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Association of Indian Management Schools

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**Prof (Dr) Upinder Dhar**  
Chairman, Editorial Board



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# Editorial

## *Mobile Cloud Computing As a Game Changer*

Mobile cloud computing technology consists of cloud computing and mobile computing combined on a wireless network. This innovative technology makes it possible to deliver and execute high-quality applications on mobile devices, regardless of the latter's operating system, storage capability, and computing tasks. It offers a greater degree of speed and flexibility for end-users and application developers. The mobile cloud encompasses cloud-based data and applications and services created for mobile devices. It brings together mobile application development and cloud-based services, facilitating the delivery of cloud services and apps to mobile users. Remote data centers store the relevant data and run the apps.

Mobile cloud computing is a natural progression of mobile and cloud computing technology and has proven to be a game-changer in using our mobile devices, whether for work or leisure. According to Mordor Intelligence, the mobile cloud market will reach the \$118.70 billion mark by the end of 2026. It is fast and flexible. As a result, it becomes easier for developers to create and share mobile app resources with end-users. Mobile cloud computing shares resources. Mobile apps that run off the cloud are not constrained by any mobile device's processing and storage limitations. All data-intensive processes can run from the cloud. This advantage means that any mobile device with access to a network can use mobile cloud apps, regardless of the operating system. Thus, users can experience cloud computing with Android or OS devices.

Mobile cloud computing uses integrated data and lets users securely and quickly collect and integrate information from many sources, no matter where the data is. Mobile computing and cloud computing seem, at the first glance, to be much the same. The technologies are similar because they share some common characteristics, but they are different when one takes a closer look at them.

Cloud computing delivers computer service over the internet. It is a scalable, cost-effective service that offers customers everything an in-house computer room can give, such as software, analytics, data storage, and databases. When we see offerings like IaaS, SaaS, or PaaS, we are dealing with cloud computing, which is not even necessarily mobile computing. Mobile computing sends data, video, and voice files over a network, using a mobile device like smartphone, laptop, or tablet. We can have a look at some of the more commonplace mobile cloud computing applications.

*Social Media:* It seems like everybody and their extended family is on Facebook, Twitter, Instagram, Tik Tok, or a host of other social media platforms. Mobile social networking lets users store data and share videos in real-time, thus one's friends and followers do not have to wait for that new cat video! *Email:* It often seems that people are more likely to log on to their social media accounts every morning rather than open their new emails. Endless spam floods can be blamed for that phenomenon. However, we are probably using apps like Outlook, Gmail, or Yahoo for those of us who do read our emails. So, if one is reading his/her emails on a mobile device, such as smartphone, that is mobile cloud technology in action.

*Finance and Commerce:* When a person is using his/her mobile to monitor account balances with a banking app, or making purchases on eBay or Amazon using tablet, that is mobile cloud computing offering scalable processing power. *Healthcare:* It is absolutely essential for healthcare workers. Thanks to mobile cloud computing, huge amount of data can be instantaneously stored or accessed with a mobile device. Healthcare professionals can instantly access patient records, an essentially important feature for referrals. A specialist needs to see a patient's medical history and why they were referred in the first place.

The readers of AJM are requested to go through the contents of the journal and help us in improving the academic value of this publication by offering suggestions based on their critical review and constructive observations. The prospective contributors to this journal are advised to follow APA pattern (latest Edition) for presenting the references.

**Prof (Dr) Upinder Dhar**  
Chairman  
Editorial Board – AJM

# A Bibliometric Analysis of the Gig Economy

Soumya Vadavi\*, J.C. Sharmila Devi\*\*

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## Abstract

*The primary objectives of this paper are as follows: First, the paper captures and explains the trends of the gig economy; second, the paper discusses bibliometric analysis using VOS viewer software. Different terminologies describe gig workers and the world's emergence of the gig economy. To know this, we applied the bibliometric strategy (bibliographic coupling) and information extracted from the Scopus Database; it is a moderately new field of study. Gig platforms, such as Freelance and Upwork, represent expanding the gig economy to encompass knowledge-based work. A new financial model that accepts a spread of transient business is quickly spreading throughout the world. Gig workers act as their bosses and choose jobs for extra income. Covid-19 also affected online job openings and online job filling, which affected the spread of the pandemic.*

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**Keywords:** Authorship, Contract Employees, Freelancing, Short Term Work, Wellness coaches.

## Introduction

The rise of technology, economic labour, and entrepreneurial spirit is aiding the expansion of the gig economy. The gig economy is a new economic model that embraces the spread of different kinds of contract/part-time employment, rapidly increasing worldwide and becoming an everyday reality and reworking in the market. The gig economy is a comparatively new concept, considered a meaningful economic game changer in the last decade. Gigs are conceptualized with four dimensions: online intermediation, paid tasks, independent contractors, and personal services. Research studies focusing on the impact of COVID-19 indicate that the pandemic positively affected the gig economy, as employers can work from anywhere across time and simultaneously figure out opportunities anywhere (Zaman et al., 2020)

One of the essential benefits of the gig economy is that workers have more flexibility to work and earn more irrespective of time and distance; it is suitable for earning

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extra income apart from their regular income. They generally include part-time drivers, retirees, self-employed women, interns, first-timers and trainers (Warren, 2021). The decrease in full-time, long-term work and periods of high unemployment contribute to the growth of gig platforms. It also reflects a change in expectations because many job seekers nowadays demand flexibility and control over their work schedules (Scully-Russ & Torraco, 2020).

The digital platforms permit job seekers to conduct most of the search and inquiry processes online. Digital media are creating further job opportunities for workers to work through online platforms (Banik & Padalkar, 2021). With technological advancement, things could become more difficult for unskilled workers. Because fewer high-skilled gig workers are available than low-skilled ones, they are in higher demand and have more negotiating leverage (Mahato et al., 2021). As per the Harvard Business Review report, digital platforms provide on-demand access to highly skilled employees and have considerably enlarged participation from 80 in 2009 to 330. It also added that all Fortune 500 firms use these platforms to scout for a highly skilled workforce (Fuller et al., 2020)

This research paper explores the prospects and challenges of gig work in India and how it can provide decent work opportunities for people. The gig economy offers numerous opportunities to gig labourers, such as flexible workplaces, working in interest regions, and admittance to worldwide occupation postings.

## **GIG Economy**

Changing trends across the job market are making the gig economy more relevant and prominent in today's digital era. The gig economy is a free-market system with a short-term opportunity to complete a project or task successfully. Traditional jobs in the United States will be replaced by "gig" or "freelance" work by self-employed workers acting as independent contractors. Traditional employment shifted towards the gig economy with flexible working hours. (Noronha, 2020) The gig platforms offer "bridge employment" before beginning permanent positions in many nations. As the gig economy grows, it expands job opportunities for gig workers, allowing them to live more comfortably (Roy & Shrivastava, 2020)

## **Motive of GIG Work**

The primary motive of gig employees is to earn additional financial gain, inspiring them to participate in the gig economy and earn extra money to extend their quality

of living. A secondary motive of gigsters is having flexibility and autonomy (Bajwa et al., 2018). The gig work is additional work that contributes to an increase in the standard of living.

The growth and effect of the gig economy at work are highly pervasive and have entirely changed industries and the way people are involved at work (Vallas & Schor, 2020). The economy slops towards the gig economy from the country's blended economy. So, this study reflects that the new system is facing new challenges, which may benefit the country (Bansal & Singh, 2020). India's gig economy is expanding as younger, educated professionals join major international freelance platforms. In 2015, there were 15 million gig workers in India; notably, 41% of gig workers in India work in or connected to information technology (IT). (Financial et al.).

