introduction

Social marketing aims at 'social good'. Social marketing means creating and modernizing the past showcasing ideas with various ways to deal with social change. Social promoting focuses on conduct change that benefits the general public for social wellbeing. It is sub arranged into two classes marketing classification and social class. Social Category utilizes government assistance plans while promoting classification centers around the business just as the public area approaches showcasing. It has re-imagined itself to socio-social and basic change identifying with different social issues identified with the geological zone. Its mission is to inspire individual and collective thoughts and behavior to promote equitable, efficient, impartial, rational, and well-supported social change. Brands are presently zeroing in additional on the social issues to fabricate enthusiastic associate with their clients. A few conspicuously utilized points are poverty, sexual orientation imbalance, and climate-related issues. Along these lines, in this paper, we will break down social promoting expands the brand estimation of organizations or not how they are influencing the purchasing behavior of the customers.

2.0 Literature Review

Marketing is a business process of identifying, anticipating and satisfying customers' needs and is employed to draw in customers; it's one of the first business management components and commerce. Robert Keith's article of 1960 depicts "The Marketing Revolution" has a history of selling practice.

*Corresponding author; Assistant Professor, Department of MBA, XIME, Tech Mahindra Building, Bengaluru, India. (Email: drvramar@gmail.com)

**Student, Department of MBA, XIME,, Tech Mahindra Building, Bengaluru, India. (Email: rajat25blr@xime.org)

***Student, Department of MBA, XIME, Tech Mahindra Building, Bengaluru, India. (Email: rajs25blr@xime.org)

****Student, Department of MBA, XIME, Tech Mahindra Building, Bengaluru, India. (Email: ravisankar25blr@xime.org)

In 1976, *The Evolution of Marketing* Since it emerged as a distinct discipline at the turn of the century, Thought has marked a watershed moment in our perception of how marketing philosophy has developed. According to etymologists. In 1897, dictionaries released the current concept of marketing as a method of transporting products from source to customer, emphasizing sales and advertisement. In the 21st century, marketing is an efficient method of awareness and interest generation focusers to shop for its offerings. Andreasen and Kotler explained the traditional two ways for marketing– Descriptive and Prescriptive. Descriptive may be an activity that members of society do, and authoritarian are some things members of a community need to do to realize certain results. They often emphasize manipulating behavior, which is what social marketing or any marketing operation tries to understand, is the last word target of generic marketing. In the 1970s, when Philip Kotler emerged as a discipline of research, Social Marketing and Gerald Zaltman emphasized that to plug or sell concepts, attitudes and habits, an analogous principle used in generic marketing was used. There are four key targets for executing an effective marketing strategy for the business, no matter the industry's time or state.

Building Brand Awareness - You must first understand who you are as an organization and who your future clients are to sell your product or service effectively. Your brand will serve as the pillar upon which your entire business will be founded. You must identify the following to build effectively, or even re-create, a powerful, popular brand that targets your target audience: Who are we as a company? What are the keywords that customers use to find our goods or services? What are our customer personas, and what do they look like? What separates us? How do we use content and graphics to express our expertise? What kind of benefit do we deliver? What motivates consumers to order from us? What brings them back? After the brand has been created, we may start a marketing strategy to increase brand awareness. **Engage with Target Audience:** You will easily humanize your brand and put yourself as an ideal person to shop from or do business with by remaining engaging with your target audience. **Driving Traffic, Leads, and Sales:** The aim is the same, but the approach has changed from traditional marketing brands to cause-related marketing or use of social issues in marketing.

2.1 Social marketing

In 1971, in the seminal paper, "Social marketing: An approach to planned social change", the word social marketing was coined (Kotler & Zaltman, 1971). The publication explained how it could be possible to solve social problems through marketing practices. Like every marketing brand, a social brand is far away. As your conventional branding message would do, it should represent your company's core values as well as your marketing message. Five C's are included in the social marketing brand: change-oriented, competitive, compatible, caring and culturally suitable. The difference is that a social brand represents the social and environmental contribution of your business. A social brand will convince your stakeholders that you have a positive, important, and authentic message about your company and, by extension, the world. Social marketing differs from other marketing methods in terms of the marketer's and his or her organization's priorities. In social marketing, the marketer strives to manipulate social habits for the good of the audience and society as a whole rather than for financial gain. "Social branding" refers to eco-branding for social change. It necessitates all publicity and networking tools available, from print advertising to public relations to social media. The goal should be to train them to work for you to spread the socially conscious message of your company. The effectiveness of social branding is dependent on a variety of factors.

To get the best output out of social marketing, we should be going in the following ways:

Identifying the most suitable cause for your society and climate would help both the community and the environment. Recognizing goals, monitoring progress, and reporting successes to track effectiveness over time. Recognizing corporate social partners – which may involve cooperation

with other for-profit corporations, non-profit organizations, grassroots organizations, and so on. Using the SWOT review, particularly if you want your group and supporters to hear about your achievements and what you're doing to change people's lives and the environment. Taking a systematic approach to social media, integrating it into as many industry areas as possible. Estimating the Social Return on Investment (SROI): The SROI will help us assess the importance of our actions and offer more knowledge for communicating the company's impact by seeing how well our constituents appreciate our social branding and progress in bringing about meaningful change.

Developing a social brand will help make our corporation or organization a positive force globally and increase loyalty to the workers, clients, boards, members of the group, etc. Greater profitability comes with greater commitment. People like to feel like they're a bigger and stronger part of something than themselves. By designing possibilities for them to contribute to a cause, by creating opportunities for them to contribute to a cause, we're bringing joy to our stakeholders and increasing awareness of social issues. Drumwright (1996) noted a decade ago that advertising was on the rise with a social dimension. It seems the pattern continues. Many corporations, including Target and Wal-Mart, have sponsored massive national ad campaigns to support their good work. The InStyle magazine issue of October 2005 alone carried more than 25 ads for the "cause" Consumers seem to be paying attention; in 1993, only 26% of people polled by Cone Communications could name a corporation as a successful corporate citizen; by 2004, that figure had grown to as high as 80%. (Bernier, 2005). Several marketing surveys have discovered that social responsibility initiatives have a major effect on revenue due to the increasing value of CSR in practice. The literature talks about how the use of social issues has affected the marketing strategy as well as the brand value in different geographical locations and How society marketing programmes of corporations include the supply of funds, services, and advertising to socially beneficial causes to create a connection between the cause and the business or one of its products in the minds of customers. The consumer is the main subject of social marketing. The marketer must understand consumer needs more precisely than making them shop for the merchandise. Arranging cycle of promoting keeping in see buyer needs is finished by zeroing in on the advertising blend. Alongside the 'Four Ps' of showcasing – Product, Price, Place and Promotion – Nedra Weinreich, in her article on social advertising, specifies that social showcasing requires a more engaged showcasing blend and a few of more P's are included alongside the traditional four Ps.

2.2 Product

A large portion of the occasions the results of social showcasing is anything but a physical contribution and incorporates a mixture of a minimum of two of the accompanying – physical item, administrations, practices and immaterial thoughts like climate security, natural life insurance and therefore the sky is that the limit from there. Advertisers during this circumstance endeavour to grasp and determine customer impression of a circumstance or situation and hooked into an identical make a significant move.

2.3 Price

Cost in social promoting alludes to what a client should do to urge the item or offer. This could be a money related expense or may require the purchaser to repudiate intangibles or chance judgment or shame. The value is usually low, or the bulk of the occasions is sans given of cost. Regularly social advertisers charge an ostensible expense to carry a sense of nobility within the exchange. From the customer's perspective, the item would be received just within the event that he/she considers the benefits quite the expense or if the apparent conduct change would improve the way of life or personal satisfaction. Spot is the dispersion framework which for a physical item would come with warehousing, wholesaling, retailing and spot of the offer. Social promoting might likewise

include places where the item is given/disseminated for nothing or apparent cost. An elusive thing is centered around rehearses and has either portable spots of conveyance – a clinical focus – or broad communications for giving data or preparing.

2.4 Promotion

Taking the sting for social advertising since correspondence is one of the key components of social promoting. Many-a-times, advancement is taken into account because of the aggregate of social showcasing, which isn't so. Upgrade incorporates advertising (PR), enabling, individual selling, media backing, and a couple of different correspondence vehicles. Public assistance declarations and using broad communications vehicles are two of the first methods of correspondence utilized in social promoting. Public – Includes various crowds to whom the program is routed and has both outer and inside groups worried within the program. External public contains the intended interest, the policymakers, gathering legitimately or by implication identified with target crowd and guards. Inside open incorporates individuals legitimately and during a detour engaged with endorsement or execution of the promoting social program.

2.5 Policy

Continuing Social Marketing methodologies and making them effective during a while ago run needs an adjustment in perspective and natural change - particularly within the event of conduct changes where the intended interest should be upheld and need to have a positive climate. For an empowering environment, frequently, strategy change is required. For example, social issues like smoking need the contribution of state and a few arrangement changes if the mission must accomplish its objectives. The Indian government has settled on an appointment option to boycott dish bidi shops in railroad stations, which sell cigarettes or tobacco items. It's likewise gotten hard for smokers to illuminate puts openly and in working environments since the greater a part of them presently is an exacting no-smoking zona. Association – Planning and executing social issues isn't simple and includes numerous degrees of usage and subsequently is tough for a solitary substance or association to affect it. It generally comprises working in association with one or multiple associations or elements for arranging execution and acknowledgement by target crowd. The essential association, which starts the movement, must distinguish different associations/gatherings – government or private or NGOs or Self-Help gatherings - with comparable objectives and recognize approaches to cooperate. Associations could likewise be created with media for advancement crusades. Tote Strings – Social Marketing efforts include gigantic supports like customary item showcasing. If there should be an event of business advertising, the association accomplishes the equivalent by selling the contributions at a benefit. Social advertising doesn't include any benefit making system and requirements to possess a uniform progression of assets if the mission must reach its intended interest. Since valuing for-benefit is not the plan, associations or gatherings actualize social promoting capacity with the help of assets given by the government, establishments, gifts made by organizations or people. Here during this way, advertising likewise includes conveying adequately to those gatherings to create up the need for assets and advantages to the overall public on the loose.

2.6 Gaps in literature

Comparing the positive effects of a social-cause relationship with the impact of other forms of affiliations, such as religious affiliations, has been absent from case studies and recent scholarly analysis. Whether demographics determine the nature of the response of customers towards social marketing, Are the managers convinced whether these social issues could influence the worth of the brand value or not. Which social issue impact customers more than others?

3.0 Hypothesis

Social marketing changes the buying behavior of customers

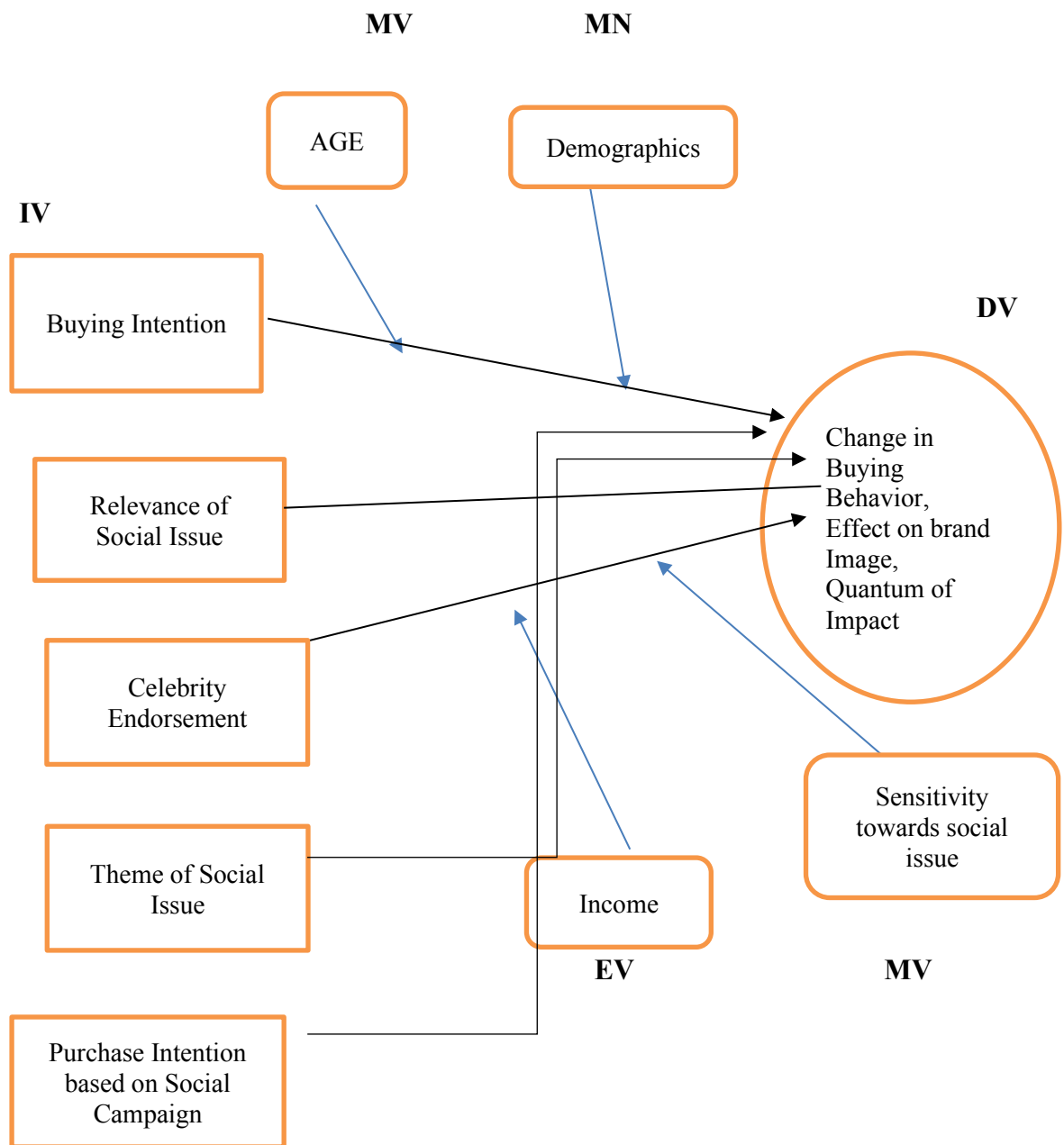
3.1 Research objective

This research aims to study whether there is any difference in customers' buying behavior using social issues in marketing and if it effects, we would also like to study the factors that will affect the buying behaviour.

3.2 Research question

Whether the use of social issue in marketing will change buying behavior or not.

Model



3.3 Scope of the study

In this ever-growing world, it becomes very difficult for marketers to make their brands Promising" enough. Apart from the several attempts made, there is very minimal success compared to what is expected. So the question arises: How social issues can help increase the loyalty of the customers alongside improving brand equity? How can a company also get help in getting the investment with the increase in the brand value using social issues? Since a brand is a perceptual unit, it represents customer expectations and, in some cases, idiosyncrasies. In the end, a brand is an idea that remains in the minds of customers. As a result, the reach of branding reaches well beyond national borders. It is important to inform customers to brand a product effectively.

1. Who is the commodity form?
2. Functions of the product.
3. Why do customers prefer a particular brand?

To ensure that the above three are fulfilled, a detailed understanding of the customer is needed, and therefore the scope of branding becomes crucial in terms of how social brands vary from other brands? How can social brands influence behavior? The vast variety of social labels available allows for discovering new meanings, functions, and constructs for dimension for sub-manufacturers. This makes it easy to see if the sub-brands are identical to or distinct from one another. This could expose the various aims of various social brands, offering a more complex viewpoint on both brands and social good.

3.4 Sampling method

Random sampling was used in this analysis. Since the random sample is a mathematical method for choosing individuals or objects for study, it was selected. This approach means that each person or entity established for the analysis has an equal probability of being selected as a test community member.

3.5 Variables and measures

Our study's variables include Independent Variables-Social Issues like buying intention, relevance of social issue, celebrity endorsement, the theme of a social problem, and purchase intention based on the social campaign. Dependent Variable is Change in Buying Behavior, Effect on brand image and quantum of Impact, Mediating Variable is Sensitivity towards the social issue, Moderating Variable- Age, gender, demographics, and Extraneous Variable is Income.

3.6 Method of analysis

Since there are only one dependent variable and various independent variables in this analysis, multiple regression is the safest model to use.

4.0 Data Analysis and Interpretation

4.1 Findings

Purchase intention, the company's purpose, relevance and celebrity endorsement do not play a significant role in the purchase process. The buying pattern is not much influenced by these factors. Theme and persistence, on the other side, play a distinctive role in determining the buying/purchasing pattern of the customers. Awareness about the social issue is the most significant factor determining the change in the customers' buying habits. The impact value can be predicted with the purchaser persistence as an input.

multiple regression (impact being the IV)

| SUMMARY OUTPUT | | | | | | |
|-----------------------|--------------|----------------|--------------|-------------|----------------|-----------|
| Regression Statistics | | | | | | |
| Multiple R | 0.772452965 | | | | | |
| R Square | 0.596883584 | | | | | |
| Adjusted R Square | 0.579878733 | | | | | |
| Standard Error | 0.666419204 | | | | | |
| Observations | 176 | | | | | |
| ANOVA | | | | | | |
| | df | SS | MS | F | Significance F | |
| Regression | 7 | 110.3630728 | 15.7690104 | 35.50662815 | 4.30271E-30 | |
| Residual | 168 | 74.61124541 | 0.444114556 | | | |
| Total | 175 | 184.9943182 | | | | |
| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% |
| Intercept | -0.103171404 | 0.299190664 | -0.344834972 | 0.73064976 | -0.693829183 | 0.487486 |
| Purchase intention | -0.024917898 | 0.066919342 | -0.372357185 | 0.710096226 | -0.157029071 | 0.107193 |
| Intension | 0.069356284 | 0.069339034 | 1.00248487 | 0.318628783 | -0.067531831 | 0.206244 |
| Relevance | 0.009029912 | 0.055177615 | 1.261923187 | 0.208725578 | -0.039300919 | 0.178561 |
| Celebrity endorsement | 0.06726869 | 0.049054368 | 1.779019757 | 0.077044751 | -0.009573717 | 0.164111 |
| Theme | 0.201133219 | 0.064180056 | 3.133889734 | 0.002036128 | 0.074429903 | 0.327837 |
| Persistence | 0.276090838 | 0.070986515 | 3.889342071 | 0.000144579 | 0.135950312 | 0.416231 |
| Awareness | 0.351042526 | 0.077515382 | 4.528682121 | 1.12084E-05 | 0.198012806 | 0.504072 |

From this analysis removing the insignificant variables we got the following output,

| Regression Statistics | | | | | | |
|-----------------------|--------------|----------------|----------|----------|----------------|-----------|
| Multiple R | 0.760872 | | | | | |
| R Square | 0.578926 | | | | | |
| Adjusted R | 0.571582 | | | | | |
| Standard Error | 0.672967 | | | | | |
| Observations | 176 | | | | | |
| ANOVA | | | | | | |
| | df | SS | MS | F | Significance F | |
| Regression | 3 | 107.0981 | 35.69936 | 78.82651 | 3.98E-32 | |
| Residual | 172 | 77.89625 | 0.452885 | | | |
| Total | 175 | 184.9943 | | | | |
| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% |
| Intercept | 0.256598 | 0.24855 | 1.032379 | 0.303344 | -0.234 | 0.747199 |
| Theme | 0.209057 | 0.062179 | 3.362176 | 0.000953 | 0.086325 | 0.33179 |
| Persistence | 0.316575 | 0.069572 | 4.55034 | 1.01E-05 | 0.179251 | 0.4539 |
| Awareness | 0.394343 | 0.073806 | 5.342993 | 2.87E-07 | 0.248662 | 0.540025 |

DV = impact

$$y = 0.209X1 + 0.316X2 + 0.394X3 + 0.256$$

- X1 = Theme
- X2 = Persistent
- X3 = Awareness

Using this equation impact value can be predicted with theme, persistent & awareness as input. This model captures 57.89% variability

multiple regression with effect on brand page in IV

| SUMMARY OUTPUT | | | | | | |
|-----------------------|--------------|----------------|-------------|------------|----------------|-----------|
| Regression Statistics | | | | | | |
| Multiple R | 0.55113812 | | | | | |
| R Square | 0.31905185 | | | | | |
| Adjusted R Square | 0.28260506 | | | | | |
| Standard Error | 0.64900119 | | | | | |
| Observations | 176 | | | | | |
| ANOVA | | | | | | |
| | df | SS | MS | F | Significance F | |
| Regression | 7 | 31.5021481 | 4.50030719 | 13.83903 | 3.0750E-11 | |
| Residual | 168 | 89.9813053 | 0.535603 | | | |
| Total | 175 | 121.4834534 | | | | |
| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% |
| Intercept | 2.13638021 | 0.228011802 | 9.36821175 | 7.1495E-19 | 1.62839044 | 2.70437 |
| Purchase intention | 0.390130546 | 0.06470549 | 6.011911783 | 4.8220E-08 | 0.25252891 | 0.5277329 |
| Intension of company | 0.13664008 | 0.067205196 | 2.0329298 | 0.04445753 | -0.00822996 | 0.28125 |
| Relevance | 0.062280412 | 0.053400805 | 1.16533164 | 0.24729932 | -0.11308697 | 0.24171 |
| Celebrity endorsement | -0.023553387 | 0.047414025 | -0.49674023 | 0.6213455 | -0.11308697 | 0.066007 |
| Theme | 0.295268897 | 0.062117111 | 4.7512545 | 0.00001223 | 0.168225202 | 0.4223169 |
| Persistence | 0.141094353 | 0.0698986 | 2.01790293 | 0.04635487 | 0.00736882 | 0.2748194 |
| Awareness | 0.24415581 | 0.07518132 | 3.24868575 | 0.00138596 | 0.09864385 | 0.3896675 |

From this analysis removing the insignificant variables we got the following output:

Multiple regression with effect on brand image as Y

Regression Statistics

| | |
|-------------------|------------|
| Multiple R | 0.50719871 |
| R Square | 0.25724561 |
| Adjusted R Square | 0.20245360 |
| Standard Error | 0.94649711 |
| Observations | 176 |

ANOVA

| | df | SS | MS | F | Significance F |
|------------|-----|----------|----------|----------|----------------|
| Regression | 2 | 29.20545 | 14.60273 | 34.97714 | 1.75E-13 |
| Residual | 173 | 72.22637 | 0.417493 | | |
| Total | 175 | 101.4318 | | | |

Coefficients

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 90% | Upper 90% |
|-------------|--------------|----------------|----------|----------|-----------|-----------|-----------|-----------|
| Intercept | 2.234457 | 0.254707 | 8.775707 | 1.42E-15 | 1.732927 | 2.735987 | 1.732927 | 2.735987 |
| Purchase | 0.127395 | 0.056208 | 2.265633 | 0.026336 | 0.015155 | 0.240635 | 0.015155 | 0.240635 |
| Persistence | 0.208028 | 0.051904 | 4.007922 | 0.000006 | 0.105581 | 0.310475 | 0.105581 | 0.310475 |

SUMMARY OUTPUT

Regression Statistics

| | |
|----------------|----------|
| Multiple R | 0.506593 |
| R Square | 0.257932 |
| Adjusted R | 0.2077 |
| Standard Error | 0.946137 |
| Observations | 176 |

ANOVA

| | df | SS | MS | F | Significance F |
|------------|-----|----------|----------|----------|----------------|
| Regression | 2 | 29.20545 | 14.60273 | 34.97714 | 1.75E-13 |
| Residual | 173 | 72.22637 | 0.417493 | | |
| Total | 175 | 101.4318 | | | |

Coefficients

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 90% | Upper 90% |
|-------------|--------------|----------------|----------|----------|-----------|-----------|-----------|-----------|
| Intercept | 2.234457 | 0.254707 | 8.775707 | 1.42E-15 | 1.732927 | 2.735987 | 1.732927 | 2.735987 |
| Purchase | 0.127395 | 0.056208 | 2.265633 | 0.026336 | 0.015155 | 0.240635 | 0.015155 | 0.240635 |
| Persistence | 0.208028 | 0.051904 | 4.007922 | 0.000006 | 0.105581 | 0.310475 | 0.105581 | 0.310475 |

$$y = 0.327x_1 + 0.208x_2 + 2.234$$

y = brand image
 x1 = Purchase
 x2 = persistence

Using this equation impact value can be predicted with purchase persistence as input

4.2 Recommendations

The companies should develop better social issue themes as it would help them connect with the customers, which will influence the buying patterns. There should be a perfect blend of music and persistence as both trigger the customers' awareness. Awareness should be created in the customers' minds by all possible means as it is the most significant factor. The companies should come up with live advertisements and even come up with one to one interactions in the rural areas as there are many untapped markets.

5.0 Conclusion

The purchase intention, company's intention and celebrity endorsements are not the key aspects the company should only focus on as they provide only minimal or negligible. Companies can focus on developing innovative ideas so that people can connect themselves with the social issues highlighted through proper awareness programs. This would ultimately will prove out to be a driving factor for change in the buying pattern.

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Pivoting Business Model as a Strategic Response to Covid-19: A Study of Select Organizations in India

A. Ramesh*

ABSTRACT

COVID-19, a black swan event of the 21st century, has shocked the world and put the industry into a spin by forcing organizations to reinvent business models for survival and growth. The paper attempts to examine how several lesser-known Indian firms and reputed firms had pivoted their business models. Some of the measures of pivoting include launching new products and services which are highly relevant to existing and new markets, offering to digital experiences to name a few. The paper also attempts to examine pivoting actions and build a conceptual model based on the strategic responses made by few organizations in India.

Keywords: *Business Models, Strategic response, Covid-19, Digital Experience.*

1.0 Introduction

Organizations need to change their business models in the event of extreme uncontrollable events. The invisible enemy of the world covid -19, had played havoc with the businesses and thereby impacting the economy of several countries. According to Mark W. Johnson, et al (2008), components of Business model include, Customer value proposition (CVP), Resources, and key processes, profit formula.

Several organizations how they have changed their business models in terms of dynamic capabilities. Organizations need to keep pace with the change in the environment and it may impact (Audia et al, 2000), The dynamic capabilities (DCs) explain how the competitive advantage can be sustained in dynamic markets (Teece et al., 1997).

In order to achieve competitive advantage, organizations can use two different but complementary strategies: fitting environmental demands and forming market change. Eisenhardt and Martin, 2000). Dynamic capabilities (The DCs) view helps in understanding how the organizations get and sustain competitive advantage in changing environments (Teece et al., 1997; Peteraf et al., 2013) and is ingrained in the resource-based view of the firms (Eisenhardt and Martin, 2000; Zahra and George, 2002; Teece et al., 1997).

DCs are defined as “the capacity of an organization to purposefully create, extend or modify its resource base” (Helfat et al., 2007). Capacity implies acceptable level of performance, while a firm’s resource base includes intangible and tangible and human resources and capabilities that a firm possesses, controls or to which it has preferential access (Helfat et al., 2007) which are important to the organization.

Organizational capabilities are classified into into DCs and operational capabilities. Operational capabilities allow an organization to perform basic functional activities (Collis, 1994) and help in day-to-day problem-solving (Zahra et al., 2006). Dynamic capabilities (Cs) are of higher order (Barreto, 2010), path dependent (Teece et al., 1997) and future oriented (Ambrosini and Bowman, 2009).

However, DCs do not directly result in marketable goods or services (Teece et al., 1997), but contribute to building, integrating and reconfiguring operational capabilities (Protogerou et al., 2012).

Marketing capabilities are important in DC’s framework as generate customer knowledge, competing products and distribution channels. (Barrales-Molina et al., 2014). Marketing capabilities emphasizes customer value (Fang and Zou, 2009). Zou, 2009; Landroquez et al., 2011 and considered to be subset of DC’s (Bruni and Verona, 2009). There is a relationship between Marketing capabilities and CVP, and resources and key processes. The dynamic marketing capabilities are important

*Sr. Assistant Professor, Department of Management, VJIM, Hyderabad, Telangana, India. (Email: a.ramesh@vjim.edu.in)

Bruni, D. S., & Verona, G. (2009) defined “Dynamic marketing capabilities” (DM’s) as indicating human capital, social capital, and the cognition of managers involved in the creation, use, and integration of market knowledge and marketing resources in order to match and create market and technological change. Market knowledge consists of customer and competitor areas (e.g., Kohli and Jaworski, 1990; Narver, and Slater, 1990); marketing resources are tangible and intangible assets such as products, brands, and distribution channels (Grant, 1991). Dynamic marketing capabilities involves middle management and enables organization to cope with the change.

According to Mark W. Johnson, Clayton M. Christensen, and Henning Kagermann (Harvard business review 2008), Business model components include, CVP, Resources, and key processes, profit formula.

India reported first laboratory-confirmed case of coronavirus disease 2019 (COVID-19) on 30 January from Kerala. As the cases spread across the country lockdown was imposed on March 25, 2020. The prevailing new conditions are referred as the new normal. The norms of social distancing, wearing mask and handwashing was advocated to fight against the Covid -19.

2.0 Objectives of the Paper

1. To explore the strategic responses made by select organizations in response to Covid -19.
2. The strategic responses are examined in the light of customer value proposition, resources, for the new and existing markets etc.
3. To build conceptual model to understand strategic responses made by the organizations.

2.1 Suparshava swabs

During March 2020, polyester swabs were not manufactured in India and were imported, and as the demand rose, but it was becoming expensive. It provided an opportunity to domestic market. A Delhi based organization, Suparshava Swabs came forward and successfully pivoted to manufacture personal hygiene products including swabs under Tulip’s brand. It converted its 100% cotton processing unit at Ghaziabad factory to produce polyester -spun swabs required for covid 19 testing. It is important to note that these are validated by national reputed govt agencies such as ICMR & NIV.

2.2 IHCL

IHCL launched Qmin, a mobile app in July 2020 to brings its collection of culinary experience online from restaurants to customers’ homes in Mumbai, Delhi, Kolkata, Bengaluru, Chennai etc. The app was designed with Tata Digital in six weeks, which showcases customer centricity, resilience and sustainability. It offers guests a discerning delivery experience through a seamless interface which allows personalization of orders, curate menus, and track deliveries real-time.”

2.3 10 by 10

The organization diversified portfolio by launching ISO.POD which is an instant room, a portable solution that protects people against infection and based on DIY methodology. ISO.POD comes in the size of 8’x7’x10’, making it compact, modular, and easy to duplicate and scale. During the lockdown as hospitals are running out of beds, this product innovation which acts airtight enclosure comes as great rescue and priced at Rs 15,000.

2.4 Shree Shakti Enterprises

Shree Shakti Enterprises, a kitchenware company during lockdown was forced to innovate for survival by launching new product portfolio comprising sensor-based sanitiser dispensers to hands-

free hand wash systems, and automatic foot sanitisers, which are extremely useful during covid 19 crisis. These can be used at offices etc. Shree Shakti received large orders from public, and government institutions, and private organizations including Hero Moto Corp, Wipro, Mohalla Clinics, the Ministry of Home Affairs, CRPF, BSF, police stations, and political parties. This allowed the company to avoid job cuts and gross Rs 1.15 crore in sales through the lockdown. This enabled the company to stop job cuts and gross Rs 1.15 crore in sales through the lockdown.

2.5 Boiline India

Indore-based Bioline India, founded in 2001, manufactures affordable and quality medical equipment. Hand sanitizers were slow moving category till pandemic struck, and it became most important item of the households and probably will remain for few years. The organization launched ULV Bio Fooger in 2005 and increased production to meet the full demand.

2.6 Fabindia

Fabindia stores were shut during lockdown, but as the government allowed the sales of essential items and hygiene products, the organization decided to increase production. The hygiene products grew to 15 to 20 % of business from 2% to 3%. Teamwork and collaboration played key role in success of the new activity.

2.7 Workshala

Established in 2013, Workshala started an initiative called Homescape to provide the tables, chairs and desks to individuals at homes. This provided comfort and ease of working for those who are working from home. This resulted in increase in productivity.

2.8 Hula Global

Founded in 2018, Hula Global is a Noida based organization manufactures apparel and also used to exports was badly hit by pandemic. It diversified its business into PPE kits, N95 masks, face shields. The company invested significantly to expand its manufacturing capacity from 10,000 coveralls a month to 10 lakh coveralls a month. From zero N95 masks in March, it is now producing 80,00,000 masks monthly. Very few organizations make all these products under one roof.