**Table 1: Percentage of companies looking to hire gig workers – by sector**

Industry	2020	Future (2-5 years)
FMCG – Pharma	15%	69%
BFSI	32%	56%
Manufacturing	35%	65%
Technology & BPO	57%	60%
Services	47%	76%

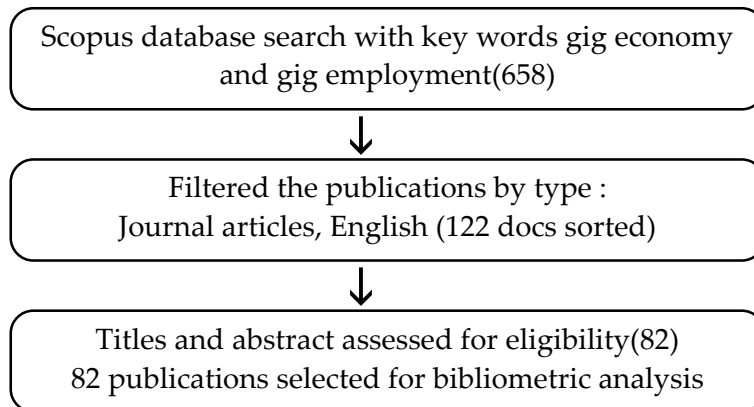
**Source:** (*Emergence of India's Gig Economy* | IBEE, 2020)

With 15 million talented professionals driving the rising demand for contract-based employment or independent business, India makes up about 40% of all independently offered independent jobs (Bansal & Singh, 2020).

Scopus indexes are considered for this study. It is a recognised index with a comprehensive coverage of peer-reviewed publications and provides reliable bibliographic data. Scopus claims to be the most significant abstract and citation database of research literature, including journals, conference proceedings, and articles. Scopus updates the database daily, but in the case of WOS, data is updated every week. Scopus has more than 20,000 unique journals, more than 13,000 unique journals in WOS. (*Scopus vs ISI WOS; Which One?* -, n.d.). We systematically obtained the publications from the Scopus database, as shown in Figure 1.

Gig economy and gig employment keywords were used to search the Scopus database, and the initial search yielded 658 papers. The titles and abstracts of publications in the database from 2009 to 2021 were then filtered out. We have limited documents that employ the English language, yielding 122 documents. After reviewing their titles and abstracts, we chose 82 pertinent papers. We used keywords such as gig economy and gig employment for bibliometric analysis. We extracted the data from the Scopus index, and more research work has been done since 2016; in the year 2021, more than 150 articles were published without filtration, but after filtration with language English and keywords such as the gig economy, we found 33 relevant articles for the study. We found an excellent scope to proceed with the research work.(Scopus | *The Largest Database of Peer-Reviewed Literature* | Elsevier, n.d.)

**Figure 1: Systematic process to select literature**



Gig work offers more flexibility, and short-term employment is spreading worldwide, creating alternative employment opportunities with the help of online platforms (Banik & Padalkar, 2021). At the same time, businesses can reach out to applicants with the necessary abilities due to the rapid growth in the utilisation of technology, digital platforms, and changing candidate preferences (Benson et al., 2020). With the rise in technology, employment culture has changed, moving towards the gig era. The scope of the gig economy is rapidly increasing with the new trends and technologies, which began to hire people to work part-time or/ on a gig basis (Rao, 2021)

As per India's emerging gig economy studies, we can reveal that women are also showing more interest in participating in the gig economy to support families or increase the standard of living. Women are finding employment as beauty and wellness

coaches or care workers in the service sector (Forum & Implementation, 2020). According to a study in the USA, the number of freelancers increased from 3.7 million in 2014 to 62.2 million in 2019. The training and education industries are among the top few industries in the highest demand for freelance workers due to the high level of skill and knowledge and the rise of virtual education. From the new learning or online learning methods, students can explore and adopt the new culture of the gig economy, giving them more choices of where and how to learn. (*How the Gig Economy Is Impacting Education* | *InformED*, n.d.)

Here, from the literature, we found some similar studies in the context of the future of the gig economy or boundaryless careers in the gig economy, talk about career growth opportunities in the current and future; the only difference the researcher observed is that studies are conducted in different countries, such as India and Norway. As per bibliometric analysis, these countries have fewer publications.

As per a study by the researchers titled *The Emergence of Gig Economy in India and A Study on Its Growing Relevance in India*, both researchers are talking about how the new system of online platforms creates more opportunities for gig employees to grow faster in India. Based on the study, we found that most of the researchers used mixed research methods with non-probability sampling design and conceptual-based research, and only a few of the researchers used qualitative methods using observation and semi-structured interview methods.

Bibliometric analysis helps to analyse the data and provide insight into the literature related to a specific field (Ellegaard, 2018). The significance of taking bibliometric analysis is that we can clearly understand the people, institutions, locations, relevance, and methodological contributions made in a specific field of knowledge/study, which also facilitates taking the knowledge study further, leading to identifying knowledge gaps, research gaps, methodological gaps, critical views, etc. (Garfield, 2001; Podsakoff et al., 2008).

This paper focuses on a bibliometric overview of research published in the gig economy in the last decade. The researcher aims to know some of the most researched work in this area and understand the upcoming trends according to the information in the indexed database. A bibliometric method facilitates the examination of large data sets by knowing the number of authorships and publications. Bibliometric analysis helps to measure the impact of an article using citation counts. (*Bibliometrics* | *The Guidelines Project*, n.d.), Bibliometrics also provides a general picture of the research field, which can be classified into authorship, countries, and citations. This analysis paper

showcases a bibliometric overview of research published on the gig economy in recent decades (Merigó & Yang, 2017)

We chose Vos Viewer instead of any other software because, unlike other programs typically used for bibliometric mapping, Vos Viewer showcases the maps and analysis of authors and publications, which helps to interpret quickly. (Netto & Tello-Gamarra, 2020; van Eck & Waltman, 2006). The research was conducted on one of the most essential knowledge domain databases to make this analysis viable (Philip Saul et al., 2016). Finally, we employed the bibliographic authorship and country citation technique to map the bibliometric study. All publications were imported into the Vos Viewer program, and an existing relation was discovered using the similarity method (van Eck & Waltman, 2006).

## **Results and Discussion**

Bibliometrics analysis data will be presented in this section. The evolution of research about the gig economy over the decades has used the gig economy as a keyword. Central studies in this field are addressed here sequentially, which helps to know research trends and agenda.

### **Authorship of the Countries**

The Scopus database and VOS viewer software results show that most publications are done in Australia, Canada, Germany, India, Norway, the United States and the United Kingdom. These countries focus on a large number of publications. As shown in the table, but conducting the analysis with other indicators, such as citations, authorship, countries' involvement, as the scenario highlights countries participation, such as Canada (5th), the Australia (3rd), India (4th), United Kingdom (2nd), and United States (1st), which gain expressiveness in the citations category with all countries, the central exciting fact is that in the United States a large number of researcher working on the same subject, we found lower citations.