2.9 Koko boost

Koko boost is a Bengaluru based small organization which manufactures millets and munga energy bars. Distributors were reluctant to stock during Covid-19, as the customers were not preferring to purchase. This affected the business badly and company decided to widen its product portfolio. The company decided to make innovative range of immunity-based products under brand name “Santrupt” made from the existing input and used social media for promotions.

2.10 Homz

Homz is a construction company a Delhi based company started in 1989. It is a niche player in high end luxury residential projects, reached out to its customers by giving them digital experience, and closed sales.

2.11 Parle -G

The brand had phenomenal success and achieved highest sales during covid -19, which is highest ever for eight decades. The brand Parle-G brand falls under the ‘below-Rs100 per kg’ affordable / value category, which holds one-third of the total industry revenues and accounts for over 50% of the volume sold. Getting permissions to run plant, manning people to work at factories and

sales, and educating the labor and onboarding on the fact that it's just not mundane biscuit but providing food security for vast majority of the people by virtue of sheer size of consumption across the country. As govt placed it under essential commodities, the organization shifted to Digital strategy, advertising on OTT and social media for promotions. The other reasons include, there is increase in home consumption during lock down and some consumers also downgraded to Parle- G, buying whichever is available. Reduced workforce as per restrictions is also a challenge for the organization.

2.11 Cavin care

CavinKare's launched hand sanitizer under its well-known personal care brands of Chik, Nyle, Raaga. It provided much needed accessibility and affordability to ensure safety of everyone. Everybody must regularly wash hands or use sanitizer for safety and to fight Covid -19.

2.12 ITC

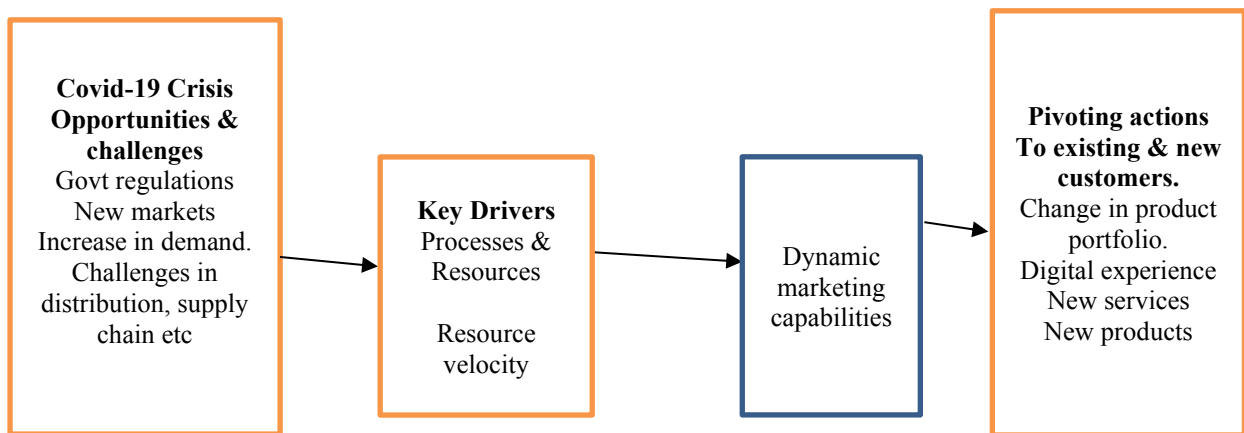
ITC' had launched Savlon Surface Disinfectant Spray as part of the ongoing fight against Covid-19. As the health stipulations have instructed two important facets to help protect against the deadly virus – hand hygiene and the hygiene of frequently touched surfaces. Savlon spray would disinfect frequently touched surfaces such as tables, doorknobs, chairs, and sofas, among others, which may have germs that can be transmitted and increase the chances of infection. See Table 1 for summary of the pivoting actions taken by organizations.

Table 1: Pivot actions taking by organizations

| Name of the firms | Challenges & opportunities, and other key issues faced by the organization | Pivoting actions |
|--------------------|--|--|
| 1. Suparshva swabs | Regulation from ICMR and NIV | special swabs under the Tulips brand. |
| 2. IHCL | The lockdown period saw a significant increase in the time spent by people on their mobile devices, and food being an essential commodity was readily available at the doorstep. | An app that gives guests a differentiated delivery experience through a seamless interface that allows them to personalise their orders, curate menus, and track deliveries real-time. |
| 3. Bioline india | Targeting the same customers with different product | Bioline India finds itself playing a bigger role in the daily battle against bacteria with its ULV Bio Fogger. |
| 4. Fabindia | The government was allowing the sales of essential items and hygiene products during the lockdown | Decided to ramp up its organic foods production. |
| 5. Workshaala | As most people started working from home amidst the pandemic, furniture is required which gives comfort and ease in working. | Homescape' to provide furniture to people working from home. tables, chairs, and desks to individuals. |
| 6. Hula global | To meet the rising demand for such products in the country. | Diversified into manufacturing PPE kits, N95 masks, face shields, etc., |
| 7. Koko boost | To take care of the immunity | brand of immunity-boosting powders made from moringa |

| | | |
|------------------------------|---|--|
| 8. Gulshan homz | Digitisation and virtual tours have been started by realtors, and this has helped them reach their target audience and close substantial sales even during the lockdown.” | “Digitisation and virtual tours |
| 9. 10 by10 | During Covid-19, the hospitals were running out of beds and ventilators. | ISO.POD — an instant isolation room solution that protects people against further infection. |
| 10. ITC | To protect families and remove germs from vegetables | Launch of safe veg wash |
| 11. DETTOL | To protect families and remove germs | Handwash and sanitizer |
| 12. Shree Shakti Enterprises | To meet the safety demand of corporate customers arising of covid -19 crisis | From sensor-based sanitiser dispensers to hands-free hand wash systems, and automatic foot sanitisers, |
| 13. Parle- G | To meet surging demand from at home, NGO’ s and migrant and poor people segment. | Focus on production, distribution, getting permissions. |
| 14. Cavin care | low priced sanitize for the on-the-go segment | Chick sanitizer |
| 15. ITC | To meet safety demands arising out of the covid -19 | Surface disinfectant |

Figure 1: Proposed Conceptual Model for Strategic Response of Organizations to Covid -19



Source: Created by author

The dreaded pandemic Covid -19, had forced the industry into turmoil which led to unprecedented challenges. These varied from, restrictions on labour availability, regulatory constraints and compliances, supply chain and promotion challenges to name a few. The organizations need to mobilize available resources at a fast pace (resource velocity), explore opportunities for new products, new services, create new customer experience offline or digital, at the same time ensuring employee safety. The organizations created new and strong value proposition, for new and existing market. They also widened product portfolio, sometimes giving impetus to the new product launches, increasing production, and using digital media for promotions etc. Most importantly these strategies had a positive bearing on top and bottom line of the organizations.

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Trends in ICT Management

Sameer Kulkarni* and Sumati Sidharth **

ABSTRACT

The paper presents analytical explanation and integrated solution in trends and best practices in Technology Management in ICT domain with specific focus on critical sectors. The paper reviews key technologies in ICT domain, their trends and future directions in meeting existing challenges as well as envisaged future challenges. ICT technologies are the key enablers in almost every facet of human life. It plays even vital role in diverse fields towards improving the situational awareness and providing valuable innovative solutions for issues in unthinkable ways. ICT plays a key role in enhancing productivity and efficiency in any organizations be it public or private, critical or otherwise. The value of ICT assets like computer systems, communication networks, hardware, software, media technologies coupled with latest technologies like Artificial Intelligence & Machine Learning, Big Data Analytics, IoT, Blockchain becomes a formidable force multiplier to drive modern developments, innovation and knowledge management in any organization. ICT technologies also make the management of information, critical factor in modern day, more effective and efficient. Technology Management entails all management activities involved in planning, management of resources, application of appropriate technologies to improve processes and outcomes. The major challenges faced in application of Technology Management in ICT domain are Formulating the use cases, Selection of appropriate technologies, Assimilation of requisite information resources ready for exploitation, Garnering top management support for using ICT in strategic thinking, Reengineering existing process and change management in organization, Managing the hardware resources (public or private cloud) and more importantly Monitoring and auditing for enhanced customer experience. In this ever-evolving ICT technology domain, it is important to keep pace with latest developments and this is a critical factor in adopting ever changing applications / processes as existing human force is not ready for such fast pace. However, this has changed significantly during the current Covid scenario. The paper aims to delve in to these realms to exploit latest development in ICT domain for implementation in critical sectors for future ready business processes.

Keywords: *ICT; Use cases; Reengineering processes; Public or private cloud; Implement.*

1.0 Introduction

1.1 Analytical Review of Key Technologies in ICT Domain

The information and communication technologies cover two distinct domains including Information Technology covering Computers (Hardware / Software), Cyber aspects, and Communication Technology covering networking, voice, video, data communication over wired or wireless media. These field are evolving at a faster pace than envisaged by Moore's laws. The ever-changing nature of these technologies makes a visible impact on every facet of human life be it social, personal, Govt or corporate affairs. According to Soumaya El Kadiri, et al., as business conditions change rapidly, the need for integrating business and technical systems calls for novel ICT frameworks and solutions to remain concurrent in highly competitive markets.

**PG Scholar, Department of Technology Management, Defence Institute of Advanced, Technology, Pune, Maharashtra, India. (Email: sameer.kuls@gmail.com)*

***Corresponding author; Assistant Professor & Head, Department of Technology Management, Defence Institute of Advanced Technology, Pune, Maharashtra, India. (Email: sumatisidharth@gmail.com)*

Accordingly, for all critical sectors, it is imperative that ICT technologies and trends therein need to be integrated in the existing process to evolve in more effective systems. Gabriel Kabanda (2019) argues that Information and Communication Technology Management is heavily dependent upon the alignment of technology and business strategies, and includes considering the value creation that is created through technology. As per T. H. AlBalushi and S. Ali (2015), with the development of a greater number and variety of e-services, citizens have higher expectations and demands and they only quest for those government e-services that are high in quality (i.e., as far as performance, security, availability, etc. are concerned). This is made possible with converged ICT domains. Even the quality factors can be improved with latest AI&ML, Big Data Analytics tools towards customer delight.

According to Esther Le Rouzic, et al, with one third of the world population online in 2013 and an international Internet bandwidth multiplied by more than eight since 2006, the ICT sector is a non-negligible contributor of worldwide greenhouse gases emissions and power consumption. The advances in ICT domain are driving efficient energy solutions as well as contributing to green resolutions. From energy efficient IoT devices, to smart grids, to intelligent monitoring solutions, ICT plays a key role in energy efficient networks.

The Information and Communication Technology (ICT) Roadmap is to align with contemporary technologies and corresponding Digital roadmap. There has to be continuous steps to remain updated in ICT domain and incorporate the latest technology in the ongoing projects. Existing ICT resources itself are changing the effectiveness and productivity in areas like Operations, Maintenance management, Administration, Hospital management, Accounting, Supply chain management etc. In the normal functioning of any critical sector, these ICT resources are paving the way for improvement in overall productivity and responsiveness. ICT has enabled data collection, transmission and storage of information for subsequent analysis. This is providing a background for better utilisation of the available resources and the advances in ICT are evolving just to ensure its effectiveness. However, the ICT is evolving at a much faster pace than adoption by Organisations. The advancements in ICT domain are enormous. We are going to focus on following key technologies from the perspective of their adoption in critical sectors:

- (a) Cloud Computing
- (b) Artificial Intelligence and Machine Learning
- (c) Big Data Analytics
- (d) Blockchain
- (e) Robotics Process Automation
- (f) Software Defined Networking
- (g) 5G
- (h) Cyber Security, encompassing all above aspects

1.2 Cloud computing

Cloud computing technology definitely minimizes the usage cost of computing resources while optimising the resource utilisation. The advances in hyper converged infrastructure make the fit case for exploiting cloud computing for migrating old systems to the cloud computing systems. The private cloud or public cloud options are there to explore. A flexible and cost-efficient cloud deployments are integrating newer concepts of load balancing, integrated monitoring, secure storage etc. The need based dynamic allocation of resources, easy implementation of roles, secure access and orchestration makes it the right infrastructure for adoption. Cloud Computing optimally allocates both processing ability and bandwidth as well as works on optimised electric power capacity with latest advancements.

1.3 Artificial intelligence and machine learning

Artificial Engineering (AI) and Machine Learning (ML) have arrived in the market and have the potential to transform the processes than ever before. Massive volumes of data are getting generated across the globe. AI is complementing human intelligence and it enables greater insight from data for helping human experts making better decisions and providing better advice. All the facets of thinking, perceiving, learning, problem solving and decision making are enabling the AI implementations.

The Natural Language processing can be effectively utilised to find anomalies even in multilingual architecture. D. Mujtaba and N. Mahapatra (2019) clearly states that several datasets and knowledge representations for question answering, coreference resolution, and inference tasks have been discussed and built upon in the NLP community.

The facial recognition technology is another important facet of AI&ML evolving at faster rate aiding in monitoring and auditing. The tracking of facial activities from video is an important and challenging problem as brought out by Prem Chand Yadav, et al (2016). This paper clearly brings out that AI&ML have facilitated lot of advances in facial action tracking for Fatigue Detection, Real Time 3D Face Pose Tracking from an Uncalibrated Camera, Simultaneous facial action tracking and expression recognition using a particle filter and Simultaneous Tracking and Facial Expression Recognition using Multi-person and Multiclass Autoregressive Models. These are key advancements which can be exploited in avoiding accidents, enhancing performance of individuals and avoiding emotional aspects in key decision-making scenarios.

1.4 Big data analytics

Every application begins with large amounts of data. Even though various data analytics are used in primitive or advanced forms, still there are instances which prevent the analytics to be used for enhancing the human intelligence. With the aid of AI&ML, this can be overcome and Big Data Analytics can provide meaningful insights in the data by correlating, corroborating and analysing with advanced algorithms. As rightly put by O. Baker and C. N. Thien (2020), business data are originating in various kinds of sources with different forms from conventional structured data to unstructured data, it is the input for producing useful information essential for business sustainability. The advanced algorithms and a host of resources are paving the way for extracting meaningful insights towards effective knowledge management. It also utilises the distributed data architectures to better assimilate data from disparate sources. This makes it easy for storing the information like IoTs storing in edge servers. This can greatly enhance the application development and decision-making processes.

1.5 Blockchain technology

Blockchain technology has evolved and is already changing traditional financial systems. It is a Distributed-ledger technology which is most commonly used for Cryptocurrency. However, the technology has immense benefits in carrying forward secure financial transactions and associated functions like auditing. Blockchain is an important tool enabling critical distributed applications without requiring centralized trust over untrusted network. Harsh Desai, et al, (2019) clearly brings out that private blockchains have been proposed to allow more efficient and privacy-preserving data sharing among pre-approved group of nodes / participants. H. Yoo and N. Ko (2020), also brings out that smart contract mechanism based on blockchain can guarantee the automatic and secure trading. Blockchain technology can be used for securing scores of technology domains like 5G, Communication channels used for sensitive information exchange.

1.6 Robotics process automation

As per Y Hao, et al, recent advances in Information and Communication Technologies (ICTs) have allowed manufacturing enterprises to improve business collaboration both within an enterprise and among enterprises, for achieving mutual benefits. This can be possible due to advances in Robotics Process Automation which is revolutionising the manufacturing as well as Supply Chain Management. Already Businesses are exploiting Virtual Factory (VF), in MSME sector through cloud-based data exchanges. These cloud-based messaging platforms are ensuring that the process automation is in line with the strategic requirements of those entities.

C. Balaguer (2004) has been vocal in bringing out research trends in robotics and automation in construction industry. RPA efforts are concentrated more in the software integration, sensory data acquisition and processing, safety and secure systems, sensor-based process control and construction industrialization. Such advancements in Robotics Process Automation can be effectively exploited in host of automation requirements especially in Manufacturing industries.

1.7 Software defined networking

J Bhatia, et al, states that evolving mega-trends such as mobile, social, cloud, and big data and correspondence innovations (ICT) are identifying new difficulties to evolving technologies, for which omnipresent availability, high data transmission, and dynamic management are essential. Software Defined Networking (SDN) has emerged as the default networking solution for converged infrastructure including wired as well as wireless networks, including 5G. SDN also brings in paradigm networking shift in the way we communicate information. The distinct layers for data and control planes, orchestration made possible with SDN is making seamless exchange of information across disparate platforms possible. The practical applications of SDN coupled with load balancing provides right mix of communication flexibility for running any application be it web based, app based or stack based. The nature of all new generation networks (NGN), wireless technologies, and broadband access is IP-based which ensures ease of access through any device or from any region in the world. SDN makes this functionality even more feasible due to its orchestration and management / monitoring functionalities.

1.8 5G

Y. Tan et al (2019), states that with the burgeoning of the Internet of everything, 5G network gradually attracts people's attention. After passing the technology hype around the 5G implementations, it is truly evolving in next generation of communication network capable of supporting low power endpoints with relatively high bandwidth and seamless connectivity across smart devices and other wired and wireless technologies. The advancements are making it possible for storing the data from end devices in edge devices itself, which was considered a major issue in explosion of IoT devices. The migration is in implementation stage in developed world, but surely it has the potential to bring in paradigm shift in connecting smart devices and extracting data from them.

1.9 Cyber security

With ICT technologies breaking the glass ceilings and becoming pervasive, there is a constant cyber threat. ICT thrives on connected world and cyber agents have a sneak peak in to these connected devices be it hardware, software, firmware or communication devices. The advances in ICT are getting automated and so are the cyber weapons as well. The enormous powers of ubiquitous computing, easy access to resources and host of new tools with AI&ML, automation makes it potent force to reckon with. When the adversary is getting more powerful, there is a need to be aware and prepared for the worst. This has been evident during the Covid scenario, when most of the working is remote and ICT driving the economy and society, there has been substantial increase in cyber attacks

as well, which is alarming. There are serious concerns about data protection, financial frauds, attacks on communication technologies including IoT, wired or wireless. World Economic Forum (WEF) has rightly enlisted cyber attacks as the third biggest concern in Covid times only after recession and bankruptcy. All the domains covered above, Cloud / Edge computing, AI&ML, Big Data Analytics, Robotics Process Automation, Software Defined Networking and 5G, where disruptive innovation has taken place, remains sub-servient to cyber threats.

2.0 IMPLEMENT Model for Effective Adoption of New Technologies in ICT Domain

Having seen the analysis of latest key technologies in ICT domain, it is imperative to exploit these technologies to the best of their abilities for improvement in productivity and performance of systems. It is extremely important to take a lead in identifying and implementing latest developments as they become available. The stability is one of the issues for rapid transition, however, same can be effectively managed with careful planning, Technology road mapping and following the path to the hilt.

There is an urgent need to adopt these latest developments in ICT domain in right earnest to extract maximum benefits. Following IMPLEMENT model is proposed to actually put the process in action. IMPLEMENT stands for:

- I Identify innovative use cases
- M Manipulation of appropriate ICT technologies
- P Provide top management support for using ICT in strategic thinking
- L Leverage requisite information resources for exploitation
- E Ensure availability of hardware and software resources (public or private cloud)
- M Managing transition of existing process through change management
- E Ensure effective monitoring and auditing for enhanced customer experience
- N Negotiate feedbacks
- T Transfer knowledge to requisite teams

The implementation strategy covered herein is the key to adopting the latest ICT advancements in almost every facet of functioning. The details of the model are covered below: -

2.1 I: Identify innovative use cases

Innovation is the key to any improvement and ICT can aid in furthering the innovation, be it new product development or processes improvement. When any application / process is aligned to the business vision, then it would substantially enhance the decision support of the organization's management. Towards this aim, anyone in the organization can identify innovative use cases. AI & ML based chatbots and voice powered assistants can be used with centralised exchanges to enhance the user experience. AI and BDA can be utilised to search through vast data sets to cull out outliers / objectionable content from ecosystems. SDN and 5G can be used to store information at the edge and use it for effective decision making at centralised locations. Be it education, supply chain management, operational activities, maintenance management, accounting, monitoring and auditing, scores of use cases can be identified to seamless migration.

2.2 M: Manipulation of appropriate ICT technologies

Manipulation of appropriate ICT technologies is the key for sustainable growth. Even in AI&ML or BDA, which algorithms to use, how to customise options provided by these latest technologies, the key answer is to manipulate these technologies to meet the use case requirements. Choosing the right communication technology from SDN to 5G considering the cost implications and ease of deployment is the core need to manipulate. The complex nature of these developments can be

overcome with thorough analysis of use cases vis a vis available ICT facet. It is important to note that the beginning is to be done to ensure effective contribution of these developments.

2.3 P: Provide top management support for using ICT in strategic thinking

Provide top management support for using ICT in strategic thinking. Without this step, it is impossible to progress in any adoption process. The organizational culture will be decided by the top management and then it becomes easy for acceptance of the changes required. The same AI&ML, BDA can give better advice to top management for growth-oriented decision making. Even the change management process covered later will be easy after acceptance by the top management. The strategic thinking can include adoption of ICT developments reaping the benefits of innovation from these advancements.

2.4 L: Leverage requisite information resources for exploitation

Leveraging requisite information resources for exploitation of ICT advancements is a key to adoption. Organizing the information is the right thing to do to manage and support the decision-making. It is important to note that the data is available in abundance and multiple formats structured, unstructured or semi-structured. However, the ICT advancements in cloud computing, Big Data Analytics with Hadoop, Mango DB, Spark etc., AI&ML algorithms can organise these vast amounts of data with SDN, 5G.

2.5 E: Ensure availability of hardware and software resources (public or private cloud)

Ensure availability of hardware and software resources (public or private cloud). Data being the sole driver for AI&ML, BDA, RPA, Blockchain, the capacity for storing and processing can be the best driver for implementation. Storage infrastructure and huge computing resources have become commoditised and easily available from various vendors in the market. Only requirement is to identify right mix of converged infrastructure for the organization. In case of software as well, customised solutions are available for every activity. Redundancy and diversity in hardware and software must be ensured. Right mix of public and private cloud, considering the criticality of the data and its envisaged confidentiality, can be identified. AI can be utilised to analyse the data content and plan future compute / storage procurements.

2.6 M: Managing transition of existing process through change management

Managing transition of existing process through change management is the next important step in adoption. This becomes easier with top management support and direction. It is important for the individuals and teams to accept the development in ICT domain with a positive outlook. Some of the tasks of individuals / teams will become redundant with RPA, AI&ML, BDA, but ultimately, the decision making with empathy has to be done by individuals. Everyone has to unlearn and re-learn to update themselves to be relevant with adoption of new technologies. The better the involvement in the change management, earlier and successful will be the adoption of ICT advancements. The advantages of the new technologies will far outperform the individual issues / concerns towards overall organizational objectives.

2.7 E: Ensure effective monitoring and auditing for enhanced customer experience

Ensure effective monitoring and auditing for enhanced customer experience. Network monitoring and management will be another important step in successful management of new technologies. This will also contribute to quality in every aspects of the process as every step can be corrected / consolidated with better inputs. AI&ML, BDA will provide much needed tools to efficiently monitor and audit the systems automatically. Be it applications, network or hardware,

monitoring and auditing will not only aid in better situational awareness but will also provide necessary inputs for further procurement of resources which is key for competitive advantage.

2.8 N: Negotiate feedbacks

Negotiating feedbacks is the key to improvement. The feedbacks can be positive or negative. But the essence of accepting feedbacks about any process during or after the adoption will improve the adoption. AI&ML can provide great deals of feedback based on the training data, contributing to removing the biases. The BDA algorithms also can be tweaked to extract meaningful feedback from the volumes of data available through scatter analysis, factor analysis etc. The feedback can then be used to correct RPA processes as well as network bandwidth management efficiently.

2.9 T: Transfer knowledge to requisite teams

Transfer knowledge to requisite teams is the last and most critical step in adoption of new ICT domain technologies. AI&ML, BDA, RPA, Blockchain implementations can give great deal of knowledge management resources throughout the process. Cyber security aspects will also provide valuable inputs for ensuring secure adoption of key technologies. SDN and 5G will make it easier to assimilate and use the knowledge from any region on any kind of device, which is key for better adoption by masses. It is extremely important to capture the tacit knowledge and make it available for further innovation and modernisation.

3.0 Implementation Case Studies

FFF Enterprises, a pharma entity, tried to migrate their SAP ERP application system to private cloud in 2016, however, due to scalability issues of hardware as well as networking devices, they had to adopt cloud computing. They migrated their entire system to Google Cloud in limited timeframe to ensure their critical pharma business is not affected. They experienced 80% improvement in speed vis a vis cost. With this migration to the cloud, the FFF managed to concentrate on innovation and support, instead of worrying about outages in their systems, which was handled by the cloud providers. A host of cloud solutions are provided from Google, Microsoft, IBM, AWS etc. for seamless migration of services and providing secure, reliable and uninterrupted services.

Cisco suffered its worst ever inventory write-down worth \$2.2b in 2001. The Cisco business and IT teams worked in unison in adopting the ICT advancements to streamline their Supply Chain Management world over. They adopted innovative RPA, 3D printing, single database instance across the world to seamlessly integrate Suppliers, Manufacturers and customers alike to ensure their Supply Chain Management system becomes the best and contribute to their success stories. Cisco promptly identified the use cases, adopted best in class ICT technologies, and reengineered their processes in time to reap the benefits.

Renowned banks are embracing AI&ML for fraud detection, customer service, credit service and loan decisions and meeting regulatory compliance. There have been numerous success stories in EdTech industry, especially in Covid scenario, to adopt the ICT developments like AI&ML, BDA in formulation of courses, student behaviour analysis, assimilation of results etc. This is helping improve retention of students which had been the key concern. AI&ML are being extensively utilised by Human Resources to screen the applications and improve the employee retention with analysis of employee behaviour on real time basis.

Retail industry also adopted ICT technologies and most of the e-tailers like Naykaa, Amazon, Flipkart etc. could improve customer satisfaction to delight by improving their delivery schedules, supply chain aspects and analysis of customer requirements on real time basis.

A leading middle east-based refinery adopted the ICT technologies including cloud, big data

analytics, AI&ML to focus on value addition in planning & scheduling, refinery operations, process engineering, maintenance & reliability and safety environment. The gap analysis was done and the processes were reengineered with ICT resulting in increase in refining margins, reliability of plant and reduction in annual maintenance costs to the tune of \$2m.

In a latest adoption of Blockchain technology, a critical problem of vaccine tracking and distribution of Covid vaccines is being tried out. Distribution across the world, with short supply, batching process and need to keep it under strict environmental conditions, poses complex problems which are being addressed by IoT and Blockchain technologies.

In recent instances across the world, the social media could filter out outliers, unwanted objectionable content through effective use of AI&ML and big data analytics. Though the very ICT technologies are enabling hackers to automate attacks, make it possible from distributed sources, the same technologies provide effective ways through AI&ML, BDA to counter them in real time. A score of such cyber-attacks were detected and counter measures were deployed to further stop the damages caused.

4.0 Analysis

Analysis of all these implementation case studies clearly brings out the enormous advantages of adopting the technologies in ICT domain in right earnest. All these technologies in ICT domain like Cloud Computing, AI&ML, Big Data Analytics and Blockchain are being offered **as a service** framework also, which will pave the way for their immediate adoption. The IMPLEMENT framework covered above can be seen in every case study. The organizations could see the possible use cases, analyse the available options for reengineering their processes, the top management drove the change process, the changes were embraced by the employees to letter and spirit, monitoring and auditing were ensured with these technologies, feedbacks were efficiently analysed and finally these are all available for use to take the lessons learnt forward. These adoptions of latest developments in ICT domain have resulted in increased productivity, profits, responsiveness, reduction in costs, losses and overall improvement in customer satisfaction which encouraged the organizations to innovate further. It is extremely important to keep tab on the latest developments and ensure continuous improvement is carried out. A key to maintain such a tempo is improving the skill levels and enhance the knowledge management aspects across the spectrum of our society.

5.0 Conclusion

It is important to harness the new developments in ICT domain and IMPLEMENT them in right earnest to gain maximum. It is imperative that latest developments in ICT domain can be implemented with collaborative efforts amongst agencies including public and private. ICT must be used to enable and deliver the envisaged changes towards improved productivity. The IMPLEMENT framework can be adopted with common ICT infrastructure, thereby enabling reducing concerns and fostering growth. This ICT adoption strategy will not only strengthen the governance but also provide adequate growth opportunities to individuals and organizations alike. The adoption of IMPLEMENT ICT strategy will enable the business venture in future with requisite resources and wherewithal to excel while maintaining safe cyber security posture. Early adoption of these latest developments in ICT domain will surely ensure meeting the sustainable development goals of the world.

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An Analysis of Levels of Financial Numeracy and Attitude among the Teachers in Higher Learning Institutions in Hyderabad

R. K. Prasad Gutti and John Byju***

ABSTRACT

Financial literacy is a pre-requisite for the achievement of financial goals by any individual. Due to economic liberalisation, finance is not limited to national boundaries and is across the globe's length and breadth. One can invest and borrow from anywhere in the world. After the opening up of economic gates, complex financial products are made available to investors and borrowers. To invest or borrow based on those versatile financial instruments, the person needs to have a specific financial knowledge level. This paper focuses on analysing and assessing the level of financial numeracy and attitude possessed by teachers of higher learning institutions in Hyderabad since they are the role models for their student community. For this study, a structured questionnaire has been adopted containing two sections: section 1 contains Socio-econo-demographic variables, and section 2 includes variables relating to financial numeracy, knowledge, attitude and behaviour. Descriptive analysis has been used to analyse the data and found that 21% of the teachers' working in Higher learning institutions at Hyderabad possess a higher level of financial numeracy skills. Only 23% have a higher level of knowledge in finance, and 50% have a high financial attitude in dealing with financial matters. This study can help policymakers, corporate entities, and academic institutions enhance literacy levels in finance to improve individuals' economic wellness.

Keywords: *Financial knowledge; Financial numeracy; Financial attitude; Financial behaviour and higher learning institutions.*

1.0 Introduction

1.1 Background

An appropriate and sufficient understanding of financial literacy can resolve future financial concerns of different individuals. Financial learning and numeracy is a part of financial knowledge, and knowledge is a part of literacy. It consists of three elements such as financial knowledge, attitude and behaviour. This literacy and its application are essential for achieving individual financial objectives. Due to liberalisation, privatisation, and globalisation worldwide, finance is not limited to certain countries and is across the globe. Financial instruments to invest or to borrow are large in number in the financial market. Choosing the right and appropriate instrument needs a basic understanding of financial concepts to enhance economic wellness and achieve financial goals. To achieve financial objectives, one needs to make financial decisions and monitor those decisions from time to time. Economic wealth can enhance the social status of the individual.

Therefore, financial literacy and the application of such literacy leads to economic progress. This financial literacy can be achieved through education and learning programs and gaining financial numerical skills to assure appropriate economic behaviour.

**Corresponding author; Research Scholar, Department of Faculty of Management, Kalinga University, Naya Raipur, Chhattisgarh, India. (Email: guthi1959@gmail.com)*

***PhD, Research Supervisor and Director General, Department of Management, Kalinga University, Naya Raipur, Chhattisgarh, India. (Email: byju.john@kalingauniversity.ac.in)*

This study focuses on assessing teachers' ability to manage their financial numeracy and evaluate the financial attitude to make the right decisions about personal finance relating to investment, borrowing, credit card, budgeting, and meeting expenditure. Those who are aware of these matters can decide when to borrow when to invest through different financial instruments.

Financial knowledge shows how an individual makes financial decisions. With knowledge and numerical skills, and the right attitude help a person create a financial vision where he wants to be in the next few years in terms of financial wealth. This knowledge affects all individuals, irrespective of their wealth, upbringing, education levels, etc. Lack of financial knowledge can lead to the acceptance of borrowings at a higher interest rate; not investing in appropriate financial securities decreases the return and increases the risk.

Financial knowledge refers to a person's comprehension of and understanding the principles of finance, procedures, and application of that knowledge to solve financial difficulties. Financial attitude can be explained as a personal feeling towards financial matters. It is the individual features that take the form of tendencies towards an economic action. Financial literacy involves understanding financial concepts such as money management, financial planning, savings, investment and budgeting, etc. and applying those concepts in real life for financial advantage. Integration of concepts and application is a difficult job in the real world. As the awareness and experience grow, there will be a change in the individual's financial behaviour.

Financial literacy is a broad word, and it includes knowledge about finance, attitude and decisions (financial behaviour). Many people have explained financial literacy in different dimensions; however, the OECD's definition in 2011 is considered more appropriate. It has described as "A combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being".

1.2 Need for the study

Literacy in finance is a global concern. It is critical due to complicated financial concepts, and a lack of understanding and knowledge about financial matters leads to financial inconsistency. Young workers now have more responsibility for planning and deciding their future financial needs due to India's economic reforms. Their financial behaviour is highly influenced by high job insecurity, wage differentials, easy access to consumer credit etc. A country like India, which has an extensive teaching community in various higher learning institutions, should research this subject.

1.3 Problem specification

The lack of financial skills and knowledge has become a global concern that is also noticeable in developing countries. Those who do not have financial literacy have not been encouraged to accept creative financial items, do sound financial planning, and implement their plans with serious commitment (Amer Jamel et al. 2015). Therefore, knowledge of finance leads to better planning for future financial needs. The teachers are the role model in our society to influence the student community, who is the creator of wealth for the future. They are in a position to control many aspects of an individuals life. Earlier studies have shown that financial knowledge positively impacts personal management in finance. Any person with good economic understanding can plan better for his/her finance; specifically, teachers are the sources of knowledge for society's growth and development. An effort is being made to study the teaching community's financial literacy and attitude levels working in higher learning institutions in Hyderabad.

1.4 Study's scope

The study exclusively concentrates on understanding financial numerical skills and attitude towards teachers' finance in higher learning institutions.

1.5 Importance of the study

The study's importance is to identify teachers' financial skills and attitude levels working in higher learning institutions to fulfil their future financial needs.

1.6 Study's objective

The study's objectives consist of the following:

1. To measure the financial numeracy levels of teachers
2. To assess the financial attitude of teachers
3. To provide suggestions to improve the teachers' attitude in finance.

1.7 Study limitations

The study limitations are

1. It is restricted to the teachers working in higher learning institutions in Hyderabad.
2. The method of convenience sampling method has been chosen for this study
3. There may be a possibility that some respondents might not give the actual situation that applies to them
4. The sample chosen may not ensure a proportionate representation of the entire population
5. The conclusions drawn may not be generalised

2.0 Review of Literature

Financial numeracy can be defined as processing basic numerical concepts, quantitative estimations, probability and ratios (Peters et al., 2006); Cokely et al., 2012). Financial numeracy directly affects financial management outcomes related to borrowing, savings and investments. These numeracy skills need to be implemented in real-time financial transactions without a third party's assistance (Brett Budson Mathews 2019).

Financial attitude is defined as a state of mind, opinion and judgment of a period about finances. It is the individual characteristics that take the form of tendencies towards a financial practice or action. It shows the inclination or likelihood of a person to undertake a behaviour (IGI Global)

The attitude is the response in the form of a statement of like or dislikes or useful or unuseful related to the individual financial behaviour (Potraich et al., 2016). Financial attitude will shape the way someone spends, hoards, and spend money wastefully (Furnham, 1984)

Financial numeracy is a part of financial knowledge (Lusardi 2012), and this knowledge with financial attitude and behaviour becomes financial literacy. Therefore, knowledge, attitude and behaviour lead to literacy.

The Standard and Poor's 2014 survey showed that India's literacy level in finance is low (25 per cent), and out of 28 nations in the study undertaken by Visa in the year 2012, India is ranked 23rd position.

Gutti R.K.P (2020), in his study, found that the levels of literacy in finance of students of post-graduate management studies in Hyderabad are low (33%), and male students are more financially literate than female.

Kalyani and Kavya Reddy (2018) found that the employees are digitally literate but not financially literate.

In their study, **Saurabh Sharma (2015)** found that young employees' financial literacy is not encouraging. Male literacy is more than female, and it is positively related to education and income levels.

Sumit Agarwal et al. (2015) assessed literacy in finance of a small cluster of Indian inhabitants who use an online investment service. The participants were found to be financially literate in general. Male respondents have a higher chance of getting the right responses, which rises with education and the investor's aggressiveness.

Agarwala et al. (2013) surveyed 3,000 people in India and concluded that Indian financial awareness is lower than international standards. However, the workers' and pensioners' financial conduct and attitude continue to be optimistic.

Bhushan and Medury (2013) found that gender, levels of education, levels of earnings, nature of jobs, and workplace all affect literacy in finance; according to them, the geographic area does not affect financial literacy. In urban India, the young working people's financial literacy level is comparable with similar groups in other nations.

According to **Hsu-Tong Deng et al. (2013)**, school teachers at the elementary level have a high level of medium literacy level in finance and education.

In his paper, **Ramakrishnan R. (2012)** concluded that individuals and society need financial education to advance the economy. Consumers who can make better decisions about themselves will improve overall welfare.

Abraham and Gyensare (2012) study among 250 Cape Coast University undergraduate and post-graduate students found that literacy in finance is positively related to age, work experience, and mothers' education. However, the levels of study, job area, parents education, media access, education, and money does not influence financial literacy

According to **Jason West (2012)**, financially literate people's acts do not always imply that they will behave responsibly with their money.

In comparison to people of nine other nations, **the ING Group (2011)** carried a global survey and identified that in managing finance, most Indian customers have exhibited good skills and are more optimistic in meeting any future economic obstacles. They also discovered that literacy in finance is impacted by an individual's age level, income level, and level of education. Financial literacy was higher among high-income respondents than among low-income respondents.

Lusardi, Mitchell, and Curto (2010) investigated literacy in finance among persons and found that only one-third of young adults have a basic understanding of interest rates, inflation, and risk diversification. Financial literacy was found to be closely linked to socioeconomic status and family financial sophistication.

Ronald and Grable (2009), individuals with low financial risk tolerance levels are the least financially capable and have the most inadequate subjective net worth assessment. They are still less pleased with their financial management capabilities.

According to **Wendy and Karen (2009)**, teachers understand the importance of financial education, but few trainers coaching literacy in finance are not fully equipped to teach personal finance. They also discovered that unique finance education opportunities for teachers are in high demand.

Those who got training in personal financial management do better in their financial matters (**Lewis and Linda 2009**). People with a low literacy level in finance have fewer chances to plan for superannuation, borrow at high cost, and partake in the economic system (**Shawn Cole et al. 2009**). Literacy levels vary significantly between countries and are dependent on educational success and societal connections (**Tullio Jappelli 2009**).

Financial education, according to **Jane Schuchardt et al. (2009)**, results in improved financial literacy as well as more positive financial behaviours, motivation, and planned behaviour.

Teachers in higher education have been studied in terms of financial literacy and expertise. Financial literacy and expertise can help everyone to increase their financial resources. In this regard, an attempt is being made to assess financial literacy (numeracy) skills and attitude among teachers in

Hyderabad's higher education institutions.

3.0 The Methodology Adopted for the Study

Research Design: Adopted a descriptive research method by the survey through a structured questionnaire for the present study.

Data: Both primary and secondary sources have been used to collect data for the study.

Questionnaire: A structured questionnaire has been prepared on literacy elements in finance such as financial learning, financial numeracy, financial knowledge, financial attitude and financial behaviour apart from socio-demographic variables and has been used to collect primary data from the teachers of higher learning institutions in Hyderabad.

Sample Description: The sampling unit used in this study is 130 teachers of higher learning institutions in Hyderabad in the age group above 25 years.

4.0 Data Presentation and Analysis

As per **Table 1**, out of the total 130 respondents, 42 (32.3%) are female, and 88 (67.7%) are male. The age group mostly ranges between 25 years to 65, and the majority are ranging from 35 years to 45 years (42.3%). 54 (41.5%) teachers are brought up from semi-urban areas, 37 (28.5%) are from urban, and the remaining 39 (30%) are from rural areas. Out of the job experience, 6 to 10 years of experience are 32 teachers, 28 teachers have 11 to 15 years, and 21 have 16 to 20 years, and 20 teachers have 0 to 5 years experience. About master's degree qualification stream, 44.6% (58) teachers are from the engineering stream, followed by business administration 21.5% (28), 10% (13) are from science and 6.2% (8) are from commerce and the remaining from arts, architecture and others. All the teachers have regular income from salaries, and their income ranges between Rs.25,000 to Rs.1,50,000 and above. 42.3% (55) of teachers are having income ranges between Rs.50,000 to Rs.75,000, 35.4% (46) are having income between Rs.25,000 to Rs.50,000, 13.8% (18) teachers are earnings in the range of Rs.1,00,000 to Rs.1,50,000, very few (3) are there earning more than Rs.1,50,000 and also earning less than Rs. 25,000.

Table 1: Socio-demographic Profile of the Respondents

| Particulars | Details (categories) | Breakup Total | % |
|-------------------|----------------------|---------------|-------|
| Gender | Female | 42 | 32.3 |
| | Male | 88 | 67.7 |
| | Total | 130 | 100.0 |
| Age group | Less than 25 years | 1 | .8 |
| | Years 25 to 35 | 43 | 33.1 |
| | Years 35 to 45 | 55 | 42.3 |
| | Years 45 to 55 | 24 | 18.5 |
| | Years 55 to 65 | 7 | 5.4 |
| | Total | 130 | 100.0 |
| Brought up | Urban (city) | 37 | 28.5 |
| | Semi Urban | 54 | 41.5 |
| | Rural | 39 | 30.0 |
| | Total | 130 | 100.0 |
| Experience | 0 to 10 yrs | 52 | 40 |
| | 11 to 20 yrs | 49 | 37.7 |
| | 21 to 30 yrs | 22 | 16.9 |
| | 31 to 40 yrs | 7 | 5.4 |
| | | | |

| | | | |
|--|--------------------------|-----|-------|
| | Total | 130 | 100.0 |
| Qualifications (Masters Degree) | Commerce | 8 | 6.2 |
| | Arts | 7 | 5.4 |
| | Business Administration | 28 | 21.5 |
| | Engineering & Technology | 66 | 50.8 |
| | Science | 13 | 10.0 |
| | Architecture | 1 | .8 |
| | Others | 7 | 5.4 |
| | Total | 130 | 100.0 |
| Income levels | <Rs.25,000 | 2 | 1.5 |
| | Rs.25,000 - 50,000 | 46 | 35.4 |
| | Rs. 50,000 - 75000 | 55 | 42.3 |
| | Rs.75,000 - 1,00,000 | 6 | 4.6 |
| | Rs. 1,00,000 - 1,50,000 | 18 | 13.8 |
| | More than Rs.1,50,000 | 3 | 2.3 |
| | Total | 130 | 100.0 |

4.1 Reliability analysis of variables.

The reliability test has been performed through the latest version of SPSS software, and values are indicated in **Table -2**. Cronbach Alpha value for financial knowledge 0.928, 0.854 for financial attitude, and 0.664 for financial numeracy. All the values have more than 0.60; hence, the reliability of variables is high.

Table 2: Reliability of Variables

| Particulars | Cronbach Alpha | No. of items |
|---------------------------|----------------|--------------|
| Financial Numeracy | 0.664 | 10 |
| Financial Knowledge (1+2) | 0.928 | 13 |
| Financial Attitude | 0.854 | 10 |

4.2 Construction Financial Literacy (Numeracy) score

There are ten multiple-choice questions with one correct answer to assess the level of financial numeracy levels. Each correct response has one value (1), and a wrong reply has zero value (0). The total score is 10 (10 questions multiplied by 1 for the correct response value). As per **Table 3**, those who scored between 0 to 5 have low financial literacy (financial numerical). Those who achieved a score between 5 to 7 are treated as medium level (average). Those who scored between 8 to 10 are determined as high levels of financial literacy since the mean value is 5.7 and the median value is 6.

Table 3: Distribution of Score for Financial Literacy (Numeracy)

| Serial Number | The score for financial literacy | Level of financial literacy (Numeracy) |
|---------------|----------------------------------|--|
| 1 | 0 to 4 | Low level |
| 2 | 5 to 7 | Medium level (average) |
| 3 | 8 to 10 | High level |

4.3 Financial Literacy (numeracy) levels of teachers:

Based on **Table 4**, 21% (27) of teachers working in higher learning institutions at Hyderabad are equipped with a high level of financial literacy, 58% (76) is having a medium level of financial literacy, and 21% (27) is having a low level of financial literacy. Therefore, teachers in these institutions are highly moderately financially literate.

Table 4: Financial Literacy Levels (Numeracy)

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|-------|--------------|-----------|----------|---------------|--------------------|
| Valid | High level | 27 | 20.8 | 20.8 | 20.8 |
| | Medium level | 76 | 58.5 | 58.5 | 79.2 |
| | Low level | 27 | 20.8 | 20.8 | 100.0 |
| | Total | 130 | 100.0 | 100.0 | |

4.4 Analysis of financial knowledge levels

On analysing **Table 5**, one can understand that only 23% (30) of teachers have high-level financial knowledge, and 50.8% and 26.2% have medium and low financial understanding, respectively. Therefore, the study clearly showed that most teachers (51%) in higher learning institutions are moderately financially knowledgeable; this indicates that teachers have an average financial knowledge level. The reasons may be that they have working experience; they directly involved in managing their money matters; they have different financial accounts. They deal with banks and other financial institutions on routine matters for their money matters, whether to deposit or withdraw and investment somewhere else to earn a higher return.

Table 5: Analysis of Financial Knowledge Levels

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|-------|----------------------------|-----------|----------|---------------|--------------------|
| Valid | Low financial knowledge | 34 | 26.2 | 26.2 | 26.2 |
| | Medium financial knowledge | 66 | 50.8 | 50.8 | 76.9 |
| | High financial Knowledge | 30 | 23.1 | 23.1 | 100.0 |
| | Total | 130 | 100.0 | 100.0 | |

4.5 Analysis of financial attitude statements

On analysing each statement as per **Table -6**, the financial attitude of teachers about financial matters are as follows:

Statement 1: 27.75% of teachers indicated very real, and 34.6% stated somewhat true about the message "I am in control of my financial situation". 22.3% of respondents are not sure of control of their financial situation. The minor segment, i.e., 4.6%, indicated that they are not in control of their financial situation. The majority of teachers are in control of their financial situation.

Statement 2: Approximately 45% of teachers believe they will achieve their future goals with their future income, but 31.5% are unsure. The message "capable of using future income to achieve financial goals" was disputed by 6.2% of respondents. It demonstrates that they are incapable of achieving future goals with future income, which may be because the future is uncertain and beyond their control.

Statement 3: Concerning the information "I feel credit cards are safe and risk-free", only 7.7% of respondents expressed as positively accurate, and 21.5% said some that true. The reason may be that they may be using the card for their personal use and paying the card bills on time. 28.5% expressed they are not sure about the safety and riskiness of credit, and Roughly 1/4th of respondents expressed that they are not sure about the statement. The reason could be that they may not be having the card or may not be using the cards correctly.

Statement 4: 15.4% of teachers agree with the statement, "I feel purchasing things are important for my happiness/comfort". The reason may be that they are feeling happy with the material objects. 26.9% expressed that the statement is somewhat correct. 30% of respondents are not sure at all that purchase of things brings happiness. 12.4% of teachers do not agree with the statement

totally, and the reason may be that happiness is not linked to material objects, and it is a state of mind.

Statement 5: The statement "I am capable of handling my financial future" has been agreed by 21.5%, and 43.1% agree somewhat. Therefore, roughly 65% of the respondent can handle their financial future without any difficulties that are a goods sign. 20% of respondents are not sure of handling their future finances, and very marginal respondents do not agree with the statement; that means they need someone's help to handle their financial future.

Table 6: Analysis of Financial Attitude Statements Relating to Financial Matters

| Q. NO. | Statements in realtion to financial attitude | 1- Not at all true | 2- Somewhat not true | 3- Not sure | 4- Somewhat true | 5- Very true |
|--------|--|--------------------|----------------------|-------------|------------------|--------------|
| 1 | I am in control of my financial situation | 6(4.6%) | 14(10.8%) | 29(22.3%) | 45(34.6%) | 36(27.75%) |
| 2 | I am capable of using my future income to achieve my financial goals | 8(6.2%) | 9(6.9%) | 41(31.5%) | 45(34.6%) | 27(10.8%) |
| 3 | I feel credit cards are safe and risk free | 33(24.5%) | 22(16.9%) | 37(28.5%) | 28(21.5%) | 10(7.7%) |
| 4 | I feel purchasing things are important for my happiness /comfort | 16(12.4%) | 20(15.4%) | 39(30%) | 35(26.9%) | 20(15.4%) |
| 5 | I am capable of handling my financial future | 8(6.2%) | 12(9.2%) | 26(20%) | 56(43.1%) | 28(21.5%) |
| 6 | I feel cost of using credit card is very high | 28(21.5%) | 22(16.9%) | 33(25.4%) | 24(18.5%) | 23(17.7%) |
| 7 | Regular savings is important for my future | 5(3.8%) | 7(5.4%) | 18(13.8%) | 34(26.2%) | 66(50.8%) |
| 8 | Insurance cover is important to protect from risk | 6(4.6%) | 8(6.2%) | 23(17.7%) | 37(28.5%) | 56(43%) |
| 9 | I feel understanding credit terms are important before borrowing on loan or on credit card | 7(5.4%) | 8(6.2%) | 23(17.7%) | 36(27.7%) | 56(43%) |
| 10 | I feel money management is important issue | 5(3.8%) | 8(6.2%) | 16(12.3%) | 27(20.8%) | 74(56.9%) |

Statement 6: 17.7% of respondents feeling that the cost of using a credit card is very high. 25% are not sure, and roughly 22% do not agree with the statement. The reason is that the use of basic cards does not involve any cost unless the card is excessively used or cash is withdrawn or unable to meet the card bills on time.

Statement 7: The message "regular saving is important for my future" has been agreed upon by more than most respondents. That shows the importance of savings to reduce future financial troubles. 13% are not sure, and 4% of respondents have not agreed with the statement, and 13.8% of teachers are not sure. Almost 77% of teachers recognise the importance of savings for a safe financial future.

Statement 8: 43% of teachers have agreed about the importance of insurance cover to protect from risk, and 28.5% have somewhat agreed. That means more than 50% of respondents have agreed with the importance of insurance to reduce future risk. It shows very clearly the awareness of insurance to manage future safety. Only 17.7% are not sure, and 4.6%, i.e., a very negligible portion of respondents, disagree with the statement. It is a good sign that people are taking care of their future risk by having insurance products.

Statement 9: About understanding credit terms before borrowing on a loan or credit card, 43% agree with the idea, and 27.7% has somewhat agreed. That shows most teachers (71%) have felt very clearly that understanding the credit terms is essential before borrowing. It is an excellent sign to reduce future complications because once the loan agreement is signed in, later on, the borrower cannot state that they have not understood. Mainly the terms of loan and credit card are numerous; hence, special attention needs to be paid to digest the agreement's terms.

Statement 10: Majority (57%) of teachers have agreed that money management is an important issue. It shows the importance of money management in their daily life, and money management is financial management. 12.3% are not sure, and a very negligible portion (3.8%) have

not agreed with the statement.

4.6 Analysis of financial attitude levels

On analysing the financial attitude levels as per **Table -7**, 50% (65) of teachers working in higher learning institutions have a very fair (high) attitude towards financial matters. The balance has a low level of attitude towards financial issues. The high level of attitude may be due to having a high level of general education and regularly dealing with money matters in their routine life.

Table 7: Analysis of Financial Attitude Levels

| | | Frequency | Per cent | Valid Percent | Cumulative Percent |
|-------|-------------------------|-----------|----------|---------------|--------------------|
| Valid | High Financial attitude | 65 | 50% | 50% | 50% |
| | Low Financial attitude | 65 | 50% | 50% | 100% |
| | Total | 130 | 100.0 | 100.0 | |

5.0 Conclusions and Suggestions

5.1 Conclusions

1. 21% of teachers are having a high level of financial literacy (numeracy) skills, and at the same time, a majority (58%) are having an average (moderate) level of financial literacy.
2. The financial knowledge level is high for 23% of teachers preparing financial plans and budgets, managing income and expenses, bills on time, savings and investment, debt and insurance.
3. 50% (65) of teachers working in higher learning institutions have a very fair (high) attitude towards financial matters, and the balance has a low level of attitude towards financial issues.
4. Based on financial attitude analysis, most respondents felt the importance of savings, money management, understanding credit terms before borrowing and undertake insurance to reduce risk. At the same time majority also thought that they are in control of their financial situation, manage their future financial needs, and the credit cards are not safe and risk-free. Minority percentage disagree about the importance of purchasing things for their happiness.

5.2 Suggestions

1. A particular orientation needs to be provided to higher learning institutions' teachers to understand various financial concepts useful in their daily lives to manage their money efficiently.
2. Non-for-profit entity) needs to be established to propagate and impart financial literacy as a sort of orientation program to reduce the financial literacy gap and reduce financial fraud due to ignorance of financial concepts.
3. In different languages, the basic financial concepts like savings, investment, insurance, pension need to be printed and distributed on a mass scale to realise the importance of money management.
4. The print and electronic media need to dedicate specific columns on financial literacy concepts to improve the common public's financial literacy levels.

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Impact of Covid-19 on Coaching Institutes

*Manmath Deshpande**

ABSTRACT

There has been a boom in the segment of coaching institutes in India in the past few years, particularly since the beginning of the 21st century. The big increase in the number of coaching institutes started at least in the 1980s itself. Since almost everything in life has to be learnt through coaching, the institutes which give training are of things which encompass many spheres of human existence, such as music, public speaking, cooking, education etc. In the education sector too, the educational service organizations are of a very wide range, such as coaching for the examinations of Grade 10 and Grade 12, which are of the Boards such as CBSE, State, ICSE etc, Joint Entrance Exams of IIT (Mains and Advanced), PMT (Pre-Medical Test) or NEET, CAT (Common Admission Test), MBA CET, Campus Recruitment Training (CRT), Programming, etc.

A new phenomenon which has come up very recently, say post-2010, is of online coaching classes. There are institutes which sell their entire course online, such as Cracku, Edushastra, HundakaFunda, CATKing, iQuanta, 2IIM, Marrow, etc. These institutes had come much before the Covid-imposed lockdown which was imposed since March 2020.

The traditional, non-online coaching institutes in India saw a decline in revenue due to the lockdown. Most of them were unprepared for this sudden change where online coaching had to be taken immediately. However, with the passage of time of the lockdown, they, or most of them, became more comfortable with and adept at the use of technology to take online classes. This paper aims to identify the impact of the lockdown on the coaching institutes, the changes that were forced to occur with regards to opening up of newer markets, changing in marketing approaches, technology management, and automation in the workplace.

Keywords: *Lockdown, Covid 19, impact, Coaching institutes, Online.*

1.0 Introduction

Coaching has always been a part of any civilization in the history of civilization. A large number of school students in India take coaching now, and this number was ever-increasing with time, at least until the lockdown was imposed due to Covid-19. A report in The Hindu's Business Line on 22 December 2013 cited a report by the Asian Development Bank (ADB) published in the year 2012, which said that as many as 83 per cent students in high school in India go to private tuitions at coaching institutes. The Indian Express dated 26 June 2013 quoted a survey of students and guardians by the Associated Chambers of Commerce and Industry of India (ASSOCHAM) which was conducted in 10 Indian cities. This survey concluded that the educational coaching classes sector increased by 35 per cent between 2007 to 2013, and that in this period, the number of students in primary school attending tuition classes doubled, while the number of students in high school attending tuitions increased to 1.92 times.

The number of students attending coaching classes at Class 12, and graduate level was not mentioned, but this too can safely be assumed to be definitely rising, if it is not at saturation level already at Class 12 level.

**Research Scholar, Department of MBA, Dr Ambedkar Institute of Management Studies & Research, Nagpur, Maharashtra, India. (Email: dmanmath@yahoo.co.in)*

2.0 Literature Review

Since the lockdown was announced only in March 2020, and is still in force, there do not appear to be many research papers written on the topic of its impact on coaching institutes as yet. The only literature available was the reports of newspapers and magazines on this issue, which gave statements of various stakeholders such as coaching institutes, students, teaching and non-teaching staff, parents, etc. Other research papers which covered the subject of coaching institutes (much before the lockdown) were studied.

A PTI report of 17 April 2020, around a month after the lockdown was imposed, said that many students left their coaching institutes drowning the fees already paid when the classes closed due to lockdown, and joined new online coaching institutes, paying the full fees. In that report, a student mentioned that many of the traditional coaching institutes did not have online coaching facility at that time.

An article by *The Indian Express* dated 8 June 2020 said that due to the lockdown, the admissions of major institutes coaching students for IIT JEE, of which Aakash, Resonance, Allen, FITJEE, CareerPoint, PACE, Vidyamandir were mentioned by name, declined to nearly half, or even lesser at some places, and that some institutes had difficulty in even paying rent for the places taken, at least in the cities of Kota, Delhi, Mumbai, Nagpur, Raipur and Indore. It stated that Resonance's Mumbai and Raipur centres and Allen's Indore centre got only half the admissions as compared to 2019, while it was just 30% of the 2019 figures at Resonance East Delhi centre.

The report also gave an interesting fact stating that in light of the difficult situation, these institutes reduced the initial payment for seat-booking. It gave the example of a Resonance centre in Delhi which booked seats for Rs 10,000 while this amount was Rs 60,000 in 2019. There were also complaints of late payment and reduced payments by faculties teaching at these institutes.

The article further said that these institutes were scared of the professional online classes or tutoring platforms like Byjus, Unacademy, Vedantu etc who are their rivals, reducing their admissions even more. The CEO of Vedantu stated that it had seen a 150% increase in paid subscribers for coaching for competitive exams in the three months of lockdown of March to June 2020.

The Indian Express dated 20 July 2020 said that the Maharashtra Class Owners Association has nearly 1 lakh classes under its ambit and quoted the association as saying that business was reduced by 70% in the four months of ban on offline coaching classes since March 2020.

The Times of India dated 10 February 2021 reported that this Association urged the Maharashtra Government to allow offline coaching classes, and that it said that many classes may not be able to sustain and a lot of teaching and non-teaching staff may lose jobs if the classes continue only in online mode.

3.0 Technology Management

3.1 Access to technology by customers

The lockdown underscored the importance of digitization all across India. Had this pandemic occurred, say in the year 2000 or 2001, it would not have been possible to hold classes online, like now. That is because, at that time very few people had access to the internet, there were almost no mobile phones in the hands of ordinary people, except the very rich, and very few people had laptops or even computers. The rural part of the country, and the lower classes even in urban areas certainly did not have access to such technology.

However, in the past few years there has been rapid growth in the access to mobile phones, internet by all sections of the society, including the underclass in urban areas, and everyone in the rural areas. According to Statista, the Internet penetration rate in India was just 4% in the year 2007,

from which it grew to nearly 50% in the year 2020.

A *Hindustan Times* article of 14 August 2020 said that the number of people using the internet in India has increased massively in the past few years, according to data compiled by the World Bank. But a large percentage of the population still does not have access to the internet. This situation is so far more in rural parts of India, households with low income, which will be classified as 'poor'.

This report said that the Delhi telecom circle (which includes other parts of the National Capital Region apart from Delhi too), as of end-2019 had a total of 169 internet subscribers per 100 people, as per TRAI data. This was the highest among all the telecom circles of India, which are 22 in number. Since many people used more than one internet connection (say, one broadband connection, while another being on mobile) the number of connections per 100 people was higher than 100. But this number was as low as 32 for Bihar and Jharkhand combined. The number of internet subscribers per 100 people was less than 50 in at least six telecom circles of India at the end of 2019.

These figures also showed a massive gap in internet usage in the urban and rural areas. The national average all over India showed that there were 106 internet subscribers per 100 people in urban areas, but this number was only 30 subscribers per 100 people in rural regions.

The Times of India reported on 6 May 2020 that for the first time the number of internet users in rural areas crossed that of those in urban areas in India (in absolute terms), in late 2019. The report by the Internet & Mobile Association of India (IAMAI) and Nielsen said that rural India had 227 million active internet users, while this number for urban India was 205 million, as of November 2019. Those who use the internet at least once in 30 days were defined as 'Active internet users' in this report. There were another 7.1 crore (i.e. 71 million) children between the age of 5 and 11 who went online using the devices of their household.

3.2 Use of technology by coaching institutes

After the lockdown was imposed in India in March 2020, there were many coaching institutes which avoided taking online classes until as late as possible. However, ultimately all those who wanted to survive had to take online coaching, and they all learnt how to take online coaching soon, some of them within as few as 2 or 3 days. Online coaching emerged as a panacea. The only things needed were a computer or laptop, tablet or smartphone and a good internet connection.

For taking online classes, two of the most popular platforms were Google Meet and Zoom. There are some differences in the working of these platforms as well. For example, in Zoom, it is possible to log in with fake IDs. Even if the entry to the Zoom meeting is done with real name, it is possible to change name after that. This has resulted in some students logging in and then changing their usernames, and with fake usernames, giving a lot of abuses and disrupting the class. This has been observed many times by various faculties on Zoom and revealed to this writer in personal interactions, and it is often either very difficult or impossible to identify the person doing so. This is not possible on Google Meet. Hence, on this count Zoom needs to improve its technology.

However, there are some shortcomings which some users claimed to exist in Google Meet. There was a feedback that in Google Meet there is a good option of screen sharing, but one cannot show anything which is not on the device (say Laptop). Thus, if one is logged in from Laptop, one can only share the screen. On Zoom, anything can be shown to students if one is logged in from mobile; one can simply shift the face of the camera and show anything written in a register etc to the students, which makes it easier. Some topics cannot be learnt by mere screen sharing, hence this facility is important to have in any technology.

In Google meet, anyone can type anything on the chat box and ask any sort of doubt, which is seen by not just the faculty, but all other students, i.e. by everyone logged in in the meeting. The benefit of this is that any doubt is seen by all other students, and any of the other students too can

immediately type on the chat box and explain it to the student who asked it. However, the drawback here is that there is no facility to write in private on Google meet. If any student wants to say anything in private, only to the teacher, he or she cannot do so. Or in case a faculty asks any question, and does not want the answer to be revealed publicly so that other students who have not yet solved the question and not yet got the answer do not hear it, there is no way the answer can be told. It is seen by everyone on the chat box, on Google meet.

But on the contrary, on Zoom, there is the facility of sending a private message, where any message can be sent to any single individual. This makes it possible for students to send the answer only to the teacher, whereby other students do not automatically see the answer sent, on Zoom. If a class is being taken on Google meet, then the only way the answer can be seen by only the teacher is through other messages like in private on the teacher's personal WhatsApp number.

In such online classes, there are at times connectivity issues in case of both students as well as the teacher. If the teacher's connection is lost, the whole class halts immediately then and there. If a student's connection is lost even for a very short time, the student too can suffer if a very important thing was being taught at that very moment. After this, if the teacher repeats the part lost by a particular student due to connectivity being lost, just for him or her, a lot of time of the class is lost. Therefore, technology is very important. The use of technology in education is not a new phenomenon. The Covid-19 lockdown simply made it more prevalent.

4.0 Opening up of Newer Markets

It is said that 'With every adversity comes an opportunity.' This is perhaps also applicable here. Due to the lockdown, it was possible for erstwhile offline coaching institutes which were limited to one particular geographical area to get a nation-wide market. Let us take the example of an individual running a one-man coaching class 'Aptitude Development Centre' in Nagpur in the offline mode. In the lockdown, such an individual had to take classes online. This resulted in some students from other cities also joining his classes online. This was possible only due to the lockdown, which resulted in the classes being taken in the online mode and another reason could be that the offline classes were closed in other cities too. Had these offline classes been available in the other cities, students of those cities may have joined them in their cities, instead of joining an online class in a different city.

Another new market opened was the students who lived far from the location of the coaching institute within the same city. Due to the online coaching, it became accessible, easy and comfortable to attend the classes for such students. Students who were unable to join a particular institute due to too much distance, lack of transport (such as lack of personal vehicle) could join it in the online mode.

In some cities, even now, many girls are not allowed to travel at night, or even if permitted they are afraid of doing that. The coaching institutes have got even such a market segment as a new segment, since such girls can attend the classes from home in the online mode. Aptitude Development Centre, Nagpur had examples of such students got in online coaching, which it took on Google Meet or Zoom.

Professional online coaching institutes like say, Cracku or Marrow, which did not operate in the brick-and-mortar mode at all even in the pre-lockdown times, have got a lot of new customers, as reported by English dailies. Since there was no option but to go for online coaching, many students preferred the professional online institutes as compared to the brick and mortar ones. Several students revealed to this author that they did not want to go for online coaching of the brick and mortar ones. Several of the otherwise traditional brick and mortar institutes gave only recorded video lectures in their online coaching, which was not found worth going for, by many students.