Through the below table, we can see that for this study, "A bibliometric analysis on gig economy", here in the bibliometrics analysis out of 28 countries with a minimum number of citations of a country, five (5) out of these 7 meet the threshold, out of 7 countries four items are a most extensive set of connected items. The highest number of studies has been conducted in the United Kingdom, with the number of papers published being 23 with citations of 959, followed by the United States with 12 documents and 189 citations. The least number of papers on the current topic has

been conducted for India and Norway, with the number of papers published being 5. Finally, we must highlight many citations and publications in the United Kingdom. The United Kingdom individually published 23 documents with the citation of 959, and India is exhibiting with five publications.

**Table 1: Authorship of the Countries**

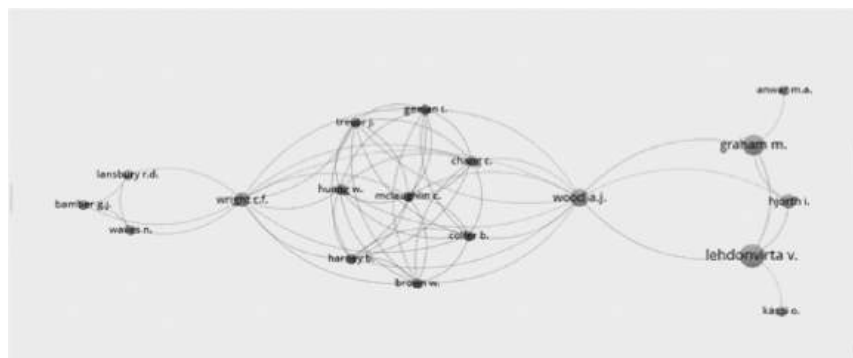
Sl No.	Rank	Country	Documents	Citations	Total link strength
1	1	Australia	11	89	5
2	4	Canada	6	42	0
3	10	Germany	7	16	2
4	12	India	5	50	2
5	17	Norway	5	32	2
6	27	United Kingdom	23	959	3
7	28	United States	12	189	2

*Source: Authors compilation*

### **Authors and Publications**

Through the authors and publication figure-2 and table -2 as below, we can see that for this study “A bibliometric analysis on gig economy”, out of 68 documents and 182 authors, 80 meet the threshold with minimum citation of an author is five(5), for each of 80 authors most excellent total link strength will be selected. The highest total link of strength is 14. The author Lehdonvirta v. has the highest citation of 563.

**Figure 2: Authors and Publications**



As per the figure, we can observe that the articles received an elevated number of authors and citations during this research field; since this is a booming research area, the publications of a study with a better number of citations highlight its author. In Table- 2, we can observe a list of publications with author names. A minimum of one published study was necessary for consideration, and the lowest citation is 6, the highest citation is 563, the highest link strength is 14 by author Wood A.J, and the citation is 242.

**Table 2: Authors and Publication**

Sr. No.	Id	Author	Documents	Citations	Total Link Strength
1	3	Anwar M.A.	1	11	1
2	4	Aroles J.	1	18	2
3	5	Audebrand L.K.	1	31	3
4	6	Awasthi I.C.	1	7	1
5	7	Baiyere A.	1	9	2
6	8	Bamber G.J.	1	14	3
7	17	Bergvall- B.	1	78	1
8	25	Brown W.	1	6	9
9	27	Bucher E.L.	1	8	2
10	28	Burtch G.	1	104	2
11	29	Bögenhold D.	1	7	2
12	30	Carnahan S.	1	104	2
13	34	Chang C.	1	6	9
14	37	Colfer B.	1	6	9
15	39	Cristian Ciurlău F.	1	12	1
16	40	Croteau A.-M.	1	31	3
17	42	De Vaujany F.-X.	1	18	2
18	43	De' R.	1	43	2
19	44	Dunn M.	1	13	3

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20	45	Fieseler C.	2	14	4
21	46	Flanagan F.	1	13	0
22	48	Fleming P.	2	104	0
23	50	Ford M.	1	9	1
24	52	Gandini A.	1	81	0
25	53	Geelan T.	1	6	9
26	56	Grassley S.	1	40	4
27	57	Graham M.	4	436	8
28	58	Greenwood B.N.	1	104	2
29	61	Harney B.	1	6	9
30	62	Harvey G.	1	29	3
31	65	Hjorth I.	2	370	5
32	67	Honan V.	1	9	1
33	68	Horak J.	1	40	4
34	70	Howcroft D.	1	78	1
35	71	Huang W.	1	6	9
36	72	Islam A.K.M.N.	1	9	2
37	74	Jabagi N.	1	31	3
38	78	Jarrahi M.H.	1	13	3
39	85	Kandutsch F.	1	7	2
40	87	Keegan A.	2	39	2
41	90	Klinglmair R.	1	7	2
42	93	Kost D.	2	14	4
43	94	Kovacova M.	1	40	4
44	95	Kässi O.	1	61	1
45	96	Lansbury R.D.	1	14	3
46	97	Lehdonvirta V.	5	563	8

47	98	Leung M.D.	1	8	0
48	102	Maccarrone V.	1	42	1
49	104	Maffie M.D.	1	6	0
50	106	Marsan J.	1	31	3
51	108	Mclaughlin C.	1	6	9
52	110	Mehta B.S.	1	7	1
53	111	Meijerink J.	2	39	2
54	112	Meilhan D.	1	6	0
55	113	Mitev N.	1	18	2
56	115	Morales M.	1	7	0
57	116	Mäntymäki M.	1	9	2
58	119	Nelson S.B.	1	13	3
59	120	Newlands G.	1	10	0
60	124	Pal A.	1	43	2
61	125	Pandey N.	1	43	2
62	128	Però D.	1	6	0
63	132	Poliak M.	1	40	4
64	133	Popescu G.H.	1	12	1
65	138	Rawling M.	2	10	2
66	139	Rhodes C.	1	29	3
67	145	Schofield-Georgeson E.	2	10	2
68	147	Schou P.K.	2	8	3
69	157	Sutherland W.	1	13	3
70	158	Tassinari A.	1	42	1
71	160	Todolí-Signes A.	1	40	0
72	161	Trevor J.	1	6	9
73	164	Vachhani S.J.	1	29	3

74	166	Valaskova K.	1	40	4
75	168	Wailes N.	1	14	3
76	169	Waldkirch M.	2	8	3
77	173	Williams K.	1	29	3
78	174	Wong S.I.	2	14	4
79	175	Wood A.J.	3	242	14
80	176	Wright C.F	2	20	12

Source: Authors compilation

## Conclusion

The present research study aimed to present a quantitative view of studies related to the gig world of the economy and a map of the directions taken by recent research studies through the identification of the most adopted research lines. For this purpose, bibliometric data about the gig economy was collected and analysed. This study provides an all-around view of the research related to this gig area, with new results shown through citation analysis.

A new perspective also emerged through the bibliographic coupling technique. It allows us to position new researchers in the field's main research trends, which, in addition to our research agenda, will enable the advancement of knowledge production in the field and can lead to more precise definitions. LEHDONVIRTA V is the most cited author with five publications among the papers referred to, and he is also the highest-ranking author in terms of the number of publications. Authors with many published articles are not necessarily the most influential in this field. It can be explained by the fact that these platforms thrive in the current market environment, making them role models for startups or those who must adjust to the current COVID-19 times. The fact that the current study did not take publications outside of the Scopus database into account is a restriction to be taken into account. In light of this, we suggest that for the following bibliometric investigations.