5.0 Changes in Marketing Approaches

Due to only online classes being available, several institutes had or have the chance to highlight what exactly better they are doing in online coaching which other institutes are not doing. In online coaching ‘What we are doing better than our competitors’ can differ completely from the offline coaching. In offline coaching, everyone is present in a classroom with a teacher teaching live and interacting with the students. But in the online mode, it is not necessarily so, and simply recorded lectures could be made available.

As we mentioned, some institutes which went online simply gave pre-recorded video lectures, with no live online coaching. Many students thought the fees to be too high just for getting such pre-recorded lectures. Some other institutes (e.g. Kiran Gadkari Sir’s institute for coaching of Maths in Class 12, or HR Mentors institute in Nagpur city, in the initial phase of the lockdown) uploaded videos on YouTube, and many were disappointed with that as well. In such cases, there was no personal attention given to any student, and there was no live coaching at all.

One of the most popular ways of marketing coaching institutes is and was to take guest lectures in colleges, whereby the students would get a demonstration of the teaching of the teacher. But due to the lockdown, the colleges were all closed. Hence, here the other ways of marketing were (are) needed. However, such guest lectures can be taken even in the online mode in the colleges.

Due to the lockdown, students were (are) spending a lot of time on smartphones or on the social media. Hence, giving advertisements on Facebook or Instagram is a very effective way to advertise about coaching institutes in this time. It is useful even more in lockdown than other times.

In marketing, the coaching institutes also need to encourage students to join the classes. Due to the lockdown, the market size itself has reduced.

An article in *The Indian Express* dated 16 November 2020 titled “Lost in lockdown” was written by three authors namely Sucharita Iyer, Shireen Jejeebhoy and Nitya Daryanani. That gave insights from a study done by the Dasra Adolescents Collaborative and it was an attempt to understand how the COVID-19 pandemic affected the lives of the youth of India. The article said that for the study, an online survey was done which asked questions about this. The number of organizations responding to the survey was 111.

The article said that past instances showed that there is a far greater increase in the probability of girls and young women being asked to drop out, and actually dropping out of school during crises. This is the effect of the significant increase in care work and domestic work during times of crises, and also due to economic disparity making girls to help in adding to the income of the family. Females are often made to discontinue their education and are married off to reduce the financial burden of the family. It stated that this study of the Dasra Adolescents Collaborative revealed that 43 per cent of the organizations who participated in the survey stated that they knew of one or more girls, who revealed their fear of ceasing of school or whose guardians had either planned for or asked for the discontinuation of school.

After studying the report as well as the current trends due to the Covid 19 lockdown, the authors of the article published by *The Indian Express* gave some recommendations to the government, one of which was:

‘Engage with parents, especially families of girls who are at risk of dropping out of school. Parents need to be made aware about the importance of completing studies, even in the time of economic hardships due to lockdown, especially those parents who may force their daughters to cease studies.’

The local franchise owner, i.e. centre head of TIME Nagpur said to this writer in a personal interaction on 3 March 2021 that TIME Nagpur’s business went down by at least 40% if not to 40%, due to the lockdown. Among the various reasons, one major reason cited was the fact of many girls

choosing not to go for Post-graduation (MBA) due to the lockdown. This resulted in reduction in size of the market itself, by such a significant level that a major player like TIME had to mention it, and it affected its business.

In case of reduction in market size, one must try to increase it. One can see this from the advertisements given by say, some toothpastes, saying that one should brush twice a day. They show a young boy going to sleep at night, saying 'Rinse the teeth with water' before sleeping, to which a dentist comes and says 'Don't just rinse, brush your teeth before going to sleep at night. Use XYZ toothpaste.' Now the motivation for the toothpaste makers to make everyone brush twice a day is to increase their consumption of toothpaste, so that more toothpaste can be sold. This is basically, increasing the market size.

The same we can see even in terms of MBA. A hoarding of a major coaching institute showed a girl with the words written: '*MBA to karna hi padega. Status. Salary. Prestige.*' ('One will certainly have to do an MBA, for the sake of status, prestige, salary.') This was because the number of students going for MBA was reducing, due to various reasons such as the astronomical rise in the fees of B-schools. So the institutes had to try to make doing MBA popular again, and then hope to get students for MBA entrance exams' coaching. Exactly the same has to be done in times of lockdown.

Due to online classes, many institutes were able to save the cost of rent, at least for some time. Many of the conventional coaching centres had to pay the rent even for the time classes were not held, since their contracts were often year-wise, with their landlords. Some institutes had only monthly rental contracts, so they lost only some days of March 2020. However, after a particular point of time, majority of the institutes did not have to pay rent where physical classes were not held. This money could and should be utilized for marketing.

6.0 Workplace Automation

Institutes which are basically of the offline mode, gave pre-recorded lectures to the students as their online classes. This was actually automation. But this wasn't received as well by the students as a live class. Some students were definitely happy even with this, but many were not. Automation is fine so long as it satisfies the customer. If not, it should be discontinued.

6.1 Coaching institutes studied

The institutes studied for this purpose of understanding the impact of Covid-19 were:

- 1- TIME Nagpur [TIME is a national institute coaching students for MBA entrance exams like CAT, MBA CET and other such exams, Number 1 in the country]. It gave pre-recorded video lectures made available by Head Office.
- 2- Kiran Gadkari's institute for Maths for Class 12 and JEE coaching, Nagpur. It uploaded lectures on YouTube.
- 3- HR Mentors [a local institute of Nagpur, in the same category as TIME] (study was done through its students). It initially uploaded lectures on YouTube, and later took classes on Zoom.
- 4- Athavale's Sulabh Classes (the No. 1 coaching institute for Class 10 of Maharashtra State Board in Nagpur city). It took live classes on Zoom or Google Meet.
- 5- Zoom Coaching Institute (of Class 10 coaching of various boards, in Nagpur city). It took live classes on Zoom or Google Meet.
- 6- Marrow-an exclusively online institute coaching students for NEET (study was done through its students)
- 7- Cracku- an exclusively online institute coaching students for CAT (study was done through its students)
- 8- Working of some other institutes like Aakash, Resonance, Allen, FITJEE, CareerPoint, PACE,

Vidyamandir etc was seen through newspaper reports, all of whom took online coaching.

7.0 Conclusion and Recommendations

Covid-19 had a huge impact on the coaching institutes. Adapting new technologies was very important, or rather necessary, for survival. While the traditional brick and mortar institutes had a lot of challenges, and mostly lost market share, they also got some opportunities like access to newer market segments.

Some recommendations for coaching institutes are:

- 1- Some ways of marketing like taking guest lectures in person in colleges were (are) lost due to colleges being closed offline. There should be an attempt to take guest lectures in the online mode, though it is not as easy as when colleges were open.
- 2- It is quite possible to give personal attention to every student even in online coaching. Many students want just that. So, institutes which take coaching live on Zoom or Google Meet and give personal attention should highlight those aspects of their coaching, which others can't give in YouTube videos or pre-recorded lectures.
- 3- Making short videos of 1 or maximum 2 minutes, and promoting them on Facebook, WhatsApp is another good way, since students spend a lot of time online in lockdown. This was a useful and good way even in the pre-lockdown times, but with physical classes closed in colleges, its importance increased a lot more.
- 4- The market size itself reduced, hence some strategy should be chosen by the institutes to incentivize the lost market to return to the sector itself. The segment of female students, mentioned by the head of TIME Nagpur as well as in the article 'Lost in lockdown' by *The Indian Express* dated 16 November 2020, needs to be specially targeted by the coaching institutes. They need to urge them to do MBA and go for similar things like government jobs, bank exams, etc whose coaching they provide.
- 5- The institutes could come up with the message 'Use time of lockdown to do this course by our class.'
- 6- Institutes should use the money saved on paying rent for physical classes on marketing.
- 7- Coaching institutes will benefit with a strong online learning management system with course material, tests, assignments being provided and having a facility to take anonymous feedback to ensure better learning. In all such online classes, there is a real problem of checking assignments, conducting subjective tests, proper invigilation. If all these issues are solved with proper technology by the institutes, not only the students, but the institutes too will benefit massively.

Those institutes which were totally in the offline mode before the lockdown mostly saw a big decline. But it was the opposite in case of those which were exclusively in the online mode already.

What will happen to online coaching in the long term, after Covid-19 ends is a very interesting matter. It is possible that there will be much greater growth of the professional online coaching classes like Cracku, Marrow etc. A PTI report of 17 April 2020 quoted the CEO of NEETprep, an online coaching institute for NEET, Kapil Gupta as saying that many students were forced to take online coaching due to the lockdown may not ever revert to classroom coaching.

That report also gave the opinion of the CEO of Catalyst Group, which is another online learning platform, Akhand Swaroop Pandit, as saying that the charges of the online coaching institutes have increased in the lockdown, and that the lockdown would result in a long-term increase in the use of online coaching institutes. But it is quite possible that it may turn out to be exactly the opposite. Students who attended online coaching may find that offline, in person coaching, is better; and as soon as they get the chance, they may abandon online coaching. Anything can happen. Coaching institutes need to be on their toes and be ready for anything.

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Indian Life Insurance Market: The Liberalisation Experience and Emerging Dynamics

K.V. Bhanu Murthy and Manisha Choudhary***

ABSTRACT

The Indian life insurance market, after remaining a free market since its inception was nationalised in 1956 with the setting up of Life Insurance Corporation of India (LIC). LIC did fairly well in terms of spreading insurance culture and reaching out to the masses but under the nationalised regime, the market remained under tapped. To bring reforms, Malhotra Committee was constituted which recommended the opening up of the market to private players to induce competition and improve market performance.

This paper studies the impact of liberalisation over the 20 year period (2001 to 2020) through secondary data analysis (obtained from various IRDAI Handbooks on Indian Insurance Statistics) using semi-log regression model of growth rate and other descriptive statistics. Data analysis has revealed that there is negligible rise in life insurance penetration during the 20 year post-reform period whereas density has risen at the rate of 9% per annum. LIC still remains the dominant firm in terms of total premium, new business premium and number of new policies issued. In terms of surplus, after an initial shock due to entry of private players, LIC has recovered and adjusted itself to show a consistent rise but the private players are still struggling to have steady growth. Competition has resulted in market expansion and the market has become more dynamic- in terms of products, distribution channels, geographical spread, micro insurance, surplus and growth pattern. On the whole, liberalisation has partially succeeded in improving the market.

Keywords: *Indian life insurance market, Liberalisation, LIC, Private insurers, Malhotra committee.*

1.0 Introduction

Life insurance in India dates back to 1818 when the first life insurance company, named Oriental Life Insurance Company was set up. Since then, this market remained an open market till 1956. In 1956, it was nationalised keeping in view the social objective of life insurance. For this purpose, Life Insurance Corporation of India (popularly known as LIC) was set up in 1956. LIC did a fairly good job of spreading awareness about life insurance and making it popular amongst the masses. However, being a state monopoly, it had its own drawbacks and the market largely remained untapped. This led to the initiation of reforms in this market which started with the constitution of Malhotra Committee in 1993. Malhotra Committee gave its recommendations in 1994. One major recommendation was opening up of the sector to private players and also allowing foreign participation, with adequate regulation in place.

In 1999, Insurance Regulatory Development Authority of India (IRDA) was set up as the separate regulator for the insurance market. Also, the private players were allowed to enter the market. At present, there are 23 private life insurance companies along with the incumbent state veteran LIC, which makes it a total of 24.

**Corresponding author; Professor, Department of Management, Delhi Technological University, New Delhi, Delhi, India. (Email: bhanumurthykv@yahoo.com)*

***Assistant Professor, Department of Commerce, Government College, Rithoj, Gurugram, Gurugram, Haryana, India. (Email: manishachoudharydr2017@gmail.com)*

The way this market has behaved in the post-liberalisation period is really interesting to study. Liberalisation or reforms implemented in 1999 brought new hopes to improve the performance of this market. Here, it is pertinent to mention that market performance of life insurance is measured through two parameters- life insurance penetration and life insurance density. Life insurance penetration is expressed as a percentage of life insurance premium to Gross Domestic Product (GDP) of the country. Life insurance density is the per capita insurance. It was felt that by introducing competition, customers will get better products, better prices and the overall market performance (life insurance penetration and density) would go up.

This paper focuses on the impact of liberalisation on life insurance market. It has been 20 years now that the major reforms were introduced. Also, IRDA (now renamed as IRDAI), keeps bringing in necessary amendments and reforms from time to time keeping in view the changing national and international environment. Whether this entire reform process is able to yield the desired results is an important question. Through the analysis of this market over this 20 year period we intend to assess the efficacy of these reforms and the performance of Indian life insurance market in the post-reform period.

1.1 Malhotra committee: Major recommendations

The Malhotra Committee submitted its report in 1994. As per the Law Commission of India (2003) Report, some of the major recommendations made by it were as under:-

- (a) “the establishment of an independent regulatory authority (akin to Securities and Exchange Board of India);
- (b) allowing private sector to enter the insurance field;
- (c) improvement of the commission structure for agents to make it effective instrument for procuring business specially rural, personal and non-obligatory lines of business;
- (d) insurance plans for economically backward sections, appointment of institutional agents;
- (e) marketing of life insurance to relatively weaker sections of the society and specified proportion of business in rural areas;
- (f) provisions for co-operative societies for transacting life insurance business in states.”

2.0 Literature Review

The literature review is focused on the studies that measure the impact of liberalisation on the life insurance market.

Gulati and Jain (2011) revealed that private sector has induced competition but is unable to affect the performance of LIC.

Bodla and Chaudhary (2012) studied the reasons why the private sector after initially capturing a significant market share is now struggling for a regular growth in business and market share.

Shah et al. (2011) recognized profitability as the biggest challenge for the industry. Private life insurers had accumulated losses of over 16,000 crores till March 2010.

Jain (2013) found that after liberalization, the life insurance industry of India witnessed marvelous growth but this growth declined after economic crisis in 2008.

Ansari and Fola (2014) did not find a significant difference in the new business premium of private and public life insurance companies.

Kulkarni (2017) through an analysis of the Indian life insurance sector revealed that after an initial growth in business (mainly led by ULIPs), the growth of private sector has slowed down and has been found to be lop-sided.

The above studies reveal that the reforms initiated in 1999 definitely led to increased competition and expansion of market but even now, the market hasn't realised its full potential. So, we want to contribute to the knowledge of impact of liberalisation on life insurance market by studying the impact of reforms over the entire 20 year period (2001-2020).

3.0 Objectives

The objectives of this paper are to study the impact of opening up of the life insurance market and the emerging changes. These objectives are given below:

- a) To study the density and penetration of life insurance in the post reform period.
- b) To look at growth profile of LIC and private insurers.
- c) To analyse the network of life insurance business – area wise spread of offices.
- d) To study the pattern of growth of Micro-insurance business.
- e) To study the growth of Agent base of LIC and private insurers.
- f) To study the growth of life insurance products.
- g) To analyse the growth pattern of Surplus/deficit of LIC and private insurers.

4.0 Data and Methodology

4.1 Data

To study the various indicators in line with the objectives, secondary data has been used. This data is obtained from the IRDAI website through the Handbook on Indian Insurance Statistics 2007-08, 2011-12, 2012-13, 2015-16 and 2018-19. The insurance Annual Reports 2001-02 to 2019-20 are also referred to fill some data gaps. The latest data released by IRDAI through its Handbook of Statistics on 12th March, 2021 has also been incorporated to present an upto date analysis.

4.2 Methodology

1. To study the growth patterns of various indicators of life insurance market's performance, semi-log growth equations are used.

Semi-Log Growth Equation

The natural log of each variable of life insurance, like life insurance penetration, density, total premium etc. (Y) is regressed on time (t). Therefore, the regression equation can be written as follows (1), in exponential form:

$$Y = e^{\alpha + \beta t} \quad \dots (1)$$

Taking log of both sides and adding an error term;

$$\ln Y = \alpha + \beta t + \mu t \quad \dots (2)$$

Where,

Ln Y = Natural log of variable Y

α = intercept term

β = slope of the regression equation (instant growth rate)

t = time (2000-2001 to 2017-2018)

μt = error term

2. To study the growth pattern of surplus/deficit of LIC and private players, a set of descriptive statistics are used.

5.0 Data Analysis and Interpretation

5.1 Life insurance penetration and density

As discussed in the introductory section, life insurance penetration and life insurance density are two accepted parameters to measure the performance of life insurance market. Growth of these two parameters is shown in Table 1.

Table 1: Life Insurance Density and Penetration

| Indicator | Period | Growth | Std. Error | t Stat | P-value |
|----------------------------|-----------|--------|------------|--------|-------------|
| Life Insurance Density | 2001-2019 | 0.09 | 0.014 | 6.63 | 4.26E-06*** |
| Life Insurance Penetration | 2001-2019 | 0.00 | 0.010 | 0.31 | 0.76 |
| * Significant at 10% | | | | | |
| ** Significant at 5% | | | | | |
| *** Significant at 1% | | | | | |

Source: Authors' Estimation

After the coming of private players and liberalisation, there is a statistically significant growth of 9% per annum in the life insurance density over the period 2001 to 2019. However, if we see the growth rate of life insurance penetration from 2001 to 2019, there is no growth in the life insurance penetration, although the result is not statistically significant. This result points towards the unsatisfactory performance of life insurance market.

5.2 Growth profile: LIC vs private insurers

After looking at the overall market performance, now we wish to see the growth profile of LIC and the private players. The growth profile has been measured through three indicators- total premium, new business premium and number of individual new policies issued. These results are presented in Table 2.

Table 2: Growth Profile in Life Insurance Business

| Indicator | Period | Entity | Growth | Std. Error | t Stat | P-value |
|--|-----------|---------|--------|------------|--------|-------------|
| Total Premium | 2001-2020 | LIC | 0.11 | 0.01 | 16.24 | 3.38E-12*** |
| | | Private | 0.36 | 0.06 | 6.01 | 0.00*** |
| New Business Premium | 2001-2020 | LIC | 0.13 | 0.01 | 12.83 | 1.69E-10*** |
| | | Private | 0.31 | 0.05 | 5.41 | 0.00*** |
| Number of Individual New Policies Issued | 2003-2020 | LIC | -0.02 | 0.01 | -2.09 | 0.05** |
| | | Private | 0.06 | 0.03 | 2.09 | 0.05** |
| * Significant at 10% | | | | | | |
| ** Significant at 5% | | | | | | |
| *** Significant at 1% | | | | | | |

Source: Authors' Estimation

Total premium of LIC has shown a statistically significant growth of 11% per annum over the period 2001 to 2020. Over the same period there is a statistically significant growth in the total premium of private players at the rate of 36% per annum. This shows that private insurers have been successful in expanding the market.

The second comparison is between the growth of new business premium of LIC and the private players. New business premium is the sum of premium of the new single premium policies

and the first year premium of other policies. The new business premium of LIC has risen at a statistically significant rate of 13% per annum over the period 2001 to 2020. Over the same period, the new business premium of private players has risen at a statistically significant rate of 31% per annum. This shows that the market has expanded over this 20 year period.

In terms of the individual new policies issued, LIC has shown a statistically significant negative growth of 2% per annum over the period 2003 to 2020. Over the same period, private players have exhibited a statistically significant growth of 6% per annum in the number of individual new policies issued. This also points towards the expansion of the market.

But this comparison between the growth rates of private players and LIC should be read with caution. It should in no way be believed that private sector has outperformed LIC just going by the face value of these results. Private sector is showing a much higher growth in certain cases, just because it started from a very low base. LIC began with a large base in 2001 whereas the private players started from scratch. Secondly, it is a comparison of one company (LIC) with the entire private sector (comprising of 23 companies). This shows that these 23 private insurers even if taken together are not able to give a tough fight to the state veteran LIC.

6.0 Network of Life Insurance Business

Network of life insurance business as reflected in geographical spread of life insurance offices is shown in Table 3.

Table 3: No. of offices_Area-wise

| <i>Indicator</i> | <i>Period</i> | <i>Entity</i> | <i>Growth</i> | <i>Std. Error</i> | <i>t Stat</i> | <i>P-value</i> |
|---------------------------------------|------------------|----------------|---------------|-------------------|---------------|--------------------|
| No. of Offices (metro + urban) | 2007-2020 | LIC | 0.08 | 0.01 | 8.72 | 1.54E-06*** |
| | | Private | 0.0913 | 0.01 | 8.10 | 3.29E-06*** |
| No. of offices (unclassified) | 2007-2015 | LIC | 0.1065 | 0.01 | 8.37 | 0.01*** |
| | | Private | 0.0169 | 0.05 | 0.32 | 0.76 |
| Semi-urban | 2016-2020 | LIC | -0.004 | 0.00 | -1.05 | 0.37 |
| | | Private | -0.102 | 0.04 | -2.70 | 0.07* |
| Rural | 2016-2020 | LIC | 0.0316 | 0.00 | 14.07 | 0.01*** |
| | | Private | -0.5561 | 0.20 | -2.76 | 0.07* |
| * Significant at 10% | | | | | | |
| ** Significant at 5% | | | | | | |
| *** Significant at 1% | | | | | | |

Source: Authors' Estimation

Before presenting the analysis, the description of the geographic division is called for. So, first it is explained how the areas are divided into various categories. From 2007 to 2015, IRDA has given three-way classification of the area-wise distribution of offices namely, metropolitan, urban and unclassified. Metropolitan cities are those having a population of 10,00,000 or more; urban areas are those which have a population between 100,000 to 9,99,999. It implies that the areas referred to as unclassified had a population of less than 1 lakh, but it is not explicitly stated.

From 2016 onwards, the classification of areas given by IRDA changed to four, namely, metropolitan, urban, semi-urban and rural wherein semi-urban areas are those having a population of 10,000 to 99,999 and rural areas had a population upto 9,999.

6.1 Metropolitan and urban areas

For the purpose of our analysis, we have added the offices in metropolitan and urban areas (which represent a population of more than 1,00,000) and seen their growth rate for LIC and private

insurers. In case of LIC, there is a statistically significant growth of 8% per annum in the offices situated in metropolitan and urban areas over the period 2007 to 2020. Over the same period, there is a statistically significant growth of 9% in the offices of private insurers situated in metropolitan and urban areas.

6.2 Unclassified areas

The second analysis is done for the offices situated in unclassified areas which represent a population of less than 1,00,000. From 2007 to 2015, the number of offices of LIC situated in these areas with a population upto 99,999 have risen at a statistically significant rate of 10% per annum. However, the private companies' offices in these areas have grown at a meagre 1.6% per annum over the same period and this is also not statistically significant. Thus, it can be seen that the private life insurers do not have more offices in less populated areas and their offices are majorly confined to metropolitan and urban areas.

6.3 Semi-urban areas

The third analysis is for the offices situated in semi-urban areas starting from the year when IRDA started releasing the data for this category i.e., 2016. From 2016 to 2020, the number of offices of LIC situated in semi-urban areas have shown a miniscule negative growth of 0.4 % per annum though it is not statistically significant. Over the same period, the number of offices of private insurers situated in semi-urban areas have fallen at a statistically significant rate of 10% per annum.

6.4 Rural areas

The fourth analysis is for the offices situated in rural areas, again starting from the year 2016, which coincides with the release of separate data for these areas by IRDA. LIC has reported a statistically significant increase of 3% per annum in the number of offices situated in rural areas from 2016 to 2020. The private insurers have however shown a decline in the number of offices situated in rural areas over the same period, showing a statistically significant negative growth rate of 55.6% per annum which is quite high and points towards the dwindling presence of private life insurance offices in rural areas.

So, we also see the dynamics in the form of changing geographic spread of offices.

7.0 Micro-insurance Business

IRDA notified the micro insurance guidelines on 10th November, 2005 which were revised in 2015. The main idea was to reach out to the poor and economically weaker sections through simpler and need based insurance products, including life insurance. Micro-insurance products have a sum assured of upto Rs 50,000. Table 4 reflects the performance of life insurers in terms of micro-insurance business.

Table 4: Micro Insurance Business

| <i>Indicator</i> | <i>Period</i> | <i>Entity</i> | <i>Growth</i> | <i>Std. Error</i> | <i>t Stat</i> | <i>P-value</i> |
|---|------------------|----------------|---------------|-------------------|---------------|----------------|
| Micro insurance (no. of lives covered) | 2009-2020 | LIC | -0.093 | 0.086 | -1.08 | 0.30 |
| | | Private | 0.379 | 0.074 | 5.06 | 0.00*** |
| Micro insurance (premium) | 2009-2020 | LIC | -0.050 | 0.071 | -0.71 | 0.49 |
| | | Private | 0.470 | 0.093 | 5.08 | 0.00*** |
| * Significant at 10% ** Significant at 5% *** Significant at 1% | | | | | | |

Source: Authors' Estimation

There are two types of micro-insurance products- individual and group. IRDA releases the data for both. In case of group insurance schemes, number of lives covered is also provided. The performance of micro insurance business is analysed through studying the growth of number of lives covered and the premium in this segment. To calculate the total number of lives covered, the individual policies and the lives covered through group insurance have been added. Similarly, the premium on individual policies and group policies is added to get the total premium from micro-insurance business.

LIC has shown a decline of 9% per annum in the number of lives covered through micro-insurance from 2009 to 2020, though it is not statistically significant. Over the same period, private life insurers have also reported a statistically significant growth of 37.9% per annum in terms of the number of lives covered through micro-insurance. In terms of premium underwritten through micro-insurance, LIC has again shown a negative growth of 5% per annum from 2009 to 2020, though it is not statistically significant. Over the same period, there is a statistically significant growth of 47% per annum in the premium underwritten by private insurers through micro-insurance business.

7.1 Agent-base

Table 5 depicts the growth of agent base of LIC and private insurers across two categories- individual and corporate agents. Individual agents represent the traditional channel of distribution whereas the Corporate agents represent the newer ways of selling life insurance. Corporate agents include banks (popular as bancassurance) and non-banking institutions.

Individual agents of LIC have grown at a small but statistically significant rate of 1% per annum over the period 2002 to 2020. Over the same period, the growth rate of number of individual agents of private insurers is 13.4% per annum and is statistically significant. The number of corporate agents (Banks and others) of LIC has declined at a very small rate of 0.6% per annum from 2002 to 2020 but this decline is not statistically significant.

Table 5: Agent Base

| <i>Indicator</i> | <i>Period</i> | <i>Entity</i> | <i>Growth</i> | <i>Std. Error</i> | <i>t Stat</i> | <i>P-value</i> |
|--------------------------|------------------|----------------|---------------|-------------------|---------------|----------------|
| Individual Agents | 2002-2020 | LIC | 0.0104 | 0.0049 | 2.12 | 0.05** |
| | | Private | 0.1343 | 0.0331 | 4.05 | 0.01*** |
| Corporate Agents | 2002-2020 | LIC | -0.006 | 0.0333 | -0.19 | 0.85 |
| | | Private | -0.007 | 0.0341 | -0.21 | 0.83 |
| * Significant at 10% | | | | | | |
| ** Significant at 5% | | | | | | |
| *** Significant at 1% | | | | | | |

Source: Authors' Estimation

On the other hand, the number of corporate agents of private insurers has shown a decline of 0.7% per annum from 2002 to 2018, but again it is not statistically significant. This shows some underlying trend which is not statistically significant. It gives a hint that the corporate agency channel is less preferred by the insurers (both LIC and private players) and the traditional channel of individual agents still enjoys greater popularity.

7.2 Life insurance products

Life insurance products have undergone a lot of variation with the coming of private players. Introduction of Unit Linked Insurance Plans (ULIPs) is largely attributed to the private insurers and

also seen as a major contributor to their initial success. However, lately it is seen that ULIPs are becoming less popular. So, the total premium of life insurers can be divided into two broad categories- non-linked (traditional products not linked to market performance) and linked (ULIPs which are linked to market performance).

Table 6: Life Insurance Products

| <i>Indicator</i> | <i>Period</i> | <i>Entity</i> | <i>Growth</i> | <i>Std. Error</i> | <i>t Stat</i> | <i>P-value</i> |
|---------------------------|------------------|----------------|---------------|-------------------|---------------|---------------------|
| Non-Linked Premium | 2007-2020 | LIC | 0.105 | 0.0041 | 25.71 | 7.307E-12*** |
| | | Private | 0.243 | 0.0148 | 16.42 | 1.373E-09*** |
| Linked Premium | 2007-2020 | LIC | -0.388 | 0.0354 | -10.96 | 1.321E-07*** |
| | | Private | 0.039 | 0.021 | 1.91 | 0.08* |

* Significant at 10%
 ** Significant at 5%
 *** Significant at 1%

Source: Authors' Estimation

As shown in Table 6, over the period 2007 to 2020, there is a statistically significant growth of 10.5% per annum in the non-linked premium of LIC. Over the same period, there is a statistically significant growth of 24.3% per annum in the non-linked premium of private insurers. In the linked business category, the premium of LIC has fallen at a statistically significant rate of 38.8% per annum over the period 2007 to 2020. Over the same period, private insurers have reported a statistically significant 3.9% per annum growth in the linked premium. This is again an interesting result which shows that LIC has gradually moved out of the ULIP business as it was never its stronghold. Even the private players, who were the leaders in this category have reported a much lower growth as compared to the growth of their non-linked business. So, the initial charm of ULIPs generated by promises of higher return seems to be fading and there is a general trend of decline in the linked business, though more pronounced in case of LIC. So, we have also witnessed changes or dynamics in terms of popularity of different types of products.

7.3 Surplus/Deficiency

Table 7 shows the year-wise surplus/deficit of LIC and the private insurers from 2002 to 2020. Surplus reflected through the Policyholders' accounts has been taken as measure of profitability to have comparable results. LIC has shown the highest surplus in the year 2002 whereas private sector has shown the highest surplus in 2018.

Table 7: Surplus/Deficit Indices

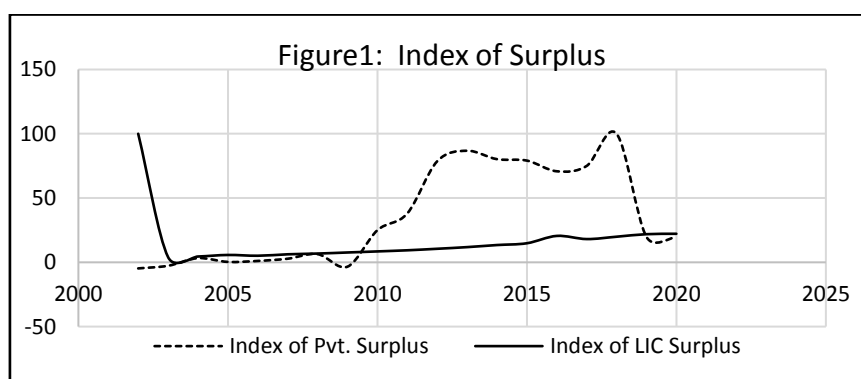
| Year | Pvt. Surplus (in Lakhs) | LIC Surplus (in Lakhs) | Index of Pvt. Surplus | Index of LIC Surplus |
|-------------|------------------------------------|-----------------------------------|----------------------------------|---------------------------------|
| 2002 | -33755.00 | 1215687 | -4.73 | 100 |
| 2003 | -19134.00 | 48810 | -2.68 | 4.02 |
| 2004 | 23095.00 | 54813 | 3.24 | 4.51 |
| 2005 | 2382.44 | 69660.17 | 0.33 | 5.73 |
| 2006 | 7670.89 | 62177 | 1.08 | 5.11 |
| 2007 | 19964.02 | 75780.57 | 2.80 | 6.23 |
| 2008 | 45465.10 | 82958.97 | 6.37 | 6.82 |
| 2009 | -24098.00 | 92912 | -3.38 | 7.64 |

| | | | | |
|------|------------------|-----------|------------|-------|
| 2010 | 178089.38 | 103092 | 24.96 | 8.48 |
| 2011 | 271141.27 | 113761.71 | 38.01 | 9.36 |
| 2012 | 560655.61 | 128122.9 | 78.59 | 10.54 |
| 2013 | 619219.09 | 143638.18 | 86.80 | 11.82 |
| 2014 | 572383.83 | 163426.52 | 80.23 | 13.44 |
| 2015 | 564514.35 | 180305.19 | 79.13 | 14.83 |
| 2016 | 505222.43 | 249703.48 | 70.82 | 20.54 |
| 2017 | 534969.86 | 220033.36 | 74.99 | 18.10 |
| 2018 | 713403.61 | 242182.26 | 100 | 19.92 |
| 2019 | 141019.77 | 266060.00 | 19.77 | 21.89 |
| 2020 | 139003.77 | 269774.00 | 19.48 | 22.19 |

Source: Authors' estimation

LIC has never reported a deficit over this entire period whereas in case of private insurers, there are three years viz 2002, 2003 and 2009, where a deficit is reported reflected through the negative sign. Index of surplus/deficit is constructed taking the highest surplus as the base. For LIC, the base year is 2002 (year with highest surplus), thus the index for this year is 100. After an initial fall of 96 basis points in 2003, LIC gradually started picking up. After constant improvement till 2016, there was a slight dip in 2017 but thereafter it again picked up and has shown an impressive growth over the last three years i.e., 2018 to 2020. Private sector on the other hand, after initial ups and downs finally started showing a consistent upward trend in its surplus since 2010 till 2014, dipped in 2015 and 2016, then rose in 2017 and reached the maximum in 2018. After that, there is again a drastic fall of around 80 basis points during the last two years. It shows that LIC is more consistent in maintaining a positive surplus, which is not true for private insurers. These ups and downs in surplus also reflect the dynamics that have emerged through liberalisation. This is clearly reflected in Figure 1 given below.