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# Behavioural Issues and Segregation of Household Municipal Solid Waste: A Critical Study

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## **Abstract**

*One promising means for better disposal of household municipal solid wastes (HMSW) is by segregating them into Recyclable, Toxic/Hazardous, Compostable, and Soiled wastes. This article, therefore, aims to critically study the behavioural issues of people regarding segregation of HMSW. This study was carried out involving 256 respondent citizens within the state of Assam in India. The findings revealed that inspite of most such respondents having idea regarding segregation of HMSW, it was not carried out in most cases in the above-mentioned forms. The study also identified certain segments of such citizens based on various demographic variables like gender, marital status, occupation etc. who require emphasis for propagation of HMSW segregation habits with respect to different issues. Based on these findings, it is opined that aforementioned segregation process may be initiated by opting for four separate bins each for segregating HMSW into the above four types of wastes.*

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**Keywords:** Compostable waste, Recyclable waste, Soiled waste, and Toxic/Hazardous waste.

## **Introduction**

The present era has witnessed an ever-increasing accumulation and unscientific disposal of household municipal solid waste (HMSW) worldwide including Indian cities (Rathi 2006; Sharholy, Ahmad, Mahmood & Trivedi, 2005). This fact has been supported by Jha, Sondhi and Pansare (2003), Kansal (2002), and Ray, Roychoudhury, Mukherjee, Roy and Lahiri (2005). Sharholy, Ahmad, Mahmood and Trivedi (2008) have further emphasized on segregation of different types of household wastes for their better scientific disposal in India.

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## Review of Literature

BabaYemi and Dauda (2009) have defined any type of solid waste as useless “non-liquid and nongaseous products” of human activities. Municipal solid waste (MSW) comprises of “commercial and residential wastes” either in “solid or semisolid form” generated in a “municipal or notified area” (Jawaharlal Nehru National Urban Renewal Mission, 2012). Such wastes originating from household include bio-medical wastes, but exclude hazardous industrial wastes (Wilson & Velis, 2015).

## Importance of Segregation of HMSW

In 2016, around 2 billion tonnes of household municipal solid waste (HMSW) were generated globally out of 7-9 billion tonnes of total wastes (Chen et al., 2020; Wilson & Velis, 2015). Such HMSW warrants emphasis because (Chen et al., 2020; Monni et al., 2006; Wiedinmyer et al., 2014):

- i) HMSW pose health risks owing to their nearness to households and their inhabitants,
- ii) Plastic waste generated take long periods to biodegrade with disastrous effects,
- iii) Green House Gases (GHGs) emissions from various treatments of generated waste, *and*
- iv) Open burning of such wastes leads to emission of hazardous “air pollutants”.

Proper recycling of generated wastes is essential to minimize land filling of such wastes (Eriksson et al., 2005). Sharholy et al. (2008) has stated that management of HMSW involves “generation”, “collection”, “transportation” and “disposal”. Segregation of HMSW is highly important in the aforementioned initial three activities for their proper disposal (and reuse). Srinilta & Kanharattanachai (2019) have suggested segregation of household wastes as general waste, compostable waste, recyclable waste and hazardous waste.

Jha et al. (2003), and Reddy & Galab (1998) have suggested segregation of HMSW as *Recyclable wastes* (comprising paper, plastics, glass, metals etc.), *Toxic wastes* (comprising paints, pesticides, used batteries, medicines etc.), *Compostable organic wastes* (comprising fruit and vegetable peels, food waste etc.), and *Soiled wastes* (comprising blood-stained cottons, sanitary napkins, baby diapers, adult diapers, disposable syringes etc.). Abdel-Shafy and Mansour (2018) have supported this view. They have stated that food items, papers, metals, glass, wood, yard trimmings etc. as major components of municipal solid waste in the United States of America. Similar findings were reported in the case of major Indian cities by Jain (1994).

## **Need for the Study**

In the light of the above discussion, Bernstad (2014) has stressed on source segregation of household food wastes for their better management. Banga (2011) has also emphasized on appropriate segregation of HMSW into biodegradable and non-biodegradable wastes. Malik, Abdullah and Manaf (2015) highlighted the importance of HMSW segregation for various waste reduction processes like composting, recycling and incineration particularly in urban Malaysia. Gogoi (2013) has mentioned about the lack of proper waste management facilities and habits in Guwahati city in the state of Assam in North East India.

Singh & Raj (2018), Pivnenko et al. (2016), and Rushton (2003) have mentioned about harmful pollutants in household garbage like cadmium, mercury, arsenic, chromium, nickel, dioxins, polychlorinated biphenyls etc. Singh & Raj (2018) have also noted that diseases emanating from such pollutants include “squamous metaplasia”, “dysplasia of bronchial epithelial cells”, “risks of congenital anomalies”, “cardiac anomalies”, “obstructive uropathies”, and various anomalies of skin. This view was endorsed by Tian et al. (2013) and Ray et al. (2004).

Cordier et al. (2004) have also supported these views. Civildaily (2017) reported that around 62 million tons of waste were generated annually in India in the year 2017. This report also stated that only about 75-80 percent of municipal waste generated in India gets collected and only “22-28 percent of this waste is processed and treated”. Pradhan et al. (2012) reported that the average MSW generation rate was 0.7 kg/capita/day in case of Guwahati city in the year 2012. However, exact data regarding different types of generated HMSW is not available regarding this city till date thereby illustrating a significant gap in this regard. This study, therefore, is an attempt to fill this gap.

## **Objective of this Study**

This study aims to identify behavioural issues regarding segregation of household municipal solid waste (HMSW).

## **Method**

For attainment of the above objective, required data was obtained from both primary and secondary sources. Primary data sources included a sample of 256 respondent heads/senior responsible persons of households spread all over Assam selected through snowball sampling technique. Relevant secondary data was obtained from journals,

books, etc. This study was conducted within a time period of seven months (from July, 2020, to January, 2021). Initial study of aforementioned secondary data, observations and personal interviews in the above selected households confirmed that HMSW could be categorized as Recyclable wastes, Toxic/Hazardous wastes, Compostable organic wastes, and Soiled wastes.

This corroborates with the earlier observations of Jha et al. (2003), and Reddy & Galab (1998). Then, this study attempted to identify the nature of handling different types of HMSW in the aforesaid households in terms of disposal, decomposition, selling as scrap for recycling, and reusing them or certain components present in them. Next, respondents' opinion regarding their various ongoing activity(ies) in segregating HMSW was examined using a three-point scale, i.e., "*Usually*", "*Sometimes*", and "*Never*". Then, respondents' perception regarding fourteen issues relating to segregation of HMSW was examined with the help of a six-point scale, i.e., "*High*", "*Above Average*", "*Average*", "*Below Average*", "*Least*", and "*Not at all*".

These 14 issues mentioned in Table 1 are denoted by abbreviations S1 to S14. Thereafter, a similar six-point scale was used to measure respondents' perception about their desires to segregate HMSW in any form, and into the above four categories (abbreviated as D1 and D2, respectively, in Table 2). Afterwards, it was tried to identify specific groups of respondent citizens who exhibited greater sensitivity towards segregation of HMSW based on demographic characteristics. These characteristics included gender, marital status, occupation, place of birth, place of residence, educational qualification, age group, and monthly income. This was done with the aid of a series of Independent Sample t-tests and

One-way Analysis of Variance (ANOVA) using SPSS software at a significance level of  $\alpha=0.05$  (5%). For this purpose, the above-mentioned demographic characteristics were treated as independent variable. Here, respondents' perception regarding the above 14 issues relating to HMSW segregation (S1 to S14), and their desire to segregate the same (D1 and D2) were treated as dependent variable. Initially, t-test was utilized to check the presence of significant differences between the means of above dependent variable with respect to various groups of such respondents based on their gender and marital status (Cooper, Schindler & Sharma, 2019; Malhotra & Dash, 2019).