Figure 1: Index of Surplus



Source: Authors' own

Table 8 reflects certain descriptive statistics calculated using surplus of LIC and Private sector. The last column shows the ratio of private to LIC for each statistic and its interpretation is given below. The mean surplus of private players is 27% more than LIC. But here it is important to mention that LIC is one company and private sector comprises of 23 companies. The median surplus of private players is also 10% higher than that of LIC. Half of the private companies have a surplus more than 141019.77 which is 10% better than LIC. Standard deviation reflects the volatility. Volatility of surplus is no different between private insurers and LIC. But if we look at the coefficient

of variation, private sector is 18% less volatile than LIC because there is a spread in case of private companies because of which the volatility goes down.

Table 8: Surplus (LIC vs Private)

| | Private Surplus | LIC Surplus | Ratio of Private to LIC in %age terms |
|---------------------------------|-----------------|----------------|---------------------------------------|
| Mean | 253748.07 | 199099.91 | 127.45 |
| Standard Error | 62141.89 | 59059.47 | 105.22 |
| Median | 141019.77 | 128122.90 | 110.07 |
| Standard Deviation | 270870.21 | 257434.25 | 105.22 |
| Sample Variance | 73370668379.01 | 66272392187.91 | 110.71 |
| Kurtosis | -1.62 | 15.34 | -10.58 |
| Skewness | 0.44 | 3.76 | 11.76 |
| Range | 747158.61 | 1166877.00 | 64.03 |
| Minimum | -33755.00 | 48810.00 | -69.16 |
| Maximum | 713403.61 | 1215687.00 | 58.68 |
| Sum | 4821213.42 | 3782898.31 | 127.45 |
| Coefficient of Variation | 106.75 | 129.30 | 82.56 |

Source: Authors' estimation

Also, since the mean is higher in case of private players, their coefficient of variation is less despite of the standard deviation being almost the same. Kurtosis in case of private players is negative or leptokurtic which shows that all the firms are getting average surplus over these years and in case of LIC, it is peaked which shows that most of the values are around the mean and high. Skewness is more in case of LIC which shows that LIC got an initial shock and its surplus fell down drastically but then it is rising consistently in the later years. It means that the dynamics of competition have gone down in favour of LIC whereas the private sector is variable. Minimum surplus of private players is much lower than LIC and is also negative (showing deficit). Maximum value of LIC surplus is also much higher (41% more) than private players. Therefore, the range of surplus is also 36% less in case of private players. Total surplus of private players over this entire period is 27.45% more than that of LIC because private sector represents 23 companies.

8.0 Contribution

This paper has contributed to the existing knowledge by providing an analysis of the growth of Indian life insurance market over the entire post reform period (2001 to 2020) and bringing out the emerging dynamics through various indicators- geographical spread, growth profile, products, channels of distribution, micro-insurance and surplus.

9.0 Conclusion

Liberalisation of life insurance market ignited great hopes for improving this market by inducing competition. But it is clearly seen that there is negligible rise in life insurance penetration over the 20 year post-reform period, though density has risen at 9% per annum. LIC still remains the dominant firm in terms of total premium, new business premium and number of new policies issued. The growth rates across these categories are higher in case of private sector but this is primarily due to starting from a low base. Most of the private insurers' offices are concentrated in urban and metropolitan areas whereas LIC's offices are also growing in semi-urban and rural areas. Individual

agents still enjoy greater popularity as a channel of distribution in comparison to the corporate agents. Linked business of LIC has shown a drastic fall and even in case of private players, it is receding. Private insurers have shown stupendous growth (much higher than LIC) in the micro-insurance business over the past few years which shows that private sector is trying to carve a niche as it is unable to directly compete with LIC. In terms of surplus, after an initial shock due to entry of private players, LIC has recovered and adjusted itself to show a consistent rise and even during the 2020 crisis, it has shown an impressive performance. Therefore, LIC has emerged as a hard rock and a seasoned player over this period but the private players are still struggling to have consistent growth. Competition has definitely resulted in market expansion and the market has become more dynamic- in terms of products, distribution channels, geographical spread, surplus and growth pattern. On the whole, liberalisation has partially succeeded in improving the market.

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An Understanding of the Emerging Dynamics in the Luxury Ecosystem

Raghupriya A.* and Thiruchelvi A.**

ABSTRACT

The year 2020 is the most challenging period in the history marked with the intense humanitarian crisis topped with the deepening economic crisis. COVID19 pandemic has affected the consumers everyday aspects of life. Like many sectors, the luxury fashion sector is also facing unprecedented shift in their ecosystem. According to McKinsey GFI analysis(2021), the fashion companies will post a 90% decline in economic profit in 2020 after a rise of 9% in 2019. For the luxury industry the pandemic will accelerate the revamping trends that were in action prior to the crisis such as more digitization, customer empowerment and social responsibilities. Currently a lot of research related to the luxury fashion industry is available, but through this study we aim to collate our understanding of the emerging dynamics in the luxury fashion industry and provide an outline of the revamped luxury ecosystem and recommend business strategies with focus on agile, flexible, ethical, culture-sensitive, omni-channel presence and enhanced use of data and analytics and customer-centric. Though there is no one strategy that fits for the whole sector, the business should tailor their strategies based on their operational resilience and capabilities for being relevant and to emerge from this unexpected crisis..

Keywords: *Luxury industry, COVID19, Consumption trends, Digitization, Data analytic, Agile SCM.*

1.0 Introduction

The concept of luxury has been continuously evolving. “What one generation sees as a luxury, the next sees as a necessity.” (Anthony Crosland). The global personal luxury industry has seen a steady trajectory at a pace of 6% CAGR since 1990’s and was worth over \$308 billion as of 2019 with China accounting for 90% of the market’s growth in 2019 (Bain, 2020). The Covid-19 pandemic has hit all the industries and luxury is no exception. With social distancing, rise in unemployment and consumers becoming more conscious than conspicuous, the personal luxury market witnessed a decline of 23% in 2020, the largest since recorded (Bain, 2020), with some iconic luxury retailers becoming bankrupt. The companies that have already experiencing distress have had a harder impact because of the pandemic. The survey of GLEN members by the Luxury Institute highlights the current luxury environment and predicts varying degrees of projections for 2021 across the categories with rise in sectors such as consumer wellness and technology, home appliances; fall for retail and flat level for travel and hospitality, automotive and fashion apparels and accessories. Relevance being the new legacy, the future fashion industry should focus on digitization and sustainability (BoF, McKinsey, 2021). The luxury retailers must be ready to embrace the disruptive technologies, adapt the omni-channel strategy, understand the changing roles of consumers and align their business models and value proposition according to the changing ecosystem.

Currently a lot of research are available for both the impact of pandemic across various fields and also the trends in luxury industry. Through this conceptual paper, we present our understanding of the luxury market scenario by collating secondary qualitative data obtained from the relevant journals and reports from global consulting firms.

*Corresponding author; PhD scholar, Department of Management Studies, College of Engineering Guindy, Chennai, Tamil Nadu, India. (Email: raghupriya28.sa@gmail.com)

**Assistant Professor, Department of Management Studies, College of Engineering Guindy, Chennai, India. (Email: thiruchelvi_y@annauniv.edu)

The aim of this article to present the new age luxury ecosystem and propose the need for business to strategize on the relevant trends which serve as silver linings to gain brand momentum to revamp from the pandemic impact.

2.0 The Theoretical Foundation

In Emergency Committee meeting, the Director General of WHO stated that "The COVID pandemic is an unanticipated rare health crisis, the effects of which will be felt for decades to come." This immense and prolonged epidemic led to unexpected and unprepared economic shock with different industries affected in varying degrees in three major areas: financial, supply value chain, consumer market, each of which is inter-linked.

2.1 The impact of pandemic on the consumer behavior

The Covid-19 has led to a perceived anxiety related to health and income patterns which has led to a decrease in the quality of life and emotional state of the consumers(Lai, 2020). This resulted to broader repercussions of fear and this is reflected in their uncertainty in spending decisions(Loxton, M et al, 2020). There is a shift in buying behavior with more focus on essential and safety items than on emotional and hedonistic goods as anticipated by the Maslow's Hierarchy of needs. These behaviors were exhibited even during the past crisis and was reflected in the form of panic buying, herd mentality and discretionary spending(Loxton, M et al, 2020). In the time of crisis, customers tend to closely watch how companies cope throughout in terms of employees and social responsibility(Buheji and Ahmed, 2020). The 2020 Edelman Trust Barometer signifies the fact that during the crisis brands can either build a new level of connection with customers or lose the relationship forever. There has been a slow transformation by the sector but a growing demand for digital presence by the luxury consumers even before the crisis(Kim and Ko, 2012). This crisis will only increase the customers expectations as they are more addicted to convenience and omni-channel experience(Klaus and Zaichkowsky, 2020) which has led to certain industries adapting the disruptive innovative technology to enhance the customer experience(Klaus, 2020a). Though the pandemic has affected the luxury sector economically, it provides an unique opportunity to the industry if they focus on employment, emotions and expectations of the consumers(Klaus et al, 2020)

2.2 The luxury industry

The notion of luxury has been evolving over a longer term on the basics of several value terms related to the consumers' perspectives(Cabigiosu, 2020). Traditionally, luxury was visioned with elegant shops and luxurious aesthetics with digitization and customization never a part of brand strategy. Some of the players in this sector were hesitant about introducing customization owing to the fear of brand dilution, it is the consumer who prefer to experience engagement, entertainment and interactive shopping though online. The study by Yoo, J and Park, M (2016) adopted the "Consumer-Perceived Value Tool" (CPVT) identified that through mass customization the luxury brands could build a better customer relationships by providing hedonistic, utilitarian, uniqueness, self-expressive, and creative achievement value with no negative impacts on their brand image. Also the branding literature states that though there have been clear distinction between luxury and mass products in the past, the boundaries are getting blurred since the recent past and every product has a piece of luxury in it. The decrease in household size, increased income and change in lifestyle influenced by education, technology and travel has resulted in consumers 'trading up' and the brands 'trading down' to welcome and retain the new affordable consumers. Even before the crisis the luxury sector was going through the changes but was slow and not able to fulfill customers' desire to buy luxury products and services online. Even though, McKinsey report(2018) states that by 2025, luxury good purchase online will be 20% and influence by online channels on all the purchases will be 80%, it has been

identified that the online channels of some luxury brands do not deliver the experiences that the customers desire. The epidemic has now defined digitization as the strategy for the future and luxury brands should embrace and enhance their digital presence and shopping facilities for customers (Bain, 2020). The retailers need to adapt the online technology to enhance their supply chains and can use the communication platform to show how the brands act and care for the society, this would lead to an increased brand loyalty (Sender, T. 2020). In an attempt to handle the crisis and to recover from heavy losses, the brands are developing strategies to emotionally connect with their customers (Siddiqui, B. & Ganjoo, M. 2020) and communicating the responsible actions, product innovations and the price adjustments to gain the brand trustworthiness and loyalty (Xie, J. & Youn, C. 2020). The performance analysis in the second quarter of 2020 signifies that the luxury brands are open to more digital marketing and the level of online sales will rise in the future (Peiyu, W. 2020)

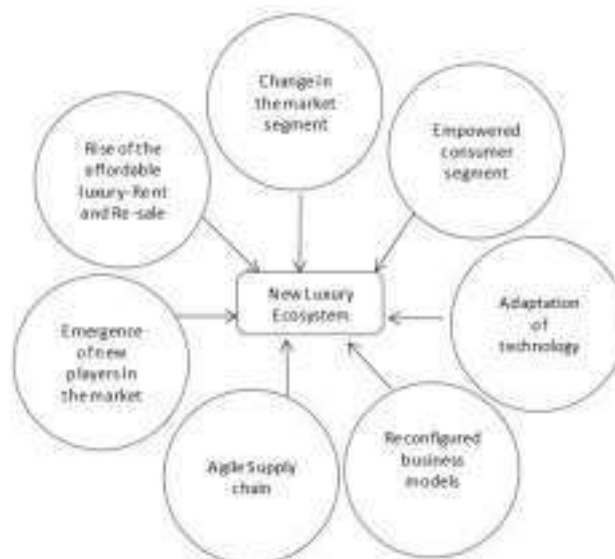
The luxury industry had witnessed some economic downturns in the past starting from the recession due to World War II, 1990s Gulf oil crisis, the dot.com, 9/11 and the 2008 recession. Despite the fact that there was a decline in the luxury spending during crisis, the trajectory is not linear or uniform and each of these times, the industry has not only emerged but strengthened by re-aligning and re-focusing on the outstanding quality, fostering customer experience, improving marketing channels, product innovation and capital investment (Reyneke, M. et al, 2020).

Recently the luxury market is gaining more attention among the scholars and lots of articles related to various evolving concepts are available. Even as we present this study we expect some evolution in the industry. Based on the existing literature, we have attempted to represent a model of the new luxury ecosystem of the millennials marked by more empowered and engaged consumers who prefer casual than glam, online than offline, product value than price, sustainability and responsibility, local culture and heritage. We recommend the significance of digitization, co-creation and sustainability, measurement of brand value equity considering the whole omni-channel as part of business strategy to sustain in an era of “Luxury 4.0” term from ‘The age of digital darwinism’ (McKinsey, 2020)

3.0 The new Luxury Ecosystem

In this study, we have presented a framework for the new luxury ecosystem and we will discuss the each arena in detail in the following sections.

Figure 1: The New Luxury Ecosystem



3.1 Change in the market segment

The UN's COVID-19 Immediate Socio-Economic Response framework warns that “ Even though the global health is mainly affected by COVID-19 but also affects the core society and economy.” The impact varies from developed to developing countries. There is a pressing need to focus on the social consequences related to job losses, depression, stress, domestic violence and so forth.(Aneja, R. et Ahuja, V, 2020)This results in immediate focus on SDGs by the governments and UN, as the development trajectories mainly depends on the the countries' measures. The UN has extended its full capacity to its 131 countries and supporting 162 territories in developing mitigation plans.

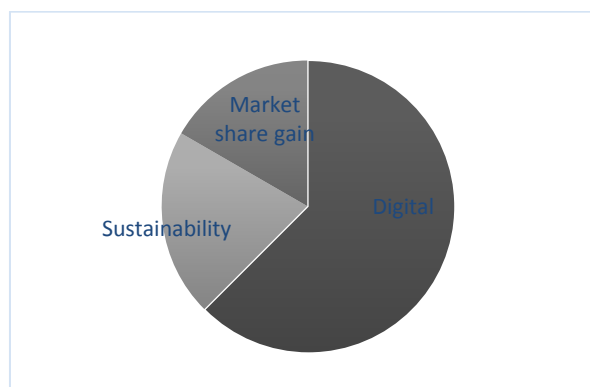
In the economy sector the effect on migrants, job losses and poverty varies disproportionately globally. Like many sectors, the luxury is also facing unexpected economic crisis. In the BoF and McKinsey 'State of Fashion survey 2021',the business executives had a divided outlook on the pandemic recovery across the sector and geography with 45% of the respondents stating that COVID19 and the economic crisis being the biggest challenge in 2021.Increased unemployment, inequality, lockdown and travel restrictions which has heavily influenced consumers psychologically resulting in reduced buying behavior and constrained spending power leading to diminished demand. Owing to which the global sales is expected to go below 2019 level by as much as 15%.

The recovery timeline is expected to vary between third-quarter of 2022 to third-quarter of 2023 based on government trade and travel regulations, improvement in the geographical markets led by China followed by Europe and USA.

3.2 Adaptation of technology

According to 'The age of digital darwinism', the digital trajectory leads to an emergence of Luxury4.0.The pandemic has led to the lackadaisical move towards online innovation to a sprint as brands started focusing on their only source of revenue: e-commerce. The global fashion e-commerce market is expected to grow from \$549.55bn in 2020 to \$668.1bn in 2021 at a CAGR of 21.6% mainly because the sector has adapted the new normal in their operations and resuming from the pandemic impact. This growth is also attributed to the rise in use of internet and smartphones(Digital 2019 Global Overview Report).Digital is seen by a third of executives as a silver lining that presents the biggest opportunity in 202(BoF, McKinsey,2021)

Figure 2: Top Three Answers of the Fashion Executives



(Note:SOURCE: BoF McKinsey State of Fashion 2021 Survey)

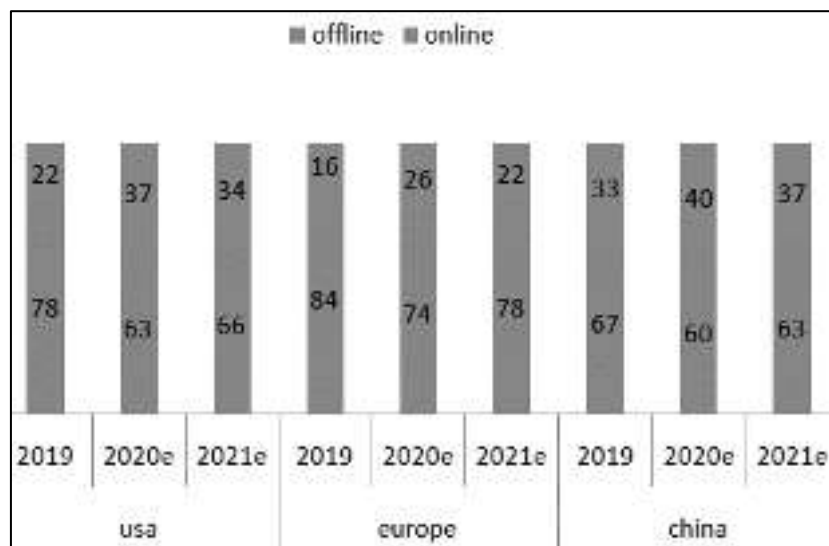
It is expected that by 2025,one-fifth of the personal luxury sector will happen online with variations in purchase from product to product. Luxury shoppers of all age groups are embracing digital as a consumption channel moving from laptop to smart phones. The main challenge lies in how

the marketers could translate the art of story-telling through a smart device. The acceptance of digital reality is happening in the luxury sector which is seen through the change in brands promotion investments and adopting of new technologies such as AI, scanners, VR outfits and automation tools which provides highly relevant and personal consumer experience(Fashion E-commerce Global Market Report 2021, Business Research Company)Fashion shows, 3D virtual exhibitions and interactions, conversational bots serve as a powerful tool for digital communication. The e-luxury business models are evolving with e-retailers(Matches Fashion),marketplaces(Farfetch) and tech companies(Stitch Fix)(McKinsey, 2020).The most forward looking brands use consumer data and adapt AI in enhancing the front and back-end operations. According to CEO, CFDA; this pandemic has also introduced Phygital as the future of fashion weeks which is evident from the virtual fashion shows organized in the main fashion cities with live audiences owing to the travel ban of luxury tourists. Though this virtual fashion weeks worked for lot of brands, some still need a physical presence.

Apart from creativity, digital storytelling and omni-channel, there is a rise in the use of influencer marketing which has proved itself more important than ever in this year. Still, measuring the value of brand visibility across social media is a primary challenge for brands to estimate ROI. The Media Impact Value is a key global strategy to determine brand's ROI and rank among competitors. According to Launchmetrics, brands make hefty investments in the following channels: Influencers, Celebrities, Partners and Media(Paid, Earned and Own).

As online penetration accelerates and shoppers demand ever-more sophisticated digital interactions, fashion players must optimise the online experience and channel mix while finding persuasive ways to integrate the human touch.

Figure 3: Expected Share of Online Sales



(Note: SOURCE: BoF McKinsey State of Fashion 2021 Survey)

3.3 Empowered consumer segment

The luxury industry is witnessing a trend in their consumer segment: demographically(millennials, GenZ, HENRYs),geographically(rise in the Asian market), psychologically(social media influencers, KOLs used for digital campaigns) and behaviorally (focus on brand value, sustainability, social ethics, purchase behavior). For the marketers, this pandemic has amplified the need to focus and capitalize on the segment patterns. In the global battle with pandemic, the everyday aspects of the consumers have changed drastically making them a conscious spender

than a conspicuous consumer. There was a slow shift towards digital shopping which has increased to 60% or more during the quarantine (Nielsen research, 2020). Even in a typical brick and mortar market like Hong Kong, the consumers quickly moved to e-commerce apps. In the Asian region, social media also served as a platform for COVID19 updates.

During the crisis, there is an increase in demand for social responsibility and sustainability from the luxury brands and their involvement are being carefully assessed. The top luxury brands are also contributing to the fight against COVID through product or monetary donations. These socially responsible measures by the brands will increase the consumers brand trust, loyalty and emotional bond for a longer time post the turmoil (Bain, 2020) and these are communicated via digital channels (paid, earned and owned). Nearly two-thirds of the consumers expect their brands to be responsible towards their employees during this crisis and state that they would either stop or significantly reduce their purchase with brands mistreating the employees (McKinsey, 2021).

The new age luxury market is dominated by the millennials and Gen Z who will make up for a 40% market share by 2025. There is also a rise in the medium and medium-higher groups (HENRYs-High Earners Not Rich Yet) who are affordable and aspirational and view luxury as an investment. The luxury brands try to attract and retain them through the premium entry products (McKinsey, 2020). The millennial HENRYs especially, are tech-savvy, with better purchasing power and use social media for buying decisions. The BCG study stated, this new segment appreciates collaboration of KOLs and brands, consider re-sale value, focus on 'silent luxury' (craft and heritage rather than glam) and prioritize sustainability (McKinsey, 2020). A study from Nielsen states that nearly three-quarters of the millennial are willing to spend more for products that come from a sustainable and socially responsible brands. With digital presence, sustainability along with process transparency will gain brand trust from consumers. Brands are competing for this new age mindshare and focussing on engaging with influencers who are in line with their brand values. The spike in TikTok popularity during lockdown, has spurred a new thought for luxury to engage with this audience via this channel.

All luxury consumers are going digital, this trend is not just linked with millennials. Baby boomers spend 16.4 hours in the Internet and 75% of them use social media as compared to 17.5 hours and 98% use by the millennials (McKinsey, 2020). With increased online purchase the customer wants to engage via multiple digital points and experience the product customization. In the past 5 years, the number of touch-points influencing consumers purchase journey have become thrice. In case of Chinese luxury consumers the points are estimated to be around 15 (Euromonitor, Forrester and McKinsey, 2020). The customer also expects this continuous and coherent brand relationship via these digital points, even as they travel from one geography to the other. This is still a challenge for brands who are organized around channels and geographies. Daigou, the act of shoppers outside China market buying luxury goods for consumers back home, is an indication of the consumers' willingness towards digital touch points across boundaries. The use of WeChat by Chinese consumers for the entire purchase journey is another example of the rise in digital luxury shopping.

The luxury brands should be willing to accept the concept of co-creation not only in production development but also in brand content generation without affecting the core brand identity. The brands have to develop strategies to make the consumers the brand ambassadors. The digital luxury is turning into a C2C economy with the greater engagement and empowerment of consumers who are not just a purchaser but a creator, meta-voice and a propagator (Liu-Thompkins et al, 2020).

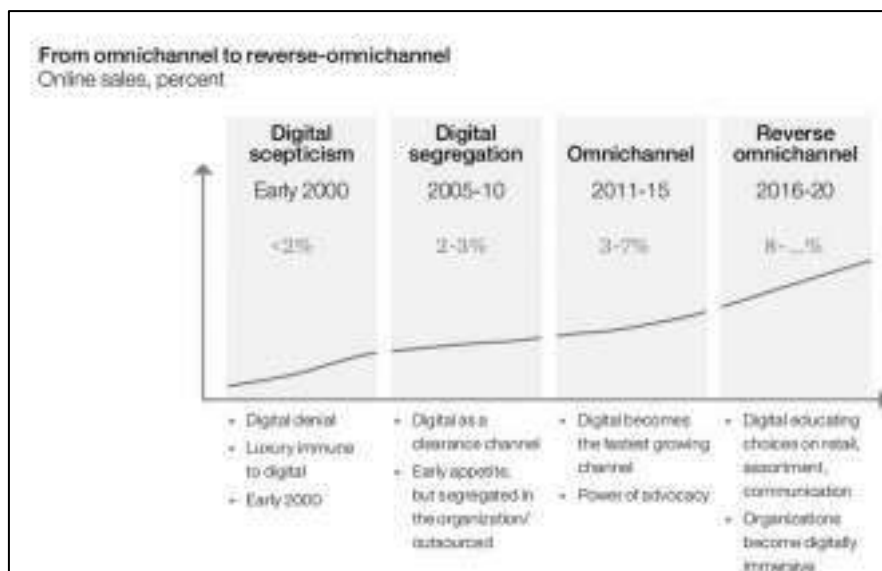
The impact of digital experience makes consumer set expectations on online shopping and also the same in the physical store. It is time for reverse omni-channel where stores are expected to match the level of online experience. Digital is no longer a medium of mere sales or communication but a source of inspiration to re-design the store and re-focus on the customer experience.

Figure 4: Sales Influenced by Online



(Note: SOURCE: Euromonitor, Forrester, McKinsey Annual Reports)

Figure 5: Reverse Omnichannel



(Note: SOURCE: Euromonitor, Forrester, McKinsey Annual Reports)

Another dynamically and fast-growing trend in luxury sector is the “Experiential luxury” which along with social media influencers are gaining momentum. Social distancing and lockdown had made popular brands like Louis Vitton, Saint Laurent, Versace and Burberry to name a few use nostalgic marketing campaigns via social media channels (instagrammable moments) and develop product designs based on nostalgic theme to attract the boomers and the millennials equally.

The lockdown has resulted in revenge spending which is observed in the China market as the situations are settling down. The consumers have started to resume their shopping behaviors with the alleviation of the situation and we foresee a higher spending than before from China, given the fact that traveling is still restricted. With big data and machine learning, the luxury brands can improve the authenticity and customer relationship. In early days, Louis Vitton used to send personalized product suggestions to their customers, the same unique personalized recommendation can now be achieved using Big data analytics and this marks the era of contextual marketing where each customer is unique in each situation.

The new age luxury consumers embrace ethics, crafts, heritage, technology and prefer casual

over glam. This pandemic has created an opportunity for the industry to reconsider 'rest of the world' strategy to focus on other emerging markets than China and focus on engaging and empowering consumers.

3.4 Rise of the affordable luxury- Rent and Re-sale

The re-sale or re-commerce market for the fashion goods were booming even before the pandemic. Consumers started valuing their once purchased luxury items as not only a style factor but a trade-able asset. The online retail site such as The RealReal, Poshmark, Depop and ThredUp are boosting of a growing amount of consumers in this sector which serves as a means of financial security especially during the time of this epidemic. The luxury apparel and accessories market reached \$24 billion in 2019 and is expected to reach \$53 billion by 2023. Even though the millennials and GenZ dominate this sector, Boomers and GenX are also embracing this market as a means to clear-up their closets. The RealReal holds the authenticated designer brands such as Chanel, LV and Valentino. While the ThredUp holds the consignment of around 45,000 brands from Gap to Gucci, the sites like Poshmark and Depop provide a C2C transaction platform. According to ThredUp report 2020, over the three years the resale business grew at a speed of 21 times as that of new apparels business with millennials and Gen Z holding a market size which is 2.5 times that of the boomers and GenX. This pandemic has led to a 50% increase in the business size. Also, the legacy retail players have tapped into the resale market to attract the young consumers which is witnessed by the tie-up of retailer Macy with ThredUp.

The re-sale market has also been hit by the pandemic. According to Milton Pedraza the founder of Luxury Institute, the supply of the consignment has been increasing with consumers ready to sell their used fashion goods but the demand is far less leading to difficulties in inventory management. The RealReal is witnessing a downward slope and the resale business also looks for way to re-model their business and are connecting with their customers virtually. Pedraza also points out that the viability of resale business in European and Asian markets and the big brands like Gucci and Chanel will invest in pre-owned business to avoid counterfeits in the market.

With environment and economy conscious consumers on the rise, another viable option to experience luxury is through renting. Renting becomes the new owning. There is an increasing number of online apps and platforms which offer an option for renting luxury items for a subscription. With this the consumers can flaunt the luxury for a specific period with less investment and maintenance. Renting is extended across various sectors of luxury from homes (AirBnb, Homeaway), clothing (Rent n Flaunt, Le Tote), Accessories (Bag, Borrow or Steal), Cars (Rolls-Royce Drophead, Turo) etc..

3.5 Emergence of new players in the market

The introduction of Amazon's Luxury Stores and the Farfetch China are two notable entrants to the luxury industry in the pandemic era.

The launch of a section on Amazon's mobile app called the Luxury stores in the fashion sector on September 2020, has been an opportunity for the already struggling fashion department stores, as it serves as a new channel for distribution. The Amazon luxury stores provides an efficient gateway for designers who find it difficult to connect with the consumers and the retailers who are facing bankruptcy. The Amazon's luxury stores will provide a 360-degree interactive window for shoppers to view items on different body types and skin tones. It has also stated it provides the retailers the option for independent decision regarding product assortment, price, delivery and service options. With its strong customer database and technology adoption, the Amazon luxury stores will play a dominant competitive role in the luxury business.

Another new entrant in the luxury industry amidst the pandemic is the creation of online

marketplace Farfetch China, the most high profile luxury e-commerce deal with \$1.1 billion venture between Richemont, Alibaba, Artémis and Farfetch and a joint investment of \$600 million by Alibaba and Richemont in Farfetch resulting in a quarter percent stake in Farfetch's operations in China.

During the period of extended lockdown with increased consumers purchase through smart devices and reduced store footprints, Farfetch's e-commerce share of the global luxury market nearly doubled from 12%-23%. This resulted in a staggering market capitalization rise by 475% with its first ever profit during the fourth quarter of 2020.

This deal has led to dedicated Farfetch shopping channels on Alibaba's T mall Luxury Pavilion, Luxury Soho online and cross-border marketplace T mall Global. For Richemont, this is an opportunity to tap the China market and emerge as a global digital competitor to its rival LVMH who has a strong digital presence, 24S and Lyst, since 2017. For Alibaba, who have been tapping the US market with its B2B selling program and the use of Western influencers in social media promotions, this deal would make it a global competitor to Amazon in the luxury space. Farfetch would benefit from Alibaba's strong data capabilities and mark a footprint in the East and South-east Asia.

3.6 Reconfigured business models

The business models are focusing more on vertical integration and omni-channel strategy to emerge victoriously from the pandemic. From Gucci to Hermes and fast fashion retailers like Zara and H&M were slowly moving towards vertical integration even before the pandemic to avoid bankruptcy and better value chain management. Though this sector is composed of consolidation by big players, the pandemic has proven that there is still opportunity for young independent and local players. The focus on serving the local market with the local supplies and not tourist dependent is gaining momentum as this serves as a best recovery from the pandemic. The elite and the millennials are getting inclined more towards local artisans and craftsmanship. So the luxury models should focus on culturally relevant and building up of local community craftsmanship (Luxe Digital, 2020). The marketers should work collaboratively with the Chinese market experts and incorporate brand value aligned KOLs, Asia Weibo and Douyin to make domestic communication to be successful in the Eastern market (Launchmetrics, 2021). The JIT management of Industry 4.0 along with digital enhancement will lead to an agile and responsive operations of the luxury sector without diluting the brand identity resulting to Luxury 4.0 offering 3D printed products to their consumers in the next five years as stated by McKinsey survey report. Also, Sustainability growth strategy is gaining momentum which is emphasized by the Forbes report which signifies millennials concern about environment (42%), animal welfare (26%) and baby boomers primary concern for ethical manufacturing (32%).

3.7 Agile supply chain

The risks due to disruptions (natural or man-made) has a significant impact on supply chain. The disruption in one link of the supply chain will move downstream if there are no proper buffers and adequate lead times leading to a ripple effect. In an era of globalization, a small epidemic arising out of a geographical area will disperse across regions. Ivanov (2020) identifies three characteristics of an epidemic outbreak: (1) unpredictable disruption period, (2) the ripple effect and (3) consequent disruptions followed in the logistics, demand and supply. With asynchronous nature of epidemic spread and variation in disaster management followed by countries, we observe a unique angle of disruption with varying levels of period and intensity in various countries either as a ripple effect or as a lockdown. With China being the dominant player on the global luxury industry, the supply chain of this sector was temporarily impacted during the rise of the pandemic. This highlights the complex and interdependent nature of this sector. Also, we identify that there has been a disturbances in the supply and demand with consumers changing or cancelling the demands of the non-essential fashion goods. This reflects the impact of epidemic on the upstream and downstream supply chains. The business

should strategize on implementing agile SCM with adequate inventory management for an effective value creation (McMaster, M et al. 2020).

4.0 Discussions

This study highlights the following trends for the luxury brands to rebuild its business post the pandemic:

- Brands should focus on brand momentum
- Measure brand equity value by considering all the omni-channels
- Build upon Sustainable Ethical Growth strategy
- Develop agile and flexible supply value chain
- Emphasize on local crafts and heritage
- Communicate with consumers for a better exchange of data and improved sales and improve emotional connect
- Collaborate with brand value aligned influencers
- Embrace technology and data analytics
- Even though the market witnesses mergers of big players, there are opportunities for young independent local players
- Diversify the market portfolio by considering the rest of the world strategy

5.0 Conclusion

According to Altgamma foundation, “The year 2021 will be the beginning of recovery from recession and we can expect a pre-crisis return from 2022. An average growth of 14% across all luxury sectors, with 22% increase in online and 18% from Chinese market has been predicted.” There is a greater scope for the use of Artificial Intelligence and Big Data and the brands who are early adaptor of this technology will gain better customer-relationship and emerge a stronger player in the market. Through this framework of the new luxury ecosystem this study identifies the key trends for an evolutionary future. Digitization and Sustainability are the silver linings to overcome this global crisis era. The luxury sector will be more dynamic, reactive, adaptable and push their creative limits to emerge stronger.

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Influence of Consumer Behaviours towards Online Shopping

Pooja Agarwal*, Riya Agarwal**, Priyanshu Mishra** and Ramar Veluchamy***

ABSTRACT

Consumers have traditionally made purchase decisions at the store shelf, giving institutional brick-and-mortar retailers great power to learn about and influence behaviors and preferences. It was found out that the factors like demographic – age, gender and employability have effect on the model as people having a good purchasing power are more towards the buying and their behavior get influenced when there is variety of the product available and discounts on the website. It is also seen that mode of delivery and post purchase satisfaction plays important role as the customer service in fast delivery, exchange and return also important factor of consumer behavior. The psychographic like the attitude and motivation towards the online shopping get influenced as the website quality, the promotions and the ease of the process as the fast the transaction happen it makes the customer journey more satisfactory. As the data which we collected the sample is more of college going students and the age group is more 20-30 years thus it influence the data we collected as other are less. As more working adults, high school students as well as senior citizens should also be considered. Even with the advancement in the technology has increased the number of factors as the image recognition and voice search has also implemented on the many platforms. While the online platform gave a big opportunity to the small retailed to join the platform as thus such a wide variety of the product range with the different promotion activities also affect the consumer purchasing behavior towards the online shopping. With this research we can conclude that the factors like demographic, psychographic and behavioral has effect on the consumer buying behavior but also with the advancement of the technology there are many others factors we have to consider too. The exploratory research gives a study if the marketer coming up with the online site what are the factors he or she can consider to increase the number of users on their platform while also this research can help in different promotion activities.

Keywords: Consumer behaviours on online shopping, Change in consumer perception in online shopping sites, Factors influence purchase decision, Factors influence online shopping.

1.0 Introduction

Consumers have traditionally made purchase decisions at the store shelf, giving institutional brick-and-mortar retailers great power to learn about and influence behaviors and preferences. With the rise of e-commerce, mobile shopping, and most recently smart technologies, new competitors threaten this long-standing supremacy. Retailing as a function is central to all economies it bridges the varied needs of consumers with specialized offerings of producers. At heart, these retailing functions comprise the building of assortments, physical logistics of merchandise, legal transactions with the consumer, information provision and communication in general, and the rendering of ancillary services. Traditionally, brick-and-mortar physical retailers (offline retailers) have taken on these functions most of the time.

*Corresponding author; Student, Department of MBA, Xavier Institute of Management and Entrepreneurship, Tech Mahindra Building, Bengaluru, India. (Email: pooja25blr@xime.org)

**Student, Department of MBA, Xavier Institute of Management and Entrepreneurship, Tech Mahindra Building, Bengaluru, India. (Email: riya25blr@xime.org; priyanshu25blr@xime.org)

***Assistant Professor, Department of MBA, Xavier Institute of Management and Entrepreneurship, Tech Mahindra Building, Bengaluru, India. (Email: drvramar@gmail.com)

Within the retail value chain, the supremacy of stationary retailing is being structurally challenged as increasing portions of the retail trade are shifted from store-based formats to internet-based formats, including pure plays, manufacturer online operations, and platforms. Multiple forces give rise to internet-based retailing's dynamic growth. These forces include more and better information availability about a product, larger assortments, and greater transparency across vendors from the consumer's perspective, and potentially lower prices because of lower fixed-cost operations. Traditionally, the stationary retailer has been the a priori information and transaction interface to the end customer. However, new players such as manufacturers or online platforms increasingly enter the retailing arena and challenge that interface, thereby contributing to physical retailing's decline in importance. For example, the entry of Internet of Things (IoT) technologies into the everyday environment will allow the automation of many economic transactions so the retailer is no longer necessarily the first 'address' for making a retail transaction. Hence, brands (manufacturers) themselves attempt to engage directly with the end consumer. They are able to build powerful brand ecosystems that interact with consumers via IoT applications, direct selling, engagement and experience programs, and personalized communication, which create entirely new value propositions and make brands experiential. This is just one example likewise, there are many such examples that show the changing customer buying behavior towards the online mode.

We need to discuss the issue under what circumstance the customer will shift its behavior towards the online store and when it will remain on the retail platform.

2.0 Literature Review

Electronic Commerce has become one of the essential characteristics in the Internet era. Online shopping has become the third most popular Internet activity, immediately following e-mail using/instant messaging and web browsing. Online shopping behavior (also called online buying behavior and Internet shopping/buying behavior) refers to the process of purchasing products or services via the Internet. In the typical online shopping process, when potential consumers recognize a need for some merchandise or service, they go to the Internet and search for need-related information. However, rather than searching actively, at times potential consumers are attracted by information about products or services associated with the felt need. They then evaluate alternatives and choose the one that best fits their criteria for meeting the felt need. Finally, a transaction is conducted and post-sales services provided. There has been an intensive study of online shopping attitudes and behavior in recent years. Most of them have attempted to identify factors influencing or contributing to online shopping attitudes and behavior. As a phenomenon, the online shopping became popular in the mid-1990s with the introduction of WWW (World Wide Web) after that subsequent year saw research being conducted in order to develop an understanding of user's online behavior.

There are various factors like external environment, demographics, personal characteristics, vender/service/ product characteristics, attitude towards online shopping, intention to shop online, online shopping decision making, online purchasing, and consumer satisfaction. Five (external environment, demographics, personal characteristics, vendor/service/product characteristics, and website quality) are found to be ordinarily independent and five (attitude toward online shopping, intention to shop online, decision making, online purchasing, and consumer satisfaction) are ordinarily dependent variables.

Few of the factors are discussed as below:

- (i) Demographics include variables such as age, gender, level of education, income, and time online. Demographics appear to play an important role in determining whether people use the Internet, however once people are online, demographics do not seem to be key factors affecting purchase decisions or shopping behavior.
- (ii) Personal Characteristics can be defined as a group of specific customer features that may influence

their online shopping attitudes and behavior, such as their Internet knowledge, need specificity, and cultural environment. Some customers look for convenience during shopping as the most important factor in the purchase decision because people are time constrained and they usually do not mind buying without touching and feeling them as it saves time. Other factors found to impact consumers online shopping attitudes and behavior include cultural environment, need specificity, product involvement, disposition to trust, the extent to which they would like to share values and information with others, the extent to which they like being first to use new technologies, and tendency to spend money on shopping.

(iii) Product Characteristics refer to features of the Internet stores, the products they sell, and the service they provide to support the transactions. These factors are found to influence customer's online shopping attitudes and behavior significantly. Among product features that impact customers' online shopping behavior are variety of goods product availability, price, social presence requirement, product presence requirement, dependability of product, possibility of customized products, and brand.

(iv) Website Quality basically involves features that can be regarded as hygiene and motivator factors that contribute to user dissatisfaction and satisfaction with a website. Hygiene factors are those whose presence make a website functional and serviceable, and whose absence causes user dissatisfaction. Some of the categories of hygiene factors are: Privacy and Security, Technical Aspect, Navigation, Impartiality, and Information Content. Motivator factors are those that add value to the website by contributing to user satisfaction. A variety of factors related to website quality have been demonstrated to significantly influence consumer's online shopping attitudes and behavior. Better website quality can guide the consumer's complete transactions smoothly and attract them to revisit this Internet store. In contrast, worse quality would hinder their online shopping moves.

(v) Attitude towards online shopping have gained a great deal of attention it is believed that consumer attitudes affects the intention to shop online and eventually whether a transaction is made. It basically involves the consumers acceptance of the Internet as a shopping channel and it also includes consumer attitudes toward a specific Internet store (i.e., to what extent consumers think that shopping at this store is appealing).

(vi) Intention to shop online refers to their willingness to make purchases in an Internet store. Commonly, this factor is measured by consumer's willingness to buy and to return for additional purchases. The latter also contributes to customer loyalty.

(vii) Online shopping decision making online shopping decision-making includes information seeking, comparison of alternatives, and choice making. The results bearing on this factor directly influence consumers purchasing behavior. In addition, there appears to be an impact on user's satisfaction.

(viii) Customer Satisfaction can be defined as the extent to which consumers' perceptions of the online shopping experience confirm their expectations. Most consumers form expectations of the product, vendor, service, and quality of the website that they patronize before engaging in online shopping activities. These expectations influence their attitudes and intentions to shop at a certain Internet store, and consequently their decision-making processes and purchasing behavior. If expectations are met, customers achieve a high degree of satisfaction, which influences their online shopping attitudes, intentions, decisions, and purchasing activity positively.

2.1 Gaps in literature

After reviewing a few research papers it is found that there are some literature gaps which include lack of quantitative approach in order to come to do a proper analysis and come to proper conclusion. Most of the papers have taken theoretical approach in order to explain the concept and derive a conclusion from it. Quantitative approach means empirically we can test on the basis of some

parameters which are available to us. The best approach could have been statistical approach through collection of data and then doing proper thorough analysis of it and then arriving at a standard conclusion.

There are certain features in online shopping that have been restricted to the vital few customers of the company. Those will take time to reach the common public. For ex the customized online clothing facility. So here the gap is how and when will those features reach the mass and what will be the effect of those in the retail boutiques? The effect of sponsors on the mindset or emotions of the customers while making their purchase decision, how strongly they connect themselves to the sponsors and get influenced by the advertisements. How and why did customers buy something they don't know? What are the factors that lead to unwanted purchases and does that create long term customers for a company or make the buyer regret their purchase decision.

3.0 Data Analysis and Interpretation

| SUMMARY OUTPUT | | | | | |
|-----------------------|----|----------|----------|----------|----------------|
| Regression Statistics | | | | | |
| Multiple R | | 0.323731 | | | |
| R Square | | 0.654802 | | | |
| Adjusted R Square | | -0.02948 | | | |
| Standard Error | | 0.121272 | | | |
| Observations | | 70 | | | |
| ANOVA | | | | | |
| | df | SS | MS | F | Significance F |
| Regression | 9 | 0.103305 | 0.011478 | 0.780474 | 0.434941 |
| Residual | 60 | 0.88241 | 0.014707 | | |
| Total | 69 | 0.985714 | | | |

Multiple linear regression is the most common form of the regression analysis. As a predictive analysis, multiple linear regression is used to describe data and to explain the relationship between one dependent variable and two or more independent variables. Here the dependent variable is online shopping behaviour of the customers and independent variables are demographic, psychographic and behavioral. The sample is of 209 test and in the output R squared value is .65 which measures the fitness of the model is more than .50 which significance that it is a good model. As the variance between dependent and independent variables is there. The strength of the relationship between dependent and independent variables is 65%. The null hypothesis is that the number of factors (demographic, psychographic and behavioral) doesn't influence the consumer to purchase online as the output shows the significance of below .05 thus it means we reject the null hypothesis. According to the sample test it can be summarized that the demographic, psychographic and behavioural effects on the consumer behaviour towards online shopping. This research has shown an increased explanatory power of the purchase intention and online shopping behavior compared to previous research. It also provides guidelines for future research to concentrate on the strengths and terminate the weaknesses. As with any studies, there are some drawbacks in this research such as the sample chosen was limited to university students with a higher education background. As more working adults, high school students as well as senior citizens should also be considered.

4.0 Findings

From the data analysis it was find out that the factors like demographic – age, gender and employability have effect on the model as people having a good purchasing power are more towards

the buying and their behavior get influenced when there is variety of the product available and discounts on the website. It is also seen that mode of delivery and post purchase satisfaction plays important role as the customer service in fast delivery, exchange and return also important factor of consumer behavior. The psychographic like the attitude and motivation towards the online shopping get influenced as the website quality, the promotions and the ease of the process as the fast the transaction happen it makes the customer journey more satisfactory.

5.0 Recommendation

As the data which we collected the sample is more of college going students and the age group is more 20-30 years thus it influence the data we collected as other are less. As more working adults, high school students as well as senior citizens should also be considered. Even with the advancement in the technology has increased the number of factors as the image recognition and voice search has also implemented on the many platforms. While the online platform gave a big opportunity to the small retailed to join the platform as thus such a wide variety of the product range with the different promotion activities also affect the consumer purchasing behavior towards the online shopping.

6.0 Conclusion

With this research we can conclude that the factors like demographic, psychographic and behavioral has effect on the consumer buying behavior but also with the advancement of the technology there are many others factors we have to consider too. The exploratory research gives a study if the marketer coming up with the online site what are the factors he or she can consider to increase the number of users on their platform while also this research can help in different promotion activities.

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A Study on Marketing Strategies of Banking Services during Covid times

Namitha Krishnan* and Sheeja R.**

ABSTRACT

The main intent of this paper is to assess the prevailing literature on marketing of banking services in Kerala. The Indian banking system, by custom and practise, considered deposit growth as the business objective and other parameters such as productivity, profitability, beneficiary satisfaction, etc. were considered less important. Banks today are functioning in a highly competitive and briskly changing environment. In the fluctuating economic scenario, a professional approach to business development is vital and the persistence of a banking institution depends on its capacity to take up challenges coming up in the environment. Developing business through marketing of bank's services is one of the crucial areas which need attention of the bankers to ensure profitable survival. A marketing strategy, in general, is a systematic, appropriate and feasible set of concepts and actions through which the institution strives to achieve its goal of beneficiary satisfaction and profitable survival. Strategy should be designed after taking into account the strengths and weaknesses of the organisation. The operational aspects of strategies for marketing contain actions such as development of Relationship Banking, designing of effective delivery system, ensuring beneficiary-oriented services and modifying the system into a personal selling organisation. In western banking, officials assigned the job of personally contacting the beneficiaries and offering the services at doorsteps was been able to make a significant impact on the development of business for their organisations. The importance and role of personal selling and beneficiary contacts in the marketing efforts of a banking institution stem from the success of such efforts in many banking institutions all over the world.

Keywords: *Indian banking system, Relationship banking, Marketing mix, Product/Service mix, Promotion mix, Beneficiary satisfaction.*

1.0 Introduction

Banks are the most important constituents of the financial infrastructure of a country. They play a vital role in bringing about desired change in the economic development of the country. The size and composition of banking transactions mirror the economic happenings in the country. Banks provide a convenient avenue for investment of surplus funds, and to the investor a source to finance. Thus, they, as 'Repositories of People's Savings', mobilise small and scattered savings of the community and as 'Purveyors of Credit' channelize the savings so mobilised into the production of capital goods and thereby facilitate capital formation. By providing cheap and timely credit to the best of the schemes, they help in optimum utilisation of scarce productive resources and in keeping the production cost low. Further, by providing remittance facility with their vast branch network help free flow of funds over different parts of the country wherever there is a need for it instead of allowing them to lie dormant in stagnant pools. They help in the implementation of various welfare programmes of the Government and are also of tremendous help to the Government in meeting plan objectives by directing the resources through desired channels.

Market development and Market penetration were the focus in 1970s when banks expanded their area of operation by opening more branches. Banks developed new products and services in the 1980s to cater to the various needs of increasing number of customers.

*Corresponding author; Research Scholar, Department of Management, Nehru College of Management, Coimbatore, Tamil Nadu, India. (Email: namiz88@gmail.com)

**Associate Professor, Department of Management, CMS Institute of Management Studies, Coimbatore, Tamil Nadu, India. (Email: sheeja.ramkrishnan@gmail.com)

With the advent of banking sector reforms in the 1990s the scenario of banking has totally changed. In order to bring efficiency, accountability and high degree of customer services, competition has been induced by granting license for banking business to new operators like private banks, regional rural banks and cooperative banks. In such a competitive environment the ability of a bank to achieve growth rate depends on how well the needs of customers are identified and effective Marketing strategies evolved. This involves developing new and improved products and services, providing better amenities and facilities, exploring new distribution channels, and evolving effective Marketing strategies so as to continuously meet the changing customer needs. During 1990s the financial sector and implicitly the banking sector experienced a significant growth in the developed countries.

During the 21st century, the banks act in a dynamic environment, where the Market and the other factors (components of the political, economic, social, juridical, cultural, demographical and technological environment) frequently raise problems, forcing them to additional efforts or offering them opportunities that need to be fructified as well as possible; they need to integrate their current actions to their long term objectives which were previously determined by the bank Marketing policy. Adapting the banking institutions activity to the environment requires a continuous tracking of the structural quality and quantity changes which the environments register or will register. In order to successfully achieve the purpose of the Marketing process the banks should perform analysis in order to know the bank customers to the highest possible extent, so that the offered banking products/services match their needs and the sale is ensured, systematically analyse the financial Market identifying the profitable Markets, the new agencies, intermediaries and entrepreneurs acting on these Markets and efficiently using their own resources in order to create new banking products/services and to diversify them according to the consumers' wishes and expectations. Hallowell Roger conducted a research on customer satisfaction, loyalty and profitability and found that as compared to public sector, private sector bank customer's level of satisfaction is higher.

Today banks can look back with satisfaction by having responded effectively to the challenges put before them from time to time – whether of social control or of reforms. In future, the banks will have to adjust their system of functioning, venturing into new areas, improve efficiency levels by inclusion of trained and skilled manpower and restructure their organizations. Then only they can face the challenges of the future more confidently and proactively.

2.0 Literature Review

Marketing by service industries is yet to gain momentum, especially when it comes to marketing by commercial banks. Marketing orientation of banks is imperative for survival and success. Marketing of financial services by banks is under active and extensive discussion among academicians and bank personnel survey and research have been conducted by both academic researchers and practitioners on the various aspects of services marketing in general and financial services marketing by banks in particular both in India as well as abroad.

Leorge William R and Hiran C Barksdale studied the marketing activities in the service firms and discovered that services' marketing is generally on the low ebb. Service firms tend to be less marketing oriented less likely to have marketing mix activities carried out in the marketing department; less likely to perform analysis in the area of service product more likely to undertake advertising internally rather than go to specialized advertising agencies less likely to have overall sales plan less likely to develop sales training programmes less likely to utilize the services marketing consultants and marketing research firms and less likely to spend much on marketing, as a percentage of gross sales'.

Bessom, Richard M and Donald W Jackson jr referred that 400 service and marketing firms revealed that service firms are less likely to have marketing departments, to make use of sales

planning and training, and to employ marketing professionals like consultants, advertising firms and market research agencies. Today, the banking sector is changing in terms of providing the customer with what he wants, when he wants and where he wants. Thus, the element of marketing which was unheard of in earlier days of banking has assumed great significance in today's world of stiff competition. As such, no bank today can do without marketing its services.

Sarkar, Kaptan and Sagane reveal that most of the work in the area of marketing of financial services has been undertaken in countries like USA and U. K. This area of research has not received much attention of the researchers in India. A few studies which have been conducted in India reveal that no comprehensive study has been carried out to make a comparative analysis of marketing strategies of the public, private and foreign banks in India.

B. N. Bhattacharya, Koparkar, Sreedar have dealt with marketing in commercial banks. They have emphasized motivation research, marketing research and promotional aspects in marketing of services and suggested to improve the marketing strategies to cope with the changing environment. Nascenzi pointed out that though bankers use market segmentation they were yet to identify and locate their best customers. He suggested that market segmentation must be used to define profitable target customers.

R.M.Chidambaram and K. Alamelu enunciated the measures to face the challenges in marketing of services in view of proliferation of financial services. They emphasized the need for learning about the customer and developing strategies for future. Berry, Kehoe and Lindgreen's found that most frustrating aspects of bank marketing were 1) lack of management support 2) lack of interdepartmental co-operation 3) crisis management 4) government intrusion 5) advertising and media problems.

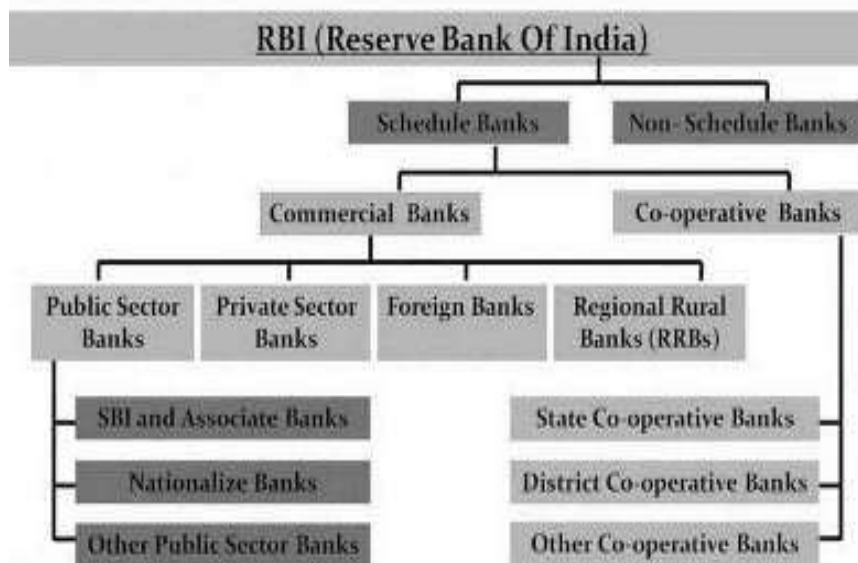
Zeitham and Bitner identified that one of the most basic concepts in marketing is the marketing mix, defined as the elements of an organisation controls that can be used to satisfy the customers unlike marketing of products. The services also have four elements in the marketing mix, viz. product, price, place and promotion. Apart from that, there are three more elements, people, process and physical evidence, in the marketing mix for service marketing. A combination of these seven Ps makes marketing offers of the service provider. Kaptan studied marketing aims not only at delivering (selling) whatever products (schemes and services) banks have but also creating products as per customer needs.

3.0 Objectives of the Study

- ❖ To investigate into the marketing process
- ❖ To understand the banking behaviour
- ❖ To study the present banking scenario
- ❖ To analyze the 7p's of marketing mix

4.0 Structure of Banking Industry

The organised banking system in India can be broadly divided into three categories, viz., the central bank of the country known as the Reserve Bank of India, the Commercial banks and Cooperative banks. Another and more common classification of banks in India is between scheduled and non – scheduled banks. The Reserve Bank of India is the supreme monetary and banking authority in the country and has the responsibility to control the banking system in the country. It keeps cash reserves of all scheduled banks and hence it is known as the “Reserve Bank”.



5.0 Types of Banks in India

5.1 Commercial Banks: Commercial Banks in India consist of Public Sector Banks, Private sector Banks and Foreign banks in India.

- i. **Public Sector Banks:** Public Sector Banks include State Bank of India and its associate banks called the State Bank group, 20 nationalized banks and Regional Rural Banks mainly sponsored by Public Sector Banks.
- ii. **Private Sector Banks:** Private Sector Banks includes Old generation private banks and new generation private banks in India.
- iii. **Foreign banks:** The foreign banks were referred as “Exchange banks” as their transactions primarily related to foreign exchange and foreign trade. The ‘Indian Central Banking Enquiry Committee Report’ (1931) pointed out that the entire foreign exchange was virtual monopoly of these banks.

5.2 Cooperative Banks: Cooperative Banks in India consists of State Co-operative Banks, Central Co-operative Banks, Primary Agriculture Credit Societies, Land Development Banks, Urban Co-operative Banks, Primary Agricultural Development Banks, Primary Land Development Banks and State Land Development Banks.

5.3 Development Banks: Development Banks in India are Industrial Finance Corporation of India (IFCI), Industrial Development Bank of India (IDBI), Industrial Credit and Investment Corporation of India (ICICI), Industrial Investment Bank of India (IIBI), Small Industries Development Bank of India (SIDBI), SCICI Ltd, National Bank for Agriculture and Rural Development (NABARD), Export Import Bank of India and National Housing Bank.

6.0 Nationalization of Banks

Nationalization of banks began with the passing of the Reserve Bank (Transfer of Public Ownership) Act 1948, which became law on the 3rd September, 1948. It was thought desirable to nationalize the bank to ensure greater co-ordination of monetary, economic and Fiscal policies. The nationalization of the Reserve Bank was, indeed, necessary in the interests of large-scale planning

upon which the Union Government had embarked. The objective of this nationalization was to enhance the ability of the banking system to meet more effectively the needs of the development of the economy and to promote the welfare of the people more adequately. The nationalized banks play a new and pioneering role in helping the public sector get on its feet. If banks do not function effectively, nationalization may promote serious dislocations and distortions in the economy, and a transfer of deposits may take place from the nationalized banks to the smaller banks which are still in the private sector.

6.1 Reasons for Nationalization

The important reasons for the nationalization of major banks in India can be enumerated as follows:

- ❖ Equitable distribution of economic power
- ❖ To provide finance to neglected sectors of agriculture, small-scale industries etc.
- ❖ Removal of malpractices
- ❖ Expansion of banking facilities

6.2 Objectives behind Nationalization of Banks

The main objectives behind the nationalization of banks are as follows:

- ❖ Social Welfare
- ❖ Controlling Private Monopolies
- ❖ Expansion of Banking
- ❖ Reducing Regional Imbalance
- ❖ Priority Sector Lending
- ❖ Developing Banking Habits

7.0 Economic Reforms of the Banking Sector

Indian banking sector has undergone major changes and reforms during economic reforms. Though it was a part of overall economic reforms, it has changed the very functioning of Indian banks. This reform has not only influenced the productivity and efficiency of many of the Indian Banks, but has left everlasting footprints on the working of the banking sector in India. Some of the important reforms in the banking sector in India are:

- ❖ Reduced Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR)
- ❖ Deregulation of Interest Rate
- ❖ Fixing prudential Norms
- ❖ Introduction of Capital to Risk Weighted Asset Ratio
- ❖ Operational Autonomy
- ❖ Banking Diversification
- ❖ Emergence of New Generation Banks
- ❖ Improved Profitability and Efficiency

8.0 Challenges faced by Indian Banking Industry

- ❖ **Rural Market:** Banking in India is generally fairly mature in terms of supply, product range and research even though reach in rural India, still remains a challenge for the private sector and foreign banks.
- ❖ **Management of Risks:** With gradual deregulation, banks are exposed to different types of risks. Banks face various market risks like Interest rate risk, Liquidity risk, Exchange risk etc.

- ❖ **Growth of Banking:** As the Indian banks move gradually beyond universal banking and position themselves as financial service providers, banking business is getting redefined. The structure of Indian banking system may be expected to undergo a transformation, the main drives of which will be consolidation, convergence and technology.
- ❖ **Market Discipline and Transparency:** Banks are expected to be more responsive and accountable to the investors.
- ❖ **Human Resource Management:** On account of introduction of certain advanced technology, there would also be a strong case for recruiting fresh talent with attractive pay and perquisites.
- ❖ **Global Banking:** It is practically and fundamentally impossible for any nation to exclude itself from world economy. Therefore, for sustainable development, one has to adopt integration process in the form of liberalization and globalization
- ❖ **Financial Inclusion:** Financial inclusion has become a necessity in today's business environment. Whatever is produced by business hours, that has to be under check from period with continuous net losses for over 6 years, erosion of entire net worth, adverse media publicity, consequent low morale of staff, and a throttled decision making process.
- ❖ **Employee's Retention:** Long time banking employees are becoming disenchanted with the industry and are often resistant to perform up to new expectations. The diminishing employee morale results in decreasing revenue.
- ❖ **Environmental Concerns:** The object is to assist in enhancing the public and political awareness of the actions that could have a significant impact on global emissions growth and to disseminate the message that it is time to act.
- ❖ **Social and ethical aspects:** There are some banks which proactively undertake the responsibility to bear the social and ethical aspects of banking.
- ❖ **Customer retention:** In India, currently, there are two types of customers – one who is a multichannel user and the other who still relies on a branch as the anchor channel. The primary challenge is to give consistent service to customers irrespective of the kind of the channel they choose to use.

9.0 Banking Marketing Period

It is also known as modern period. The frantic pace of branch expansion and credit disbursement during the development banking period has direct impact on the health of public sector banks. The real outcome was the proliferation of loss-making branches. The problem of communication and transport network in the countryside, rising customer dissatisfaction with banking services, and resultant apathy of bank staff towards developmental work are the basic reasons for this. The RBI urged commercial banks to take stock of the state of affairs, to consolidate their gains and go slow on branch expansion, thus ushering in the period of consolidation. The bank visualises the risk inherent in continuing to do business as before. So there is a growing awareness that marketing was an essential tool in the hands of the banker, an inescapable necessity without which perhaps survival itself might become difficult in future.

Bank Marketing is defined as “identifying the most profitable markets now and in future, assessing the present and future needs of customers, setting business development goals and making plans to meet them, managing the various services and promoting them to achieve the plans – all in the context of a changing environment in the market”. Marketing thus aims not only at delivering whatever products banks have but also creating new products as per customer needs. As far as India is concerned, the position of marketing in the banking industry has been quite dismal.

Banks essentially deal in services and not products. “Financial service is any act or performance that one party can offer to another; it is essentially intangible and does not result in

ownership of anything. It broadly includes investment activities in terms of investment management, investment advice and investment arrangement. Berry²⁸ has contrasted services from goods by defining “a good as an object, a device or a thing. A service is a deed, a performance and an effort. When goods are purchased, something tangible is acquired. When a service is purchased, there is generally nothing tangible to show for it. Services are consumed but not possessed.

According to Federal Express, the giant express delivery organization, services have been redefined as all actions and reactions which customers perceive they have purchased. The above definitions clearly show that services do have certain specific characteristics which make them different from goods. These are broadly defined as intangibility, perishability, heterogeneity and inseparability of production and consumption.

10.0 Marketing Mix for Banking Services

The formulation of marketing mix for the banking services is the prime responsibility of the bank professional who based on their expertise and excellence attempt to market the services and schemes profitably.

The bank professionals having world class excellence make possible frequency in the innovation process which simplifies their task of selling more but spending less. The four sub mixes of the marketing mix, such as the product mix, the promotion mix, the price mix and the place mix, no doubt, are found significant even to the banking organizations but in addition to the traditional combination of receipts, the marketing experts have also been talking about some more mixes for getting the best result. The “People” as a sub mix is now found getting a new place in the management of marketing mix. It is right to mention that the quality of people/employees serving an organization assumes a place of outstanding significance. This requires a strong emphasis on the development of personally-committed, value-based, efficient employees who contribute substantially to the process of making the efforts cost effective. In addition, we also find some of the marketing experts talking about a new mix, i.e. physical appearance. In the corporate world, the personal care dimension thus becomes important. The employees are supposed to be well dressed, smart and active. Besides, we also find emphasis on “Process” which gravitates our attention on the way of offering the services. It is only not sufficient that you promise quality services. It is much more impact generating that your promises reach to the ultimate users without any distortion. The banking organizations, of late, face a number of challenges and the organizations assigning an overriding priority to the formulation processes get a success. The formulation of marketing mix is just like the combination of ingredients, spices in the cooking process.