Here too, firstly, t-test was used to find out the specific issues among the aforesaid 14 issues in case of which the aforementioned means differed significantly with respect to different groups of respondents' gender and then marital status ( $p$ -value less than  $\alpha=0.05$  (5%)). Then, from the descriptive data, it was tried to find the value of the above

mean (relating to the above identified issues) which was higher in comparison to the other mean, and the corresponding group with respect to respondents' gender and marital status. This identified group of respondents require higher consideration for appropriate HMSW segregation.

Again, One-way ANOVA was used in a similar manner to identify specific groups of respondents based on six demographic characteristics who require higher concern for proper HMSW segregation. These demographic characteristics included occupation, place of birth, place of residence, educational qualification, age group, and monthly income. It is to be noted that t-test and ANOVA were used whenever the independent variable consisted of only two groups, and more than two groups respectively (Cooper et al., 2019; Malhotra & Dash, 2019). In this manner, it was tried to attain the said objectives of this study. Therefore, this study involved exploratory and descriptive research design, and is quantitative in nature.

## **Results and Discussion**

The findings of this study indicated that most of the respondent citizens were males (67.97%), married (63.28%), private sector employees (43.36%), and post graduates (68.36%) (refer to Table A.1 in the Annexure). Also, majority of them aged between 20 to 30 years (69.92%), and had a monthly income less than Rs.25,000 (30.47% (less than Rs.12,000) and 28.13% (between Rs.12,000 to Rs.25,000)). Besides, most of them mentioned urban areas as their birthplace (60.94%), and place of residence (78.13%).

**Nature of Handling Generated HMSW:** Most respondent citizens had disposed different types of generated household municipal solid wastes (HMSW) in dustbins and others (refer to Table A.2 in the Annexure). Most HMSW which were metals were sold as scrap for recycling. Also, most respondents had idea regarding segregation of HMSW (75.78%) (refer to Table A.3 in the Annexure). Majority of them segregated HMSW in some other form rather than as dry and wet wastes in two separate bins, and into four categories as Recyclable, Toxic/Hazardous, Compostable, and Soiled wastes (Table A.4 in the Annexure).

**HMSW Segregation:** It was also noticed that most respondents highly agreed upon the issue regarding teaching segregation of HMSW in the locality of their residence (S1), and in schools from primary level (S2) (refer to Table 1). Similar findings were noticed in case of all the remaining issues (from S3 to S14) related to HMSW segregation as noted in Table 1.

**Table 1: Perception regarding Issues related to HMSW Segregation**

Sr. . No	Issues	Abbreviation	HighAgreement	AboveAverage Agreement	Average Agreement	BelowAverage Agreement	LeastAgreement	NoAgreement	Total
1	Teaching segregation of HMSW in the locality of residence	S1	205	19	4	5	0	23	256
2	Teaching segregation of HMSW in schools from primary level	S2	213	16	27	0	0	0	256
3	Educating local people to properly handle unscientific disposal of HMSW	S3	238	12	6	0	0	0	256
4	Providing incentives for compliance of HMSW segregation from appropriate authorities	S4	133	72	47	0	0	4	256
5	HMSW segregation activities provides self-satisfaction	S5	150	50	52	4	0	0	256
6	Attainment of self-esteem by HMSW segregation activities	S6	130	70	54	1	1	0	256
7	Attainment of privilege in neighbourhood by HMSW segregation activities	S7	145	42	50	13	6	0	256
8	Increased chances for implementation of creative ideas by HMSW segregation activities	S8	146	53	57	0	0	0	256
9	Increased cohesion with family members by HMSW segregation activities	S9	93	83	57	16	7	0	256
10	HMSW segregation activities increases cohesion with neighbours	S10	91	89	68	0	8	0	256
11	Great interest shown by neighbours in activities for HMSW segregation	S11	92	84	31	11	6	32	256

12	Boost in healthy living conditions in home by HMSW segregation activities	S12	181	65	10	0	0	0	256
13	Reduction in prevalence of diseases in home by HMSW segregation activities	S13	195	42	6	12	0	1	256
14	Start of imitation of activities for HMSW segregation by some neighbours	S14	105	69	34	26	7	15	256

It was also noticed that most of the respondents desired to always segregate HMSW in any form, and into the above-mentioned four categories as Recyclable wastes, Toxic/Hazardous wastes, Compostable organic wastes, and Soiled wastes (Table 2).

**Table 2: Perception regarding Desires for Segregating HMSW**

Sr. . No	Issues	Abbreviation	High Agreement	Above Average Agreement	Average Agreement	Below Average Agreement	Least Agreement	No Agreement	Total
1	In any form	D1	109	113	34	0	0	0	256
2	Into four categories as Recyclable, Toxic/Hazardous, Compostable, and Soiled wastes	D2	116	105	23	12	0	0	256

**HMSW Segregation and Gender:** The outcome of Independent Sample t-test indicated that the null hypothesis that there exists no significant difference between means of respondents' perception regarding teaching segregation of HMSW in the locality of their residence (S1) across their gender can be rejected ( $p$ -value=0.000 less than  $\alpha=0.05$ ) (refer to Table A.5 in the Annexure). This implies existence of this significant difference. It was seen from descriptive data that the above mean was highest in case of female respondent citizens. This implies that they are more sensitive towards teaching HMSW segregation in the locality of their residence (S1) compared to male citizens. This indicates a need for emphasizing female citizens concerning S1.

Based on this, it is opined that motivating more participation of female members will help in propagation of HMSW segregation habits. Same findings have been observed in case of issues S2, S3, S4, S5, S6, S8, S10, S11, and S14. It was also observed that no such significant differences exist among the above means concerning issues S7, S9, S12, and S13 as shown in Table A.5. Hence, it can be inferred that opinion regarding these issues does not vary across gender concerning sensitising citizens regarding segregation of HMSW. However, it was found in a similar manner that male citizens are relatively highly desirous to segregate HMSW in any form, or into the above-mentioned four categories. This is shown in Table A.6 in the Annexure. So, it is recommended that awareness drives for educating female members may be given priority in this regard.

**HMSW Segregation and Marital Status:** Similarly, from t-test results, it is suggested that engaging higher involvement of unmarried citizens will boost implementation of HMSW segregation habits concerning the issues of S3, S5, S6, S7, S8, S9, S10, S11, S12, and S14 (refer to Table A.7 in the Annexure). Likewise, it is proposed that awareness drives for educating the married citizens may be given priority in relation to segregation of HMSW in any form, or into the aforementioned four categories (refer to Table A.8 in the Annexure).

**HMSW Segregation and Occupation:** Similarly, as explained in case of earlier t-test results and Research Methodology, One-way ANOVA results indicated that respondent citizens engaged in other professions/activities are more sensitive towards teaching segregation of HMSW in the locality of their residence (S1) than those citizens engaged in private sector, public sector. This is shown in Table A.9 in the Annexure. Hence, motivating more participation of such citizens engaged in other professions/activities (like homemakers, retired persons etc.) will aid in spread of HMSW segregation habits. Same findings have been observed in the case of issues S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, and S14.