11.0 The 7 P’s of Marketing Mix

The marketing mix is a key foundation on which most modern marketing strategies and business activities are based. The concept of the ‘Marketing Mix’ came about in the 1960s when Neil H. Borden, professor and academic, elaborated on James Culliton’s concept of the marketing mix. Culliton described business executives as ‘mixers of ingredients’: the ingredients being different marketing concepts, aspects, and procedures. However, it’s now widely accepted that Jerome McCarthy founded the concept. After all, it was McCarthy who offered the marketing mix as we know it today; in the form of ‘The 4Ps of Marketing’: Product, Place, Price, & Promotion. The 4Ps then paved the way for two modern academics, Booms and Bitner, who, in 1981, brought us the extended version of the marketing mix: the ‘7Ps’. The 7Ps comprise McCarthy’s 4 original elements, and extend to include a further 3 factors: Physical Evidence, People, & Processes.

11.1 Product / Service

Product/ service define the core offering of a business. In banking industry, managers must strive to satisfy customers as customers are after value and benefits. Kotler and Armstrong (2013) define product as anything tangible or intangible offered to a market for attention, use and consumption with aim of satisfying needs and wants of customers. In this definition, they consider product to include services. Products in banks includes different accounts for customers to use for example current accounts, savings accounts, save for children, other products are investment advice, loans and agencies. Researches have established relation between product and customer satisfaction. Banks must encourage customers to open account and increase the service quality with different product innovation in order to achieve competitive advantage. Therefore, the relationship between service and customer satisfaction has been established.

The main products of Banks are Saving Account, Current Account, Forex Department, Salary Accounts and Demat Account. The other products are Home loan, personal loan, Insurance, Credit cards, etc.

11.2 Price

Bank offers an assortment of financial services to its esteemed customers. It has a very clear-cut pricing policy. It deals in a competitive market and so it has a policy that involves improvisation at each level. The bank's value added strategies are made keeping in mind and analysing the customer's mind set and economic changes happening in the market. It has also started an aggressive pricing policy that involves acquisition through low-cost funds. The bank's main aim is to eliminate competition in the banking field. The bank offers loans and schemes to attract its customer. The rates are evaluated at regular periods and changed to suit the needs and demands of both the bank and the customer. The price of the product depends upon the services provided by the Bank on the respective product to the customers.

11.3 Place

Place plays an important role in tangibilizing service offerings. Quality of service is perceived by many customers in the form of place of delivery- locational appeal, interiors, ambience, etc. If a bank is located in a crowded market the place or location will be a negative tangibilizes. Providing excellent tangibles in the form of place or location and interiors is particularly important for appealing to the customers segment. More recently, some of the private banks in India are providing very attractive tangibles in the form of their locations, exteriors and interiors.

The places acts as a distribution channel for the banking facilities where services are provided anytime 24*7. The concept of Internet banking and using of technology for any kind of services is encouraged. All its branches are equipped with modern facilities. The bank has opened various information centres where all the related queries can be answered.

11.4 Promotion

The promotion strategy of Banks comprises of direct and indirect communication to the customers. Besides emphasizing on the modernization of its banking facilities stress is also laid on the benefits one gets on using the banks services. The benefit of each product is highlighted so that the clients become impressed and they are forced to grasp the services of this bank. Promotion can tangibilize services in different forms:

- ❖ Visualization
- ❖ Association
- ❖ Physical representation
- ❖ Documentation.

Visualization tangibilizes services through hoardings, TV and print campaigns or advertisements. Physical representation in services has a good promotional appeal to customers like use of colours to symbolize wealth and status. Service providers use documentation in their promotions in support of their claims for dependability, popularity and responsiveness

11.5 People

People, refers to those involved in service delivery. Their level of training, interpersonal behaviour, discretion in rendering the service and appearance matters a lot in customer satisfaction in banking industry. Thorsten (2004) opines that customer orientation of service employees is a key driver of customer satisfaction. The interaction of employees and customers create good customer satisfaction. Customers rely on bank employees for advice, complaint and direction towards some of the banks' products and channel of distribution. Interaction quality is an important factor when customers evaluate service quality.

People are a common factor in every service. And people tangibilize services. Good people (means good performance) make good or successful services. Bad performers deliver bad services.

11.6 Process

Process shows procedure of rendering services. Banks should create a good service process to maintain satisfied customers and attract potential customers. Banks are constantly taking initiatives to offer the best in class service that seek to enhance customer experience.

11.7 Physical evidence

This deals with environment where business operates. It includes reducing of paper usage, gives higher standard of services through product innovation, Satisfies the diverse need of individual and corporate clients, customer centric, and service oriented.



12.0 Perceptions of Beneficiaries

With the current change in the functional orientation of banks, the purpose of banking is being redefined. The main driver of this change is changing beneficiary needs and expectations. Beneficiaries in urban India no longer want to wait in long queues and spend hours in banking transactions. This change in beneficiary attitude has gone hand in hand with the development of ATMs, phone and net banking along with availability of service right at the beneficiaries door step. Further, the world class banking experience provided by private and multinational banks with their ever evolving products and services has raised the bar of beneficiary expectations.

With the emergence of universal banking, banks aim to provide all banking product and

service offerings under one roof and their Endeavour is to be beneficiary centric. The Indian banking industry is also embracing technology rapidly. Big players among the private and public sector banks are reengineering and automating their core banking processes.

Beneficiary Satisfaction is a key indicator of the operational and financial performance of a bank. Due to an increase in the number of beneficiaries, traditional one-to-one beneficiary interaction has become unsustainable. This sets the goal for the financial services sector to use sector insights to understand how to create an effective multi-channel beneficiary experience that is personalized and relevant, differentiated by value and respectful of privacy concerns. As global competition increases and products become harder to differentiate, banks have begun moving from their product centric attitude to beneficiary -centric one.

13.0 Discussions

13.1 Findings

From the inception of civilization the banking sector has dominated the economic development of a country by mobilizing the savings from the general people and channelling those savings for investment and for economic development and growth of the country. The issues of marketing and promotion in the banking sector are becoming more and more important and complicated as internationalization of financial services continues to increase. In recent years, India has emerged as an attractive market for many western countries and several banks have started their operation here. So, the industry has become competitive and the banks essentially need to look for unique and competitive promotional activities in order to stay in competition and to retain prospective beneficiaries. To keep itself up-to-date banking industry is adopting these new services in their portfolio. For success it is important to make the beneficiaries aware of the new products. So it becomes the duty of the commercial banks to provide more information to their target beneficiaries about themselves & their products. Here comes the need for introducing marketing strategy in banking industry. For this aspect banks are now adopting different promotion activities to make their products acceptable and familiar in the market.

The present study falls under the area of marketing. The theme in broad is to analyse the marketing mix and how far this tool useful in the present situation. The objective for which this research has been undertaken is to investigate into the marketing process. i.e. 7P's of services marketing. In present day context banking industry is mainly focusing on marketing practices to attract the beneficiaries.

The scope of the present study extends to the attitude and perceptions of bankers and beneficiaries towards bank marketing and is confined to the bankers and beneficiaries of commercial banks operating in Thrissur District, Kerala. For this purpose it is proposed to elicit the perceptions from managerial and non-managerial staff of the banks. An attempt has been made to elicit the opinions from beneficiaries, because they are having their own banking behaviour.

The preliminary limitation of this study relates to the behavioural sciences. The basic limitation of behavioural sciences is that they would deal with attitudes. These attitudes differ from individual to individual. The preliminary limitation of this study relates to the behavioural sciences. The basic limitation of behavioural sciences is that they would deal with attitudes. These attitudes differ from individual to individual.

Today, the banking sector in India is fairly mature in terms of supply, product range and reach. As far as private sector and foreign banks are concerned, the reach in rural India still remains a challenge. In terms of quality of assets and capital adequacy, Indian banks are considered to have clean, strong and transparent balance sheets relative to other banks in comparable economies in its region. The Reserve Bank of India is an autonomous body, with minimal pressure from the

government. The stated policy of the Bank on the Indian Rupee is to manage volatility but without any fixed exchange rate. Till now, there is hardly any deviation seen from this stated goal which is again very encouraging. With passing time, Indian economy is further expected to grow and be strong for quite some time-especially in its services sector. The demand for banking services, especially retail banking, mortgages and investment services are expected to grow stronger.

13.2 Suggestions

The following are some of the suggestions made to the branch managers and employees of the banks.

Technology: Banks need to continue their focus on the innovation required to compete and grow while coping with the instability engendered by reform. Banks will need to rethink their strategies as they respond to the sweeping changes in their markets and the regulatory environment.

Knowledge Management: The value of the knowledge must be recognized in order to successfully implement knowledge management measures in the banks. Banks have to emphasize on information technology and the dissemination of information. Banking industry must strengthen their research and development work encourage flow of ideas, develop new non-conventional strategies, introduce more professional human resources management policies which can address all the issues.

Expansion & Diversification: Expansion and diversification by a bank leads to increase in operational risk. However, higher risk leads to higher returns so long as the bank has adequate systems in place to handle such risks.

Marketing Strategy: Banks have to market their products and services by giving the proper knowledge about the product to beneficiary or by awarding the beneficiary about the products. Bank should literate the beneficiaries. In the wake of the changing dynamics in the financial services sector, banks in the region have the uphill task of retaining their existing beneficiaries, acquiring new beneficiaries, building beneficiary confidence and maintaining a robust financial performance. For these challenges, the Indian banks need to adopt and implement innovative relationship marketing strategies to maintain the competitive edge in the market place.

Increased competition: The liberalised policies of RBI and Govt. of India relating to Indian Banking have set the stage for a competitive banking. The banks should add intense competition; all the banks are increasingly subjected to severe regulatory and prudential measures that are intended to ensure the viability and substance of the business as well as the safety of its stakeholders.

Banking Ethics: The performance of Indian banks has to be judged on the basis of growth, credit quality, strength, soundness, efficiency and profitability. The ethics of banking is based on the trust of the depositors and the borrowers. The measure of this trust is the strength and soundness of a bank.

Human Resources: HR plays a pivotal role at the Bank, by implementing the strategy for recruiting, developing and retaining the talented people needed to deliver against its objectives. Human Resource Management is important for banks because banking is a service industry.

Customer Relationship Management: The marketing strategy consists of a very clear definition of prospective beneficiaries and their needs and the creation of marketing mix to satisfy them. A recent development in this regard in banks is Customer Relationship Management (CRM). It is a business strategy to learn more and more about customer behavior in order to create long term and sustainable relationship with them. It is a comprehensive process of acquiring and retaining selective beneficiaries to generate value for the bank and its beneficiaries.

Build Customer Trust: Provide beneficiaries with required information for making financial decisions. Build loyalty through superior banking service and consistent messaging. Expend bank's share of wallet by providing innovative financial products, value pricing and having a clear understanding of individual financial goals.

14.0 Conclusion

This project is all about identifying the Role of marketing in banking industry. Use of marketing mix in banking sector is increasing day by day with 7'Ps. Thus, marketing concept is very important for every bank. The main purpose of this study is to get an overview of bank marketing and to find out the role of marketing in the banking industry and see how marketing mix (product, price, place, & promotion) is most important for a bank. Use of 4 p's for banks and implementation of that in bank's marketing concept and finding out why marketing is important for a bank. And combination of extra 3'Ps (people, process, Physical evidence) are also very important for a bank in the present scenario. To summarize all these, the project comprises detailed study of the role of marketing in banking sector. Bank Marketing has become a necessary survival weapon and is fundamentally changing the banking industry worldwide. The rise of Bank Marketing is redefining business, relationships and the most successful banks will be those that can truly strengthen their relationship with their beneficiaries. Technology innovation and fierce competition among existing banks have enabled a wide array of banking products and services, being made available to retail and wholesale customer through an electronic distribution channel, collectively referred to as e-banking. Technology is altering the relationships between banks and its internal and external beneficiaries.

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Use of Conjoint Analysis to Understand Purchase Behavior of Customers in Indian Garment Retail Industry

Sheeja. R.* and Indhu Nayana C V**

ABSTRACT

There is an eternal thrives to know why, what and the way customers obtain the products or services. Still we have a tendency to be able to perceive the activity method of deciding during a clear manner. Though we've ton of variable techniques like multivariate analysis, MANOVA, Regression, isn't explaining method to a most extend. With the support of articles, we have a tendency to come to know the dimensional Scale can facilitate the researchers to know client shopping for method to a bigger extend. Whereas we have a tendency to use the dimensional scaling, conjoined analysis helps in planning of the dimensions and analysis of information. During this article we have a tendency to ar getting to administer conjoined analysis techniques to check attributes to that the purchasers connected with and to search out the connection between financial gain and frequency of visit to the ranking variables in conjunction with the opposite statistical method.

Keywords: *Buying behavior, Garment retailing, Conjoint analysis, Multivariate analysis, Brand, Style, and Price.*

1.0 Introduction

Despite this international economic downswing, the worldwide fashion industry continues to grow at a healthy rate and this, let alone the absence of change prices for customers and nice product differentiation, means contention inside the trade isn't any over moderate. The fashion industry is of nice importance to the economy in terms of trade, employment, investment and revenue everywhere the globe. This specific trade has short product life cycles, huge product differentiation and is characterized by nice pace of demand amendment let alone rather long and inflexible offer processes. The worldwide fashion industry - encompassing consumer goods, textiles, footwear and luxury merchandise - reached or so \$2,560 trillion in 2010. The attire, luxury merchandise and accessories portion of the market, that accounts for over fifty fifth of the general market, is anticipated to come up with \$3,180 billion in 2015, with a yearly rate in more than four-dimensional.

1.1. Garment retailing in India

Over the past 5 years (2008-2012), the Indian attire Retail Market has been growing at a fast pace. The Indian attire retail is that the quickest growing sector among different sectors of Indian market and is anticipated to sustain its growth within the coming back years. Indian attire Retail Market is split into 5 segments like Men wear, Women wear, children wear (Boys), child wear (Girls) and androgynous attire to produce a close summary of past and gift performance, each in price and volume terms, of every section. The segment-wise future outlook has been given within the report which is able to facilitate readers to spot the long run growth spots and also the market target. in step with our new analysis report, the attire retail market within the country is anticipated to grow at a continuing CAGR of eighteen.8% from 2012 to 2015

*Corresponding author; Associate Professor, Department of Management, CMS Institute of Management Studies, Coimbatore, Tamil Nadu, India. (Email: sheeja.ramakrishnan@gmail.com)

**Ph.D Research Scholar, Department of Management, Nehru College of Management, Coimbatore, Tamil Nadu, India. (Email: indhunayanaa@gmail.com)

Historically, the men's apparel market in India has been significantly larger than the women's apparel market. With only 20 percent of India's urban women in the workforce, women's wardrobes have traditionally been limited to home wear and items for special occasions. Now, women are more willing to dress differently when they venture beyond the home—to shop, for example, or visit a school or office.

| Category | 2011, USD Bn | | | 2020(P), USD Bn | | |
|-----------------------------|---------------------------------|-----------|-----------|---------------------------------|-----------|-----------|
| | % share in Total Apparel Market | Branded | Unbranded | % share in Total Apparel Market | Branded | Unbranded |
| Men | 40% | 5 | 11 | 39% | 18 | 30 |
| Women | 35% | 4 | 10 | 42% | 20 | 31 |
| Kids | 25% | 1 | 9 | 19% | 5 | 20 |
| Total Apparel Market | 100% | 10 | 30 | 100% | 43 | 81 |

Source: Report on assessment of competition in apparel retail industry in India

2.0 Theoretical Overview

Nowadays marketers are more challenged to determine the need and performance of customers and finding ways to meet those needs as efficiently as possible due to the engagement of people in the consumption activities. Marketing become treated as a customer centric activity to bridge the gap between the company's offers and customers needs and preferences (Campbell & Butany, 1996).

Dickerson (in Beaudoin et al, 2000) investigated the relative importance that consumers attach to five garment attributes when making purchasing decisions, namely: price, care, country of origin, quality, and style. Shim and Kotsiopulos (1993) researched the garment shopping orientation of consumers on the basis of nine factor labels, namely: appearance/fashion conscious, brand conscious, convenience/ time-conscious, shopping mall-oriented, local store-oriented, apathetic toward "Made in the USA", catalogue-oriented, economy/price conscious, and credit-oriented. Beaudoin et al (2000) identified 12 attributes that correlated with attitudes when purchasing garment, namely: good fit, durability, ease of care, favorable price, comfort, quality, color, attractiveness, fashionableness, brand name, appropriateness for occasion, and choice of styles.

Any attempt to understand how multiple criteria, both intrinsic and extrinsic are combined in the purchase decision making process is lacking throughout this research (Eckman et al, 1990:14). In this study the combined influence of the following intrinsic and extrinsic attributes will be examined: brand, style, retail store and price. Each of these attributes will be briefly discussed in the following paragraphs.

2.1 Brand name

The demand for brand name garment products has risen steadily over the past decade (Huddleston & Cassil, 1990). For the retailer, branded products can mean better profits and more store traffic. Over time brand name products develop a certain reputation or image. This reputation or image conveys information that is useful to consumers in their pre-purchase decision making process. Forsythe (1993) found that the brand name was associated with a higher price when shoppers were asked to examine three identical shirts that differed only in their labels.

2.2 Style

Fashion is the custom or style of dressing that prevails among any group of persons. It is the style of the present, which may last for a year or two or a number of years (Fairchild Dictionary of Fashion, Perna, 1987:48). If a look or trend persists long enough it becomes a classic. A classic style is a look that is always available in some form that is appropriate for many occasions, and acceptable to many consumer groups (Brannon, 2000:7). Some consumers make choices concerning garment on the basis of comfort and practicality. Therefore a third style can be identified, namely a comfortable fit. The relative importance of these three styles was examined in this study.

2.3 Retail store

In this study, the utility values of the following four store types were investigated. Chain store organizations own and operate several retail store units that sell similar lines of merchandise by a standardized method and function under a centralized form of organizational structure, centralized distribution and standardized store décor and layout. A specialty store concentrates on a limited number of complementary merchandise categories and provides a high level of service in an area that is typically less than 8 000 square feet. Specialty stores focus on a narrow market segment or niche. Consumers are attracted to specialty stores by deep assortments, personal attention and a more intimate store atmosphere (Levy & Weitz, 1998:36).

2.4 Price

The differential effects of perceived value of money are vested on price and quality of a product or services. For some customers the perceived value will be low price. The literature search conducted in the context of South Africa reveals that a limited number of studies have ever been carried out on the subject of consumer decision making with respect to the buying of garment. Terblanche (1990) conducted a life-style typification study of adult students with specific reference to fashion awareness and clothing orientation. Auret (1990) did a study on the needs and purchasing behaviour of adult students at the University of Stellenbosch

2.5 Socio-cultural factors

A consumer's behavior is also influenced by social factors, such as the consumer's reference group, family, and social roles and statuses. A customer's want has to be identified and his expectations must be matched with the other economic and social factors so that their product is receptive. The cultural change in buying garment from low price brands to designer brands in emerging markets has been institutionalized in a family environment. It has been observed that parental and sibling influences decreased with age, whereas peer and media influences expanded with increasing age. The television and celebrities also play a significant role in influencing adolescents' clothing choices irrespective of gender categories. Among the most common two forms of media that children largely use are magazines and television while, teens are primarily influenced by visual merchandising, hand on experience, and spotting the fashion garment users.

2.6 Personal factors

Etzioni, (1988) believes that all human life is experienced at two levels: The Internal and the Collective. The internalized level of experience includes biological, psychological, and social factors that are more or less complex and are unique to the individual. This experience includes the formation of personal values which are the ideals or standards that guide human preferences and decisions. Interaction with parents and significant others within the social environment results in personality development, the acceptance (or rejection) of social norms, and the formation of personal values. Personal values in turn shape our beliefs, attitudes and ultimately our buying behaviors, which usually

bear some basic similarity to those around us and reflect the collective cultural and other social influences to which we are exposed. Some of these personal or internalized variables that uniquely influence our clothes buying behaviour include; education, lifestyle, intuition, ostentations etc.

2.7 Psychological factors

Most of consumers have the feelings that when they used to wear a certain clothes such as socks, sportswear, they adapt the feeling of wearing it. At times consumers may choose to use a product only once and on other occasions they may decide to use it repeatedly. When products or brand are used repeatedly, it is a sign that customers are loyal to the brand or product. After a period, consumers emotionally accept this product. When consumers purchase clothing, they always come up with some requirements under their needs. It could be influenced by time, place, target people, society environment and market competition factors.

2.8 Health factors

Nowadays the customers are more conscious about their health. The customers have started to purchase garments based on the doctor's advice in order avoid the skin problems. For Eg: the employees who are all working in factories or in hot environment will go for cotton cloths.

2.9 The nature of conjoint analysis

The retailing research frequently tried to construct the consumer typologies focused on economic and demographic characteristics, it is found that the retailers failed to understand the actual behavior of the consumers and in turn results the need to develop an appropriate method to analyze the behavior of the consumer in real – life retail settings. The conjoint study helps the researcher to understand the attributes and real values that influence the customers while making a purchase decision.

Conjoint analysis is a multivariate technique used to “understand the consumer's preference for a product or services. The method is based on the separate values provided by the customers towards various attributes of a product or service”. (Hair.et.all – 1998:392). (Sudman and Blair – 1998: 229-230). It is a difficult task for the respondents to indicate the attributes that they considered and also the combination of them to form their overall opinion. Conjoint analysis is basically valued on the fact that it estimate how each of these attributes are valued. Churchil and Lacobucci (2002:748) state that the word conjoint has to do with the notion that the relative values of things considered jointly can be measured, when they might not be measurable if taken one at a time.

Table 1: Attributes Considered by Prospective Garment Buyers

| ATTRIBUTES | LEVELS |
|------------|--|
| Price | R90 R170 R350 |
| Brand | Designer Private Label Unbranded |
| Style | High Fashion Classical Comfortable |

From the information given in the Table 1, it can be assumed that most of the buyers probably prefer the cheaper to medium priced private label shirt that is comfortable for them. This may not be the same in the case of premium designer shirts with more comfort. So the prospectus identified the

need for the trade off some of one feature to secure more of another. How the customers values these attributes is the major question. For Eg: low price values more high. In order to secure other features, the consumers are willing to pay high. Eg: the respondents are asked to rank the descriptions or attributes in order of preference. Thus the shirt description can be constructed using all 29 possible combinations (27 combinations and the orthogonal design generated by computer will add two more cards with the combination). Each combination is then written on a separate card. These 29 cards are arranged in a random order and the respondents are asked to arrange it in an ascending order based on their preferences.

2.9.1 Steps involved in designing a Conjoint Value Analysis

Based on the research situation, the researcher has to choose the right combination of tools for the project. Sudman and Blair (1998: 235) explained the difference between the arrangement of all possible combination of features (full fractional design) and one uses only some of the combinations (fractional designs). As per these authors and the general rule of thumb is to limit the descriptions to not more than 30. The Conjoint Value Analysis (CVA) can be used to measure up to six attributes. Basically it is designed for manual calculations but can be computerized by means of the SPSS 20.

A brief summary of the steps in designing a CVA follows

Select attributes: The attributes used will stem primarily from the objectives of the objectives of the study. The researcher should be guided by the principle that the attributes should be both capable of being acted on and important to consumers. These attributes are those that the company can do something about. That is, “it has the technology to make changes that might be indicated by consumer preferences” (Churchil and Lacobucci, 2002:754).

Determine Attribute Level: The nature of level of each attribute has a direct bearing on the number of stimuli respondents will be asked to judge. The more there are, the heavier the burden that is placed on the consumer. Churchill and Lacobucci suggest that the researcher make the range for the various attributes somewhat larger as to make the options unbelievable.

Determine Attribute Combination: This will determine what the full set of stimuli will look like. One cannot expect a respondent to provide meaningful judgments if there are five attributes **and three levels (3X3X3X3X3=243)** each of rank order judgments.

Select form of Presentation of Stimuli and Nature of Judgments: Basically, three approaches can be used, namely: verbal description, paragraph description and pictorial representation. When visual aids are used they are normally used in combination with verbal descriptions. The nature of the judgments that must be secured from the respondents is related in the form of presentation

Decide on Aggregation of Judgments: This step basically involves the decision whether the responses from consumers or groups of consumers will be aggregated and, if so, how this will be done? If groups are formed, operationally this means estimating the utilities for the individual level models and then clustering them into homogeneous groups.

Select Analysis Technique: The final step in the design of a conjoint analysis project is to select the technique that will be used to analyze the data. The choice depends largely on the method that was used to secure the input judgments by the respondents.

3.0 Statement of the Problem

Fashion trends were traditionally dictated by the Fashion designers and other fashion. Retailers need a better understanding of what consumers’ value when they make purchase decisions. This understanding will lead to a more accurate merchandise mix and more specifically targeted promotional and advertising campaigns. It is important to research the value consumers attach to certain attributes when making garment purchase decisions, which made the garment manufacturers to

frame an effective plan to understand the behavior of consumers and implement the plan in a successful manner. The type of garment purchasing decisions that the various types of consumers will make has been studied in this research.

4.0 Objectives

1. To analyze the attributes to which the customers of garment items were attached with.
2. To analyze the relationship between income and frequency of visit to the ranking variables.

5.0 Research Approach

For this study the population included adults from one Engineering college, one Arts College and two business Schools between the age group of 23 to 65. In this study a convenience, non-probability method of sampling was used. A questionnaire was prepared and sends to the 270 employees of these institutions and 176 data was completely filled and found usable. Conjoint analysis is used to analyze the data. Respondents were asked to make trade-offs between attributes at various levels, enabling them to make complex decisions not only on one factor, but on several factors together. The attributes and levels used in this study are shown in Table 1.

| Attribute | Level |
|--------------|--|
| Brand | Designer brand Private label brand Unbranded |
| Style | High fashion Classical Comfortable |
| Retail Store | Large clothing retail chain Discount clothing retailer Specialty clothing store Branded specialty store |
| Price | Designer: R4000-5000 Better: R3000-4000 Moderate: R2000-3000 Budget: R1000-2000 |

Published academic articles were used to identify possible attributes as a part of secondary data. A process of selection was followed to identify the four attributes used in this study. This process included ease of describing the attribute to respondents as well as the frequency with which the attribute had been used in previous research studies.

6.0 Analysis and Interpretations

6.1 Kaiser-Meyer-Olin (KMO) Measure of Sampling Adequacy

The KMO measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis to proceed. The Kaiser-Meyer-Olkin measure of sampling adequacy is an index for comparing the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients. Large values for the KMO measure indicate that a factor analysis of the variables is a good idea (Raftery 1993). In this study the KMO measures of sampling adequacy is depicted in the following table.

Table 1 Kaiser Meyer Olkin and Bartlett's Test

| | | |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | 0.782 | |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1462.556 |
| | Df | 253 |
| | Sig. | 0.000 |

The Sample is worth enough to measure variables. Anti Image Co-Variance for all the statements are $>.7$. Hence it shows the statements are unique and homogenous and are not correlated with each other.

6.2 Communalities

The extraction of all the 23 variables are $>.6$. It clearly shows that each variable contributes 60% of the variance. The cumulative variance is 62%, which means 62% of the measured variables are contributing positively towards the study. But still there is an error that 38 % of the sample variance is not measured. Still with reference to the earlier researches, even 60% is acceptable.

6.3 Exploratory Factor Analysis

Exploratory factor analysis (EFA) is a special form of factor analysis. It is used to assess the number of factors and the loadings of variables. A principal components Exploratory factor analysis with varimax rotation was performed on the original 23 items in the relationship Marketing (Grapetine, 1995). Principal components factor analysis is a statistical technique that transforms data from one set of variables into a smaller set of uncorrelated factors. An orthogonal varimax rotation was conducted because it maximizes the amount of variance described by a factor and minimizes the correlation between factors.

Table 2: Exploratory Factor Analysis for Garment buying preference

| Factors | Factor Loading | Percent Variance Explained |
|---|----------------|----------------------------|
| Social factors | | 13.95 |
| Sales person plays an important role in purchasing of dresses. | .690 | |
| Advertisement influences me to choose dresses. . | .695 | |
| Peer can have influences on my buying decision of garment | .689 | |
| I would like to try some dresses which are recommended by friends. | .716 | |
| Cultural factors | | 11.52 |
| One's own personal culture guides the selection of dresses. | .648 | |
| The ritual which we perform has an effect on purchasing of dresses. | .741 | |
| The religion to which we belong has influences my dress selection. | .740 | |
| Our subculture influences the selection of dress. | .746 | |
| I Would like to buy dress of most favored world brand. | .628 | |
| We believe that global brands will study the needs of their customers and fulfils the gap in frequent intervals | .661 | |
| Personal factors | | 11.48 |
| I feel comfortable when I am neatly dressed up | .770 | |
| I feel that I can create an image through my dresses. | .834 | |
| I feel that I can attract people through good dressing. | .702 | |
| Psychological factors | | 10.24 |
| Whenever there is a discount sale I will buy dress. | .730 | |
| New product or range from a well-known brand attracts me to buy dress. | .811 | |
| Attractive packaging influenced me to buy dress. | .624 | |
| In store display attracted me to buy dress. | .731 | |
| Brand Related Factors | | 8.91 |
| Brand Image is important for choosing dress. | .823 | |

| | | |
|---|------|-------|
| A well-known brand garments always more stylish and durable than a small brand's. | .732 | |
| I could be attracted to buy some brands represented by celebrities. | .652 | |
| I usually trust in a well-known brand because of the advertisement. | .647 | |
| Health Factors | | 6.31 |
| I select my dress which will not affect my skin | .860 | |
| I select my dress based on Dr's advice. | .742 | |
| Total | | 62.43 |

Interpretation

Factor analysis of the 23 items revealed a 6-factor structure that explained 62.43% of total variance. The criteria for retaining the 6 factors were given values greater than one and the ability to describe and label each factor. Individual items in the attributes of garment are buying preference for further analysis if they had factor loadings greater than 0.45 and fell in to 1 of the 6 interpretable factors.

Factor 1 was labelled *social factor* and was composed of 4 items. It explained 13.95% of the variance in garments buying preference. Items in this factor consisted of all of the questions relating to the social factor. The fact that the four items were originally meant to social factor and gives some evidence that customer responded as expected.

Factor 2 was labelled *cultural factor* and was composed of 6 items. It explained 11.52% of the variance in garments buying preference. Items in this factor consisted of all of the questions relating to the cultural factor. The fact that the four items were originally meant to cultural factor and gives some evidence that customer responded as expected.

Factor 3 was labelled Personal and was composed of 3 items. It explained 11.48% of the variance in garments buying preference. Items in this factor consisted of all of the questions relating to the Personal factor. The fact that the four items were originally meant to Personal factor and gives some evidence that customer responded as expected.

Factor 4 was labelled *psychological factor* and was composed of 4 items. It explained 10.24 % of the variance in garments buying preference. Items in this factor consisted of all of the questions relating to the psychological factor. The fact that the four items were originally meant to psychological factor and gives some evidence that customer responded as expected.

Factor 5 was labelled Brand related factor and was composed of 4 items. It explained 8.91% of the variance in garments buying preference. Items in this factor consisted of all of the questions relating to the Brand related factor. The fact that the four items were originally meant to Brand related factor and gives some evidence that customer responded as expected.

Factor 6 was labelled *Health factor* and was composed of 2 items. It explained 6.31% of the variance in garments buying preference. Items in this factor consisted of all of the questions relating to the Health factor. The fact that the four items were originally meant to Health factor and gives some evidence that customer responded as expected.

Table 3: One way ANOVA between Frequency of Purchase and Ranking

H₀ : Frequency of Purchase will not influence the ranking factors

| Factors | Once in 2 months | | Once in 3 months | | Once in 4 months | | Only in occasions | | F | Sig |
|----------------------|------------------|-------|------------------|-------|------------------|-------|-------------------|-------|-------|-------|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | | |
| Influence of Friends | 4.83 | 1.294 | 4.78 | 1.584 | 5.08 | 1.283 | 4.64 | 1.434 | 0.641 | 0.590 |
| Quality of the dress | 1.91 | 1.269 | 2.00 | 1.546 | 2.04 | .999 | 2.21 | 1.309 | .505 | .680 |
| Store I Purchase | 5.06 | 1.110 | 4.30 | 1.392 | 4.50 | 1.474 | 4.36 | 1.723 | 2.011 | .114 |
| Brand of the dress | 2.97 | 1.294 | 3.73 | 1.539 | 3.25 | 1.567 | 3.13 | 1.529 | 1.862 | .138 |
| Style of the dress | 3.00 | 1.393 | 3.43 | 1.405 | 3.29 | 1.681 | 3.54 | 1.517 | 1.094 | .353 |
| Price of the dress | 3.31 | 1.388 | 2.76 | 1.234 | 3.00 | 1.414 | 3.06 | 1.521 | .933 | .426 |

Source: Primary data

Interpretation

From the analysis we come to know that, frequency of visit is not influencing ranking preference towards the garment purchase. Though a small variation in the mean and standard deviation among the frequency of visit, the analysis of variance at 5% level of significance, calculated value is less than the table value. Hence the null hypothesis is accepted.

Table 4: One way ANOVA between Monthly Income and Ranking

H₀ : Monthly income will not influence the ranking factors

| Factors | <=10000 | | 10000-20000 | | 20000-30000 | | 30000-40000 | | 40000-50000 | | >50000 | | F | Sig |
|----------------------|---------|-------|-------------|-------|-------------|-------|-------------|-------|-------------|------|--------|-------|-------|------|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD | | |
| Influence of Friends | 4.06 | 1.706 | 4.82 | 1.344 | 4.94 | 1.218 | 5.44 | 1.333 | 5.75 | .500 | 5.33 | .866 | 3.224 | .008 |
| Quality of the dress | 2.36 | 1.417 | 2.12 | 1.382 | 2.0 | 1.219 | 1.89 | 1.054 | 1.5 | 1.00 | 1.44 | .726 | .989 | .426 |
| Store I Purchase | 4.78 | 1.456 | 4.38 | 1.600 | 4.50 | 1.630 | 4.67 | .707 | 4.25 | 1.50 | 4.56 | 1.59 | .379 | .863 |
| Brand of the dress | 3.25 | 1.50 | 3.44 | 1.532 | 2.86 | 1.397 | 2.78 | 1.481 | 3.00 | 1.41 | 3.44 | 1.74 | .967 | .440 |
| Style of the dress | 3.36 | 1.743 | 3.43 | 1.572 | 3.56 | 1.157 | 2.33 | 1.118 | 4.50 | .577 | 2.78 | .972 | 1.778 | .120 |
| Price of the dress | 3.06 | 1.472 | 2.89 | 1.286 | 3.17 | 1.715 | 3.89 | 1.364 | 2.00 | .000 | 3.44 | 1.236 | 1.471 | .202 |

Source: Primary data

Interpretation

The analysis between monthly income and ranking preferences were calculated. A small variation in the mean and standard deviation among the frequency of visit, the analysis of variance at 5% level of significance is found. From the calculated value, influence of friends is significances based on monthly income of respondents. All the other factors like, quality, price, store, and brand are not influenced by the monthly income.

6.4 Using Conjoint Analysis to Model Adults Garment Buying Preferences

Table 5: The Utility (part-worth) Scores and Their Standard Errors for Each Factor Level.

| Utilities | | | |
|-------------|-----------------------------|------------------|------------|
| | | Utility Estimate | Std. Error |
| Brand | Designer Brand | -.184 | .337 |
| | Private Lable Brand | -.054 | .337 |
| | Unbranded | .237 | .403 |
| Style | High Fashion | -.706 | .337 |
| | Classical | -.549 | .337 |
| | Comfortable | 1.255 | .403 |
| RetailStore | Large Clothing Retail Chain | .049 | .208 |
| | Discount Clothing Retailer | .099 | .415 |
| | Speciality Clothing Store | .148 | .623 |
| | Branded Speciality Store | .197 | .830 |
| Price | Rs.4000 to 5000 | -.195 | .208 |
| | Rs.3000 to 4000 | -.390 | .415 |
| | Rs.2000 to 3000 | -.586 | .623 |
| | Rs.1000 to 2000 | -.781 | .830 |
| (Constant) | | 13.616 | .699 |

Higher utility values indicate greater preference. As expected, there is an inverse relationship between prices and utility, with higher prices corresponding to lower utility (larger negative values mean lower utility). The presence of comfortable of the garment corresponds to a high utility, which gives a new insight in the field of study.

Since the utilities are all expressed in a common unit, they can be added together to give the total utility of any combination. For our study, the total utility of a garment purchase with the combination of Unbranded, Comfortable, Branded Speciality Store and Price Range of Rs.4000 to 5000 will give the maximum utility value for this study. This can be rewritten as :

Utility (Unbranded)+Utility (Comfortable)+Utility (Branded Speciality Store)+Utility (Price Range of Rs.4000 to 5000) + Constant.

OR

$$.237+1.255+.197+ (-.195) + 13.616= 15.11$$

7.0 Conclusion

From the above study it is evident that multivariate analysis helps us to understand the Garment Buying Preferences of the customers in market. The analysis of variance reveals the fact that the demographic factors are not affecting the buying preferences to a larger extent. From the Conjoint analysis we can understand the combinations or models in which the consumers get maximum utility value when they go for purchases. This will help the garment sellers to focus on their business in a larger extent.

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Impact of Covid -19 on Performance of Indian Sectoral Indices

Lakshmi Rawat*

ABSTRACT

Since January 01, 2020, cases of people infected with COVID-19 have emerged in almost all countries and had become the biggest challenge for a highly populated country like India. This pandemic is a significant event causing political and economic turbulence throughout the world. The objective of the current study is to capture the impact of this pandemic on the sectoral indices listed with Nifty. Market efficiency is being tested using the event study methodology with Nifty 50 as a proxy for market movement. To capture the effective impact of the information on the stock indices, to broaden the horizon of study three major events related to public information have been used for the outbreak of COVID-19 in India when the first case was confirmed on January 30, 2020. The most widely used event study methodology is efficient to capture the impact of public information and test market efficiency. To measure the estimated returns most popularly used Market Model has been applied. The statistical tool used to measure the significance in the means of the abnormal returns is the paired t-test and also confirmation through Wilcoxon test, using the SPSS software. Ten indices based on sectoral classification were studied and the results of the paired t-test and Wilcoxon test indicate that the statistically significant impact on the with an estimation period of 240 days and event window of 61 days as the most effected industries were Automobile sector, Banking sector both Private and Public Media and Metal Indices..

Keywords: Covid-19, Event Study, Market Model, Sectoral Indices, Market Efficiency.

JEL Codes: G14, C22, C52, C58.

1.0 Introduction

Statistics show that financial markets' well-being is one of the most significant factors in every economy's growth. The impact of Covid-19 on the industry based indices are at the heart of the study, trying to understand the present and future implications on the economy. It has become increasingly challenging to disregard companies' response and the related development of indexes in light of a deadly virus's recent occurrence. The disease's outbreak and the large death toll leading state and national wide lockdowns were the incontrollable developments that affected all sectors' indexes. There is an immediate need and attention towards understanding the effects on different manufacturing sectors of the Covid-19 pandemic. The present analyses suggest and describe the impact of media and reports on COVID-19 and its negative and positive effects on different indices.

The Economist (2020) report claims that the crisis is already transforming into an economic and labour shock, impacting the demand and production and distributing the factors of production and other economic and socio-political interlinkages. Also, on other issues, like consumption and investment. At the end of last year, the International Monetary Fund (IMF) said that the world is faced with an unprecedented amount of confusion over the depth and length of this crisis, and it was the worst among the worst economic fallout that happened this century. The IMF estimates the external financing needs for the emerging markets and developing economies are priceless in trillions of dollars. India too is cringing under the pandemic's curse, and as per news reports, the economists say the cost of the COVID-19 lockdown is expected to cost 4.2 per cent of the gross domestic product (GDP).

*Professor, Department of Management, Malla Reddy University, Hyderabad, Telangana, India. (Email: lakshmi_rwt@yahoo.co.in)

The pandemic impacted all the industries, including the manufacturing industry, specifically the services sector such as aviation, retail, tourism, transportation, health care, IT services and the list. Economic stress escalated initially and worsened in the last quarter of 2020 will intensify more in 2021. Forcing employees to maintain social distancing and face mask leads to decreased production on the one side. On the other hand, it also affected the demand for products and services from the consumers. As a result, economic collapse has been seen, and the downfall continues. However, it is a fact that social distancing forms a basis of cost-effective preventive methods to reduce the transmission of the virus. Flattering the caseload curve is crucial in preserving the economic health, but it comes with an economical expense.

2.0 Pandemics and their effect on the economy

Several studies performed earlier to determine the economic effects of epidemics were based on simulation models. According to Karlsson (2014), the effect of the 1918 Spanish flu outbreak on the Swedish economy is based on a neoclassical growth model. It expanded the traditional difference-in-difference estimation method to manipulate the different flu deaths rates throughout Swedish regions. According to Bloom et al. (2005) illustrations, the Asian Development Bank policy briefed to determine the Avian Disease outbreak's economic effect on Emerging markets by macro-economic projections. It was based on the Oxford Economic Forecasting Global Model (OIEFGM), which integrates both demands and supply sides and transitions to a new balance aftershock.

Similarly, experiments have measured Extreme Acute Respiratory Syndrome (SARS) economic consequences based on a global model called G-Cubed (Lee & McKibbin 2004). Economic consequences of epidemics are calculated by financial damage resulting from disease-related care costs or profits forfeited due to illness death rates. An outbreak's economic effects in one country are passed to other countries in an international economy due to interconnected distribution networks and financial markets. The pandemics and the years are highlighted in Table 1, and all have shown little to severe impact on global economies and one or other way.

Table 1: Past Pandemics in the late 2000s

| Pandemic | Year | Year | Cause | Death Toll |
|-----------|------|------|--|---------------------|
| Swine Flu | 2009 | 2010 | HINI virus/Pigs | 200,000 |
| SARS | 2002 | 2010 | Coronavirus/Bats, Civets | 770 |
| Ebola | 2014 | 2016 | Ebolavirus/Wild Animals | 11,000 |
| MERS | 2015 | - | Coronavirus/Bats, Camels | 850 |
| COVID-19 | 2019 | - | Coronavirus/Unknown (possibly pangolins) | 99,690 (increasing) |

Source – WHO reports and Wikipedia

COVID-19 is triggered through novel coronavirus, and experimental research is still ongoing to study the effect of this disease on humans and other living beings to find a potential cure for both the infectious bodies. Several factors in the epidemiological equations for this infection are dependent on hypotheses such as the source of infection, the level of infection, and the number of asymptomatic cases to symptomatic cases. In the future, scientific studies will uncover the secrets of the epidemic and transmission of the virus. Economic predictions or models are directly related to the epidemiological estimation of the incidence rates. The current study have not planned to use simulation models because of the complexities involved with the disease. The study's primary focus is to identify the most affected sectors among the eleven indices of NSE and enable businesses to take corrective measures. Suggest the government to make relevant policies from the conclusions from the analysis for future action. In the current scenario where the pandemic's strong impact takes the

capital markets, corrective measures are needed to rescue most injured sectors. A policy enacted in time may repair the damages and allow these sectors to emerge from the losses. (Malkiel, 1989; Malkiel & Fama, 1970) Efficient market hypotheses have been questioned on account of the challenges from behavioural sciences and irrational investor behaviour. However, the pandemic's impact on the stock indices and the stock prices' relevant movement needs a more in-depth examination to refer to significant policy measures in time. Consequently, the present study identified the negatively and positively influenced sectors with the most famous technique, i.e., event study methodology with statistical accuracy.

2.1 The effect of COVID -19 in India

The pandemic outbreak of COVID-19 has emerged in Wuhan city in China and then spread worldwide, creating a social and economic shock after February 2020. Recent reports from the World Health Organisation reports show that 100 million confirmed cases of COVID-19 positive and 2.16 million deaths with 55.4 recovery rate as on January 27 2021. The report for the South-East Asia Region (SEAR) is 12.76 million confirmed cases and 0.2 million deaths. In India, 10.7 million active cases, with 0.015 million deaths.

Past few years, the world population had faced the emergence of five pandemics and lost many lives, which had a massive impact for a minimum of one year. In this case, the biggest challenge is the non-existence of any vaccine or a cure for the disease. However, new vaccine drives and phase three testing has been under process, and more than 4 lakh service staff received the vaccine. This disease's spread is through human to human transmission through respiratory droplets when they are in close range of less than one meter. Indian Council for Medical Research (ICMR) the disease majorly spreads and has been classified into four stages as follows:

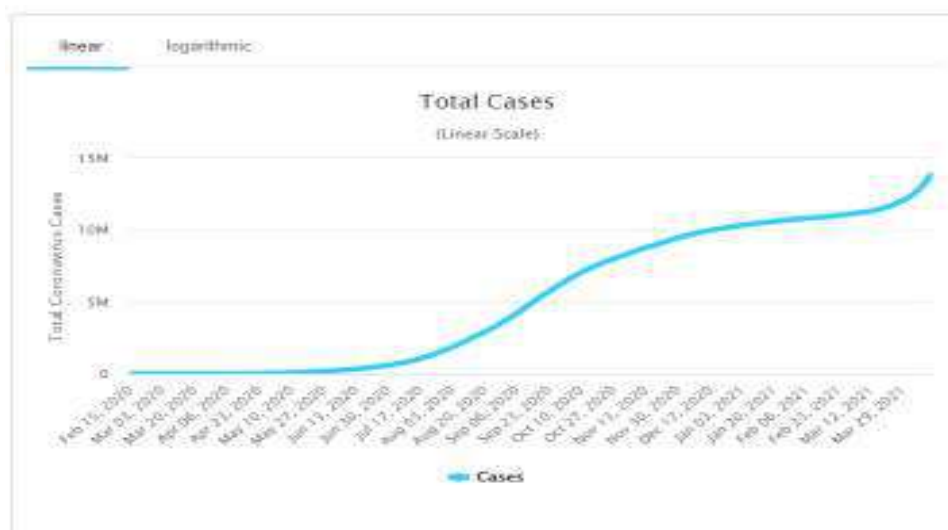
Stage 1: Low number of cases infected. Inflexion through people with travel history, sources traced, and no local spread.

Stage 2: Those who have travel history infected their close friends, relatives and others need for isolation and contacts.

Stage 3: Community transmission, where the source of the virus is untraceable. Large random members of the community start developing the disease.

Stage 4: Rapid spread of disease and growing numbers make the whole geographic region struggle with the virus spread.

Figure 1: Coronavirus cases in India 2021



Source: <https://www.worldometers.info/coronavirus/country/india/>

The spread of this disease in four stages, while Indian is currently in Stage – II.

Social distancing is the most effective preventive measure for COVID-19, the Indian government announced the Nationwide lockdown on March 24, 2020, for 21 days, and the second phase of the nationwide lockdown was announced on April 14, until May 03 2020. The third phase of lockdown from May 04 to May 17 and phase 4 from May 18 to May 31 2020. These Indian lockdowns being the biggest lockdown extensions in the world with more than 5 million active cases. After that government announced unlock sector-wise, state-wise and finally region wise. Compared with the virus effect, lockdown effect is more on the industries and their economy instability increasing in the country.

Recent studies suggest that the top five global risks' likelihood contains Human-made environmental disasters at fifth place among the evolving risks landscape. Its impact will be felt both in the short and long run (Global Risk Report, 2020; World Economic Forum, 2020) COVID-19 has been a historical case of neglected and unpredictable risk, vaccines, and targeted therapeutics for the treatment of this disease are currently lacking. The world stock markets are now battling the consequences of the outbreak of this pandemic. Through the present circumstances of world quarantine conditions, with all major industrial shutdowns, the impact is expected to fracture the major economies. The World Health Organisation announcement on the COVID-19 being declared a pandemic revealed the beginning of the economic, financial, and social crises.

For the Indian economy, this is a special case of crises with a history of corporate scams in Indian financial markets witnessed during late 2000 seems to have now been aggravated due to the pandemic. With the Prime Minister of India's announcement for the nationwide lockdown on March 24, 2020, for 21 days hampered production, employment, consumption, investments, and supply chain of national and international transactions. The study of industry-wise segregation has representation from various sectors classified separately by NSE India and BSE, which are two major stock exchanges in Indian Capital Markets.

Previous studies on pandemics have not dealt with the impact on all the (Wallis & Nerlich, 2005) industrial indices; the research has focused on unemployment; equity markets and bond markets. Research indicates that pandemics have had an immense impact on economic growth, specifically on the stock markets (Jansson, 2019; Wallis & Nerlich, 2005) during the past. This study concentrates on the immediate effect on Indian Industrial Indices' industrial indices listed with Nifty due to the COVID-19 pandemic.

2.2 Importance of Event analysis

An earlier study on SARS conducted to test the impact of virus spread on the publicly traded hotel stocks using ten days and twenty days showed significantly negative cumulative returns. As the study conclusions were drawn using the event study method (Chang, Hsu, & McAleer, 2018; Chen, 2007). The impact of demand and absenteeism of a pandemic would be unevenly distributed across sectors (Steven James & Tim Sargent, 2007). If a pandemic were to occur, human suffering and life loss would outweigh economic concerns (Muhammad & Baig, 2010; Kaur, 2013; Gakhar, Kushwaha and Ashok, 2015). Therefore event study methodology has been most popularly used to investigate a semi-strong form of market efficiency as first recommended by Fama, Fisher, Jensen, and Roll in the year 1969. Osei (1998) market efficiency is not only on account of free and available information on time but also on those who trade and analyze market information. Studies have been conducted on various policy announcements and political events such as elections in emerging economies and have impacted the financial markets.

The analytical and interpretational skill of traders influences the information which flows in the market, followed by investor decisions. Fama, E. (1995) proposed the efficient market hypotheses and suggested the presence of three forms of market efficiency: (1) Strong Form, (2) Semi-Strong

Form, and (3) Weak Form of Market Efficiency. Event study methodology has been used to outline in most of the studies to analyze corporate stocks and bonds' impact on various events (Ball and Brown, 1968; Cannella, 1993; Kothari, 2007; Malkiel, 1995; MacKinlay, 1997). The strong form of market efficiency is where the prices reflect both publicly available and insider information; it is the most potent market. It also implies that market information cannot be used to predict future prices, technical analysis, fundamental analysis, and insider information are of no use in predicting future prices.

In a nutshell, this methodology quantitatively evaluates the impact of an event (Peterson, 1989) Event study methodology has been the most frequently used tool in financial research, (Armitage, 1995; Sang, 2007) with the market model being used for derivation of abnormal returns using. The current study combines the event study methodology using the market model to assess the impact of Covid-19 on Indian Industry-specific indices.

3.0 Objectives of the study

The purpose of the present study is to examine the impact of the COVID-19 on the Indian Industry-specific Indices listed with Nifty.

3.1 Impact of COVID-19 on Indian indices

Objective of the study: The study's first objective is achieved through an event study analysis on the event-announcement of Spread of Covid -19 through media on 30 January 2020.

H_0 = There is no significant impact of the announcement of Covid-19 on the Indian Sectoral Indices (Index 1 to Index 10)

4.0 Research Methodology

Efficient Market Hypotheses says that the capital markets are efficient in reflecting the occurrence of any event. The event studies focus on long-horizons following an event can provide key evidence on market efficiency (Brown & Warner, 1980; Fama, 1991). To get a deeper understanding of industry indices during COVID-19 lockdowns and its impact on India's index (Chang et al., 2018; Shaw, Chilcott, Hansen, & Winzenberg, 2006) Returns during and post-event help in quantifying the impact of different events.

First, the outbreak of COVID-19 confirmed the case in India and second on the first COVID -19 death caused in India and the third being the announcement of the first Lockdown period of 21 days on March 24 2020. (Aljazeera, 2020); The pandemic information had run through all the channels of communication like a terror and assumed to have impacted the stock prices also. Through the present research, an attempt is made to understand the statistically significant impact of the events. With the outbreak of COVID-19 in 2020, most developed nations like the United States of America, have harmed its capital markets. The reaction of Indian Indices listed with Nifty is explored using the Nifty 50 and Nifty 100 as a market proxy through the event study methods. The information about the spread of the event started with the confirmed report on the identification of the first case in Kerala state in India on January 31 2020, then second the first confirmed death of a senior citizen on February 13 2020, and ultimately the announcement of Nationwide lockdown on March 24, 2020, by the Prime Minister of India considering the severity of the pandemic.

With the present condition of the outbreak of COVID – 19, several industries' performance has been shaken (Deloitte Report, 2020). Under these conditions, the present paper's objective is to assess through event study methodology, the impact of the event, and test for the statistical significance of the impact. (NSE) It includes the top 100 companies based on full capitalization from

Nifty 500. It intends to measure large market capitalization companies. The analysis data includes the daily closing prices of all the indices, for the market proxy Nifty 100 has been used. The NIFTY 50 Index represents about 66.8% of the free-float market capitalization of the NSE stocks as on March 29, 2019. For confirmation of the result, the most popular index of Indian capital markets Nifty 50 has also been used. The study period includes the study of closing prices of all the sectoral specific indices and the market indices from 21st June 2019 to until March 13th, 2020.

Event study analysis for estimation of returns has been used extensively (MacKinlay, 1997; Mitchell & Netter, 1994; Williams & Siegel, 1997). This model is used to calculate the estimated returns of stocks depending upon the market returns. The difference between actual returns and estimated returns is the abnormal returns.

4.1 Description of terms

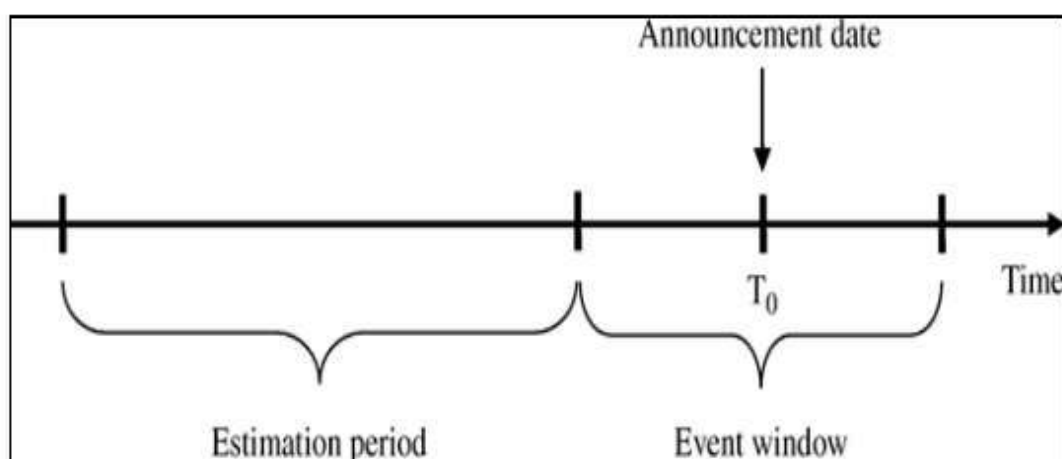
Event: "It is the occurrence of a particular action occurring at a specific time, and is expected to convey some information. Day "0" is the event day for each announcement/security in the present context. Three event days have been considered to evaluate the impact of the COVID-19 pandemic on Indian Stock Indices in the present context. These are as follows:

The estimation window is when daily returns observations for the period before the event window are drawn and used for estimating expected returns. In the present case 250 days" event period, it is commonly used in most event study analysis.

Event Window is the time duration selected before and after the event being considered to study the abnormal return variance.

Estimation Model is a statistical model that relates to the return of any given security to the market portfolio's return. Models with linear specifications follow from the assumed joint normality of asset returns. For any security „i" the market models abnormal returns are calculated using the market model, which is commonly used in event studies to measure abnormal returns (Norman, Strong; 1992). Market Model for estimation of returns has been used extensively (C. MacKinlay, 1997; Mitchell and Netter, 1994; Williams & Siegel, 1997). This model is used to calculate the estimated returns of stocks depending upon the market returns. The difference between actual returns and estimated returns is the abnormal returns. It signifies the deviation from the expected returns and demonstrates the market reaction to a particular event. For the present study market model is used for estimating the expected returns. The estimation period of 1000 days before 60 days of the as the event window is used for each of the events.

Figure 3: Event Study Window



It signifies the deviation from the expected returns and hence is capable of demonstrating the market reaction to a particular event. Daily returns are calculated for each day using data of closing price security.

$$R_i = (P_1 - P_0)/P_0 \dots\dots\dots (1)$$

Where,

$R_{i,t}$ = Return on Stock i , for time t

P_1 = Price of Stock I for present day

P_0 = Price of Stock I for a previous day

The equation used is: $R_{i,t} = \alpha_i + \beta_i * R_m + \varepsilon_{i,t} \dots\dots\dots (2)$

Where, $R_{i,t}$ is the expected return from stock I at time t , α_i , and β_i are the estimated values and $\varepsilon_{i,t}$ is the error term which is assumed to be „0“. Abnormal returns are calculated using the following:

$$I_t = R_{i,t} - (\alpha_i + \beta_i * R_m) \dots\dots\dots (3)$$

Cumulative Abnormal Returns (CAAR)

CAR (t_1, t_2) where $t_1 < t_2 < t_3 < \dots < n$

Abnormal Returns must be aggregated to draw overall inference for each announcement across two dimensions, through time and across securities. CAR is used to accommodate multiple period event windows.

4.2 Testing for significance of abnormal returns

(Kothari) The null hypothesis is rejected if the test statistic exceeds a critical value, typically corresponding to the 5% or 1% tail region (i.e., the test level or size of the test is 0.05 or 0.01). The test statistic is a random variable because abnormal returns are measured with error using parametric tests such as t-test with the assumption of normality is difficult to test. (Binder) One method to test the statistical significance of the estimated average abnormal return for month s is to assume that the individual ARis's are independent and identically distributed. The assumption of normality of standard deviation of the average abnormal returns may not be fulfilled hence non-parametric tests are also used to measure the significance of abnormal returns. Non-parametric tests reject the hypothesis of positive abnormal, Wilcoxon signed ranks test is used for testing the significance of abnormal returns. It connects both sign and magnitude of abnormal returns. Wilcoxon test assumes that “numbers of absolute values are equal and each is different from zero.” Paired sample t-test, Serra (1999), and Wilcoxon test, Corrado (1989); have been used for testing abnormal returns before and after the event.

Analysis for ex-events, abnormal returns has been done using both parametric and non-parametric tests. ARs are tested for three different event AR"s for the pre-event and post-event period. The results of the analysis completed with the help of SPSS 25 for the outbreak of COVID - 19 in India conducted on 10 indices from Nifty are presented below. This includes the results from the paired-sample t-test to check for the statistically significant difference in the mean returns before and after the event. Market model has been used with two indices as a proxy for market movement (i.e) Nifty 50.

5.0 Data Sources

Data used is secondary and is related to closing stock prices. The yahoofinance.com is the website where all the relevant secondary data has been downloaded for further analysis. All the data has been analyzed using MS-Excel and SPSS software. Rigorous data cleaning has been done before proceeding with the analysis. These are the inferences from the raw data of monthly returns calculated by taking the natural log of daily returns from the first and last date of the month for each index. There are ten most significant indices included in the sample as mentioned above.

| Sector | 30 Days-Pre event | | | 30 Days-Post event | | |
|---------------------------|-------------------|--------------------|----------|--------------------|--------------------|----------|
| | Mean | Standard Deviation | Variance | Mean | Standard Deviation | Variance |
| AUTO SECTOR | -0.011 | 0.013 | 0.000 | -0.094 | 0.062 | 0.004 |
| BANK SECTOR | -0.009 | 0.020 | 0.000 | -0.053 | 0.045 | 0.002 |
| FINANCIAL SERVICES SECTOR | 0.014 | 0.012 | 0.000 | 0.004 | 0.034 | 0.001 |
| FMCG SECTOR | -0.040 | 0.016 | 0.000 | -0.030 | 0.016 | 0.000 |
| MEDIA SECTOR | -0.099 | 0.026 | 0.001 | -0.160 | 0.093 | 0.009 |
| METAL SECTOR | 0.045 | 0.036 | 0.002 | -0.090 | 0.097 | 0.010 |
| PHARMA SECTOR | -0.027 | 0.015 | 0.000 | -0.032 | 0.032 | 0.001 |
| PRIVATE BANKS SECTOR | -0.008 | 0.022 | 0.000 | -0.059 | 0.044 | 0.002 |
| PUBLIC BANKS SECTOR | -0.076 | 0.032 | 0.001 | -0.271 | 0.123 | 0.015 |
| REALTY SECTOR | 0.081 | 0.046 | 0.002 | 0.059 | 0.074 | 0.005 |

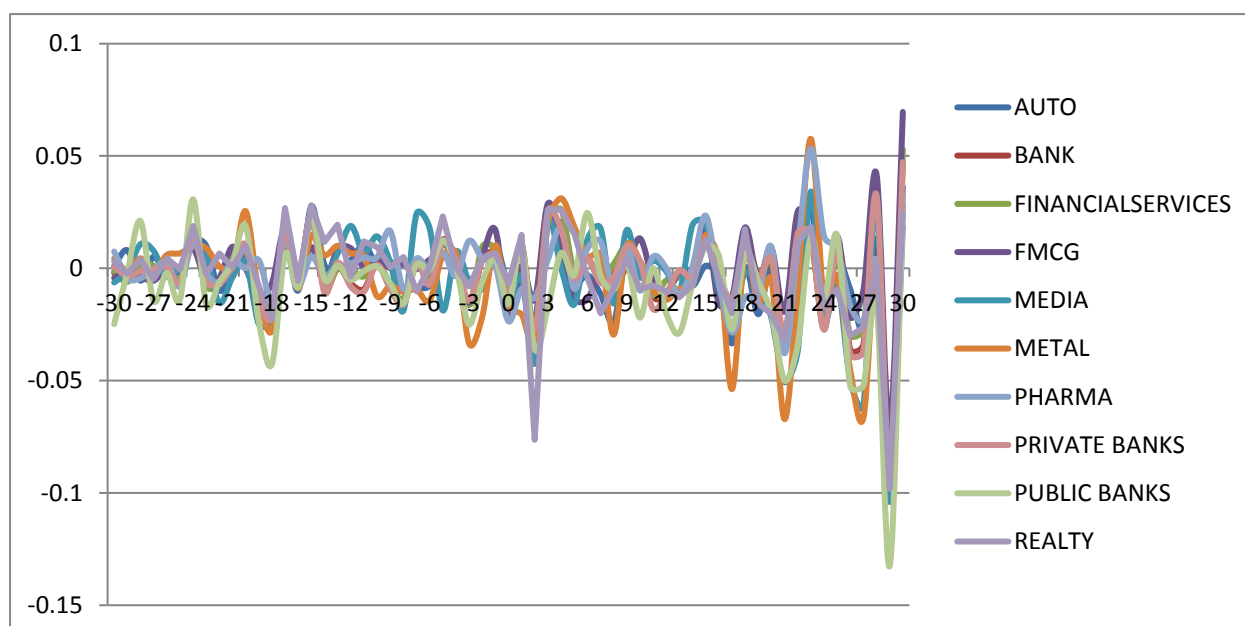
bSource: Calculated from Data using Excel

6.0 Analysis and Discussion

The study is conducted on all the industrial indices of the National Stock Exchange, which are presented in the table above. Each sector represents the group of stocks which represent the whole industry. It's useful to make a comparison for the return risk assessment among peers and with the market. They are broadly categorized as (1) Broad Market Indices (2) Sectoral Indices (3) Thematic Indices (4) Strategy Indices (5) Fixed Income Indices. Daily returns are calculated for each day using data of closing prices from the yahoofinance.com website.

The outbreak of COVID-19 started with the epicenter in one province with one confirmed case on 30 January 2020. This taken as the day on which the information ran across all the media had a dramatic impact on all the indices. Measured on the raw data of daily closing prices of these indices the results, indicate a downward market trend for all the indices, including the market benchmarks Nifty 50 from the calculated Cumulative Abnormal Returns (CAR).

Figure No.: Cumulative Abnormal Returns of all Indices



The above charts represent the cumulative abnormal returns (CAR) of the indices for the event window of -30 to +30 (i.e.) 61 days. The calculation is based on the abnormal returns calculated using the market model. The estimated returns have been calculated based on the Nifty 50 as a proxy for market movement. It reflects the downward slope of the CAR of all the indices, most of them moving from positive to negative CAR.

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