Similarly, emphasizing on citizens who are engaged as students, and in the private sector will help in increasing HMSW segregation practices concerning issues S12, and S13, respectively, as shown in Table A.9. Likewise, it was found that citizens engaged in private sector are relatively highly desirous to segregate HMSW in any form. Therefore, it is advocated that awareness drives for educating citizens engaged in other professions other than the private sector may be given priority in this regard. Similarly, it is suggested that awareness drives for educating citizens engaged in

professions other than being students may be prioritised for segregating HMSW into the above-mentioned four categories (refer to Table A.10 in the Annexure).

**HMSW Segregation and Place of Birth:** Likewise, ANOVA results suggested that engaging higher involvement of citizens born in urban areas will improve chances of carrying out of HMSW segregation practices concerning the issues S1, S2, S4, S5, S6, S7, S8, S9, S10, and S11. In this regard, similar focus should be accorded to citizens born in rural areas regarding the issues S12, and S13 (refer to Table A.11 in the Annexure). Besides, it is suggested that awareness drives for educating citizens born in urban and sub-urban areas may be given priority regarding segregation of HMSW in any form. Also, it is recommended that awareness drives for educating citizens born in rural and sub-urban areas may be prioritised regarding segregation of HMSW into the earlier mentioned four categories (refer to Table A.12 in the Annexure).

**HMSW Segregation and Place of Residence:** From ANOVA results, it is recommended that engaging higher participation of citizens residing in rural areas will improve chances of carrying out of HMSW segregation practices concerning the issues S3, and S12 (refer to Table A.13 in the Annexure). Similarly, citizens residing in urban areas, and sub-urban areas should be emphasized to boost HMSW segregation practices regarding the issues S9 and S14, respectively. Besides, it is suggested that awareness drives for educating citizens residing in urban and sub-urban areas may be emphasized regarding segregation of HMSW in any form (refer to Table A.14 in the Annexure).

**HMSW Segregation and Educational Qualification:** Also, ANOVA results recommended that motivating higher participation of citizens who have passed 10<sup>th</sup> standard and 12<sup>th</sup> standard will aid in implementation of HMSW segregation practices concerning the issues S1, S2, S4, S5, S6, S7, S8, S9, S10, S11, and S14 (refer to Table A.15 in the Annexure). It is also opined that similar focus should be accorded to post graduate citizens concerning the issue S13 relating to HMSW segregation. From Table A.16 in the Annexure, it is suggested that there should be awareness drives for educating citizens below post graduate level regarding segregation of HMSW in any form or into the earlier mentioned four categories.

**HMSW Segregation and Age:** It is recommended from ANOVA results that motivating higher participation of citizens who are above 60 years in age will aid in implementation of HMSW segregation practices concerning the issues S1, S2, S4, S5, S6, S7, S8, S9, S10, S11, and S14. In this context, similar focus should be accorded to citizens who are between 51 to 60 years, and between 20 to 30 years regarding the issues S12 and S13, respectively (refer to Table A.17 in the Annexure). In addition, it is opined that there

should be awareness drives for educating citizens above 30 years in age regarding segregation of HMSW in any form or into the above-mentioned four categories (refer to Table A.18 in the Annexure).

**HMSW Segregation and Monthly Income:** It is also recommended that motivating higher participation of citizens with monthly income less than Rs.12,000 will aid in implementation of HMSW segregation practices concerning the issues S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, and S14 (refer to Table A.19 in the Annexure). In this context, citizens earning more than Rs.1,50,000 per month should be similarly emphasized regarding the issue S12. Also, similar emphasis should be given to citizens who earn between Rs.12,001 to Rs.25,000 per month regarding the issue S13. It is also suggested that there should be awareness drives for educating citizens who earn below Rs.12,000 per month and above Rs.25,000 per month regarding segregation of HMSW in any form or into the aforementioned four categories (refer to Table A.20 in the Annexure).

The above findings indicate that HMSW segregation may be initiated through policies for opting for four separate bins in households, one each for Recyclable, Toxic/Hazardous, Compostable, and Soiled wastes.

## **Conclusion**

Mismanagement of HMSW disposal can lead towards their huge accumulation in our surroundings with serious consequences like pollution, epidemics, and environmental destruction. In this context, proper segregation of HMSW can prove to be a good solution. Findings of this study can be useful in this regard. This can aid in better handling and recycling of collected HMSW which will reduce their aforementioned accumulation. This will foster establishment of circular economy for overall sustainable development globally.

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## ANNEXURE

**Table A.1: Demographic Profile of the Respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
Male	174	67.97
Female	82	32.03
<b>Total</b>	<b>256</b>	<b>100.00</b>
<b>Place of Birth</b>	<b>Frequency</b>	<b>Percent</b>
Rural Area	21	8.20
Urban Area	156	60.94
Sub-Urban Area	79	30.86
<b>Total</b>	<b>256</b>	<b>100.00</b>
<b>Occupation</b>	<b>Frequency</b>	<b>Percent</b>
Private Sector Employee	111	43.36
Public Sector Employee	51	19.92
Student	64	25.00
Others	26	10.16
Non response	4	1.56
<b>Total</b>	<b>256</b>	<b>100.00</b>
<b>Age (in years)</b>	<b>Frequency</b>	<b>Percent</b>
20-30 years	179	69.92
31-40 years	48	18.75
41-50 years	11	4.30
51-60 years	7	2.73
Above 60 years	11	4.30
<b>Total</b>	<b>256</b>	<b>100.00</b>

<b>Marital Status</b>	<b>Frequency</b>	<b>Percent</b>
Married	162	63.28
Single	94	36.72
<b>Total</b>	<b>256</b>	<b>100.00</b>
<b>Place of residence</b>	<b>Frequency</b>	<b>Percent</b>
Rural Area	20	7.81
Urban Area	200	78.13
Sub-Urban Area	36	14.06
<b>Total</b>	<b>256</b>	<b>100.00</b>
<b>Education</b>	<b>Frequency</b>	<b>Percent</b>
Passed 10th Board	8	3.13
Passed 12th Board	4	1.56
Graduate	69	26.95
Post Graduate	175	68.36
<b>Total</b>	<b>256</b>	<b>100.00</b>
<b>Monthly Income</b>	<b>Frequency</b>	<b>Percent</b>
Less than Rs.12,000	78	30.47
Rs.12,001-Rs.25,000	72	28.13
Rs.25,001-Rs.40,000	43	16.80
Rs.40,001-Rs.1,00,000	42	16.41
Rs.1,00,001-Rs.1,50,000	1	0.39
Above Rs.1,50,000	4	1.56
Non response	16	6.25
<b>Total</b>	<b>256</b>	<b>100.00</b>

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**Table A.2: Nature of Handling Different Types of generated HMSW**

Sr. No.	Types of wastes	Disposal	Decomposition	Selling as scrap for recycling	Reusing entire waste or certain components present in it	Non response	Total	
1	Recyclable Wastes	Paper	110	20	96	5	25	256
		Plastic	134	3	69	25	25	256
		Glass	83	13	68	17	75	256
		Metals	8	0	154	15	79	256
2	Toxic/ Hazardous Wastes	Paints	91	5	21	48	91	256
		Pesticides	110	25	8	15	98	256
		Used Batteries	110	5	50	2	89	256
		Medicines	147	18	6	1	84	256
3	Compostable Organic Wastes	Fruit and Vegetable Peels	159	88	3	0	6	256
		Other Food Wastes	148	61	18	0	29	256
4	Soiled Wastes	Blood-Stained Cottons	146	14	6	1	89	256
		Sanitary Napkins	203	6	6	0	41	256
		Baby Diapers	121	4	6	1	124	256
		Adult Diapers	135	4	6	1	110	256
		Disposable Syringes	132	7	6	1	110	256
5		Mix of All the Above	117	7	6	1	125	256
6		Others	142	4	8	9	93	256

**Table A.3: Presence of Idea regarding HMSW Segregation**

Presence of Idea	Frequency	Percent
Present	194	75.78
Not present	62	24.22
Total	256	100.00

**Table A.4: Status of Various Activities for HMSW Segregation**

Sr. No.	Mode of segregation of HMSW/Household Wastes	Usually carried out		Sometimes carried out		Never carried out		Total
		F	%	F	%	F	%	
1	As dry waste and wet waste in two separate bins	59	23.05	82	32.03	115	44.92	256
2	Into four categories as Recyclable waste, Toxic/ Hazardous waste, Compostable waste, and Soiled waste	7	2.73	71	27.73	178	69.53	256
3	In any other form	102	39.84	135	52.73	19	7.42	256

“F” denotes Frequency and “%” denotes Percentage

**Table A.5: t-test- Gender and HMSW Segregation Issues**

Sr. No.	Issues	Male		Female		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean		
1	S1	174	1.27	82	2.34	0.000	R
2	S2	174	1.11	82	1.61	0.000	R
3	S3	174	1.05	82	1.20	0.002	R
4	S4	174	1.55	82	2.11	0.000	R
5	S5	174	1.43	82	2.12	0.000	R
6	S6	174	1.59	82	2.01	0.000	R
7	S7	174	1.72	82	1.98	0.072	NR
8	S8	174	1.48	82	2.02	0.000	R
9	S9	174	2.05	82	2.10	0.743	NR
10	S10	174	1.91	82	2.20	0.027	R
11	S11	174	2.14	82	3.00	0.001	R
12	S12	174	1.32	82	1.37	0.528	NR
13	S13	174	1.37	82	1.38	0.924	NR
14	S14	174	2.05	82	2.66	0.002	R

“R” denotes H0 Rejected and “NR” denotes H0 Not Rejected

**Table A.6: t-test- Gender and HMSW Segregation Desire**

Sr. No.	Issues	Male		Female		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean		
1	D1	174	1.82	82	1.48	0.000	R
2	D2	174	1.85	82	1.48	0.001	R

“R” denotes H0 Rejected and “NR” denotes H0 Not Rejected

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**Table A.7: t-test- Marital Status and HMSW Segregation Issues**

Sr. No.	Issues	Married		Single		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean		
1	S1	162	1.65	94	1.55	0.622	NR
2	S2	162	1.31	94	1.20	0.144	NR
3	S3	162	1.04	94	1.19	0.004	R
4	S4	162	1.70	94	1.77	0.610	NR
5	S5	162	1.56	94	1.81	0.022	R
6	S6	162	1.64	94	1.87	0.028	R
7	S7	162	1.69	94	2.00	0.023	R
8	S8	162	1.52	94	1.88	0.001	R
9	S9	162	1.88	94	2.38	0.000	R
10	S10	162	1.78	94	2.39	0.000	R
11	S11	162	2.17	94	2.84	0.002	R
12	S12	162	1.27	94	1.45	0.017	R
13	S13	162	1.38	94	1.36	0.887	NR
14	S14	162	1.91	94	2.82	0.000	R

“R” denotes H<sub>0</sub> Rejected and “NR” denotes H<sub>0</sub> Not Rejected

**Table A.8: t-test- Marital Status and HMSW Segregation Desire**

Sr. No.	Issues	Married		Single		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean		
1	D1	162	1.61	94	1.87	0.003	R
2	D2	162	1.54	94	2.05	0.001	R

“R” denotes H<sub>0</sub> Rejected and “NR” denotes H<sub>0</sub> Not Rejected

Table A.9: ANOVA- Occupation and HMSW Segregation Issues

Sr. No.	Issues	Private Sector Employee		Public Sector Employee		Student		Others		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean	N	Mean		
1	S1	111	1.10	51	1.00	64	1.44	26	5.54	0.000	R
2	S2	111	1.15	51	1.00	64	1.11	26	2.77	0.000	R
3	S3	111	1.07	51	1.00	64	1.25	26	1.00	0.001	R
4	S4	111	1.84	51	1.02	64	1.72	26	2.77	0.000	R
5	S5	111	1.54	51	1.04	64	1.84	26	2.77	0.000	R
6	S6	111	1.67	51	1.06	64	1.91	26	2.77	0.000	R
7	S7	111	1.77	51	1.04	64	2.06	26	2.77	0.000	R
8	S8	111	1.49	51	1.02	64	1.97	26	2.77	0.000	R
9	S9	111	2.14	51	1.06	64	2.47	26	2.77	0.000	R
10	S10	111	1.93	51	1.08	64	2.56	26	2.77	0.000	R
11	S11	111	2.03	51	1.10	64	2.95	26	5.42	0.000	R
12	S12	111	1.42	51	1.02	64	1.52	26	1.00	0.000	R
13	S13	111	1.63	51	1.02	64	1.31	26	1.00	0.000	R
14	S14	111	2.00	51	1.10	64	3.02	26	3.65	0.000	R

“R” denotes H0 Rejected and “NR” denotes H0 Not Rejected

Table A.10: ANOVA- Occupation and HMSW Segregation Desire

Sr. No.	Desires	Private Sector Employee		Public Sector Employee		Student		Others		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean	N	Mean		
1	D1	111	2.06	51	1.02	64	1.92	26	1.12	0.000	R
2	D2	111	1.98	51	1.02	64	2.20	26	1.00	0.000	R

“R” denotes H0 Rejected and “NR” denotes H0 Not Rejected

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**Table A.11: ANOVA- Place of Birth and HMSW Segregation Issues**

Sr. No.	Issues	Rural Area		Urban Area		Sub-urban Area		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean		
1	S1	21	1.00	156	1.95	79	1.11	0.000	R
2	S2	21	1.00	156	1.44	79	1.03	0.000	R
3	S3	21	1.19	156	1.12	79	1.03	0.089	NR
4	S4	21	1.62	156	2.06	79	1.10	0.000	R
5	S5	21	1.43	156	1.88	79	1.24	0.000	R
6	S6	21	1.38	156	1.99	79	1.28	0.000	R
7	S7	21	1.38	156	1.99	79	1.54	0.002	R
8	S8	21	1.48	156	1.89	79	1.23	0.000	R
9	S9	21	1.38	156	2.31	79	1.76	0.000	R
10	S10	21	1.71	156	2.19	79	1.71	0.000	R
11	S11	21	1.86	156	2.72	79	1.96	0.001	R
12	S12	21	1.71	156	1.34	79	1.22	0.001	R
13	S13	21	1.57	156	1.47	79	1.13	0.004	R
14	S14	21	1.71	156	2.37	79	2.14	0.113	NR
"R" denotes H <sub>0</sub> Rejected and "NR" denotes H <sub>0</sub> Not Rejected									

**Table A.12: ANOVA- Place of Birth and HMSW Segregation Desire**

Sr. No.	Desires	Rural Area		Urban Area		Sub-urban Area		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean		
1	D1	21	2.10	156	1.87	79	1.29	0.000	R
2	D2	21	1.67	156	1.83	79	1.54	0.033	R
"R" denotes H <sub>0</sub> Rejected and "NR" denotes H <sub>0</sub> Not Rejected									

Table A.13: ANOVA- Place of Residence and HMSW Segregation Issues

Sr. No.	Issues	Rural Area		Urban Area		Sub-urban Area		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean		
1	S1	20	1.00	200	1.70	36	1.47	0.108	NR
2	S2	20	1.10	200	1.29	36	1.28	0.451	NR
3	S3	20	1.30	200	1.04	36	1.28	0.000	R
4	S4	20	1.70	200	1.78	36	1.44	0.141	NR
5	S5	20	1.45	200	1.69	36	1.53	0.323	NR
6	S6	20	1.35	200	1.74	36	1.83	0.094	NR
7	S7	20	1.55	200	1.84	36	1.75	0.501	NR
8	S8	20	1.70	200	1.67	36	1.56	0.737	NR
9	S9	20	1.45	200	2.14	36	2.00	0.016	R
10	S10	20	1.95	200	2.03	36	1.89	0.692	NR
11	S11	20	1.95	200	2.44	36	2.58	0.368	NR
12	S12	20	1.70	200	1.26	36	1.53	0.000	R
13	S13	20	1.60	200	1.33	36	1.50	0.200	NR
14	S14	20	1.60	200	2.19	36	2.92	0.002	R
"R" denotes H <sub>0</sub> Rejected and "NR" denotes H <sub>0</sub> Not Rejected									

Table A.14: ANOVA- Place of Residence and HMSW Segregation Desire

Sr. No.	Desires	Rural Area		Urban Area		Sub-urban Area		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean		
1	D1	20	2.20	200	1.67	36	1.64	0.003	R
2	D2	20	1.80	200	1.72	36	1.75	0.905	NR
"R" denotes H <sub>0</sub> Rejected and "NR" denotes H <sub>0</sub> Not Rejected									

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**Table A.15: ANOVA- Education and HMSW Segregation Issues**

Sr. No.	Issues	Passed 10 <sup>th</sup> Standard		Passed 12 <sup>th</sup> Standard		Graduate		Post Graduate		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean	N	Mean		
1	S1	8	6.00	4	6.00	69	1.88	175	1.21	0.000	R
2	S2	8	3.00	4	3.00	69	1.39	175	1.11	0.000	R
3	S3	8	1.00	4	1.00	69	1.09	175	1.10	0.820	NR
4	S4	8	3.00	4	3.00	69	1.70	175	1.65	0.000	R
5	S5	8	3.00	4	3.00	69	1.83	175	1.49	0.000	R
6	S6	8	3.00	4	3.00	69	1.77	175	1.62	0.000	R
7	S7	8	3.00	4	3.00	69	2.03	175	1.63	0.000	R
8	S8	8	3.00	4	3.00	69	1.93	175	1.45	0.000	R
9	S9	8	3.00	4	3.00	69	2.30	175	1.91	0.000	R
10	S10	8	3.00	4	3.00	69	2.39	175	1.78	0.000	R
11	S11	8	6.00	4	6.00	69	3.07	175	1.91	0.000	R
12	S12	8	1.00	4	1.00	69	1.32	175	1.36	0.180	NR
13	S13	8	1.00	4	1.00	69	1.10	175	1.50	0.001	R
14	S14	8	4.00	4	4.00	69	2.86	175	1.87	0.000	R

“R” denotes H0 Rejected and “NR” denotes H<sub>0</sub> Not Rejected

**Table A.16: ANOVA- Education and HMSW Segregation Desire**

Sr. No.	Desires	Passed 10 <sup>th</sup> Standard		Passed 12 <sup>th</sup> Standard		Graduate		Post Graduate		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean	N	Mean		
1	D1	8	1.00	4	1.00	69	1.64	175	1.78	0.001	R
2	D2	8	1.00	4	1.00	69	1.74	175	1.78	0.016	R

“R” denotes H0 Rejected and “NR” denotes H<sub>0</sub> Not Rejected

Table A.17: ANOVA- Age and HMSW Segregation Issues

Sr. No.	Issues	20-30 years		3-40 years		41-50 years		51-60 years		Above 60 years		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	S1	179	1.33	48	1.10	11	4.18	7	3.14	11	4.91	0.000	R
2	S2	179	1.18	48	1.04	11	2.27	7	1.86	11	2.45	0.000	R
3	S3	179	1.13	48	1.00	11	1.00	7	1.00	11	1.00	0.119	NR
4	S4	179	1.80	48	1.06	11	2.27	7	2.43	11	2.45	0.000	R
5	S5	179	1.79	48	1.08	11	2.27	7	2.43	11	2.45	0.000	R
6	S6	179	1.78	48	1.10	11	2.27	7	2.43	11	2.45	0.000	R
7	S7	179	1.92	48	1.08	11	2.27	7	1.86	11	2.45	0.000	R
8	S8	179	1.72	48	1.06	11	2.27	7	1.86	11	2.45	0.000	R
9	S9	179	2.27	48	1.10	11	2.27	7	2.43	11	2.45	0.000	R
10	S10	179	2.18	48	1.13	11	2.27	7	2.43	11	2.45	0.000	R
11	S11	179	2.45	48	1.21	11	4.18	7	3.71	11	4.64	0.000	R
12	S12	179	1.45	48	1.02	11	1.00	7	1.57	11	1.00	0.000	R
13	S13	179	1.53	48	1.02	11	1.00	7	1.00	11	1.00	0.000	R
14	S14	179	2.41	48	1.17	11	2.91	7	2.86	11	3.18	0.000	R
"R" denotes H0 Rejected and "NR" denotes H <sub>0</sub> Not Rejected													

Table A.18: ANOVA- Age and HMSW Segregation Desires

Sr. No.	Desires	20-30 years		3-40 years		41-50 years		51-60 years		Above 60 years		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	D1	179	1.97	48	1.02	11	1.00	7	1.57	11	1.27	0.000	R
2	D2	179	2.02	48	1.02	11	1.00	7	1.57	11	1.00	0.000	R
"R" denotes H0 Rejected and "NR" denotes H <sub>0</sub> Not Rejected													

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**Table A.19: ANOVA- Monthly Income and HMSW Segregation Issues**

Sr. No.	Issues	Less than Rs.12,000		Rs.12,001- Rs.25,000		Rs.25,001- Rs.40,000		Rs.40,001- Rs.1,50,000		Above Rs.1,50,000		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	S1	78	1.85	72	1.15	43	1.00	43	1.00	4	1.00	0.000	R
2	S2	78	1.27	72	1.11	43	1.21	43	1.00	4	1.00	0.029	R
3	S3	78	1.21	72	1.11	43	1.00	43	1.00	4	1.00	0.012	R
4	S4	78	1.87	72	1.81	43	1.56	43	1.00	4	2.00	0.000	R
5	S5	78	1.90	72	1.49	43	1.58	43	1.00	4	2.00	0.000	R
6	S6	78	2.00	72	1.63	43	1.60	43	1.00	4	2.00	0.000	R
7	S7	78	1.99	72	1.99	43	1.58	43	1.00	4	1.00	0.000	R
8	S8	78	1.92	72	1.63	43	1.42	43	1.00	4	1.00	0.000	R
9	S9	78	2.32	72	2.46	43	1.67	43	1.00	4	2.00	0.000	R
10	S10	78	2.41	72	2.13	43	1.70	43	1.00	4	2.00	0.000	R
11	S11	78	3.08	72	2.19	43	1.72	43	1.00	4	2.00	0.000	R
12	S12	78	1.45	72	1.56	43	1.14	43	1.00	4	2.00	0.000	R
13	S13	78	1.19	72	1.79	43	1.53	43	1.00	4	1.00	0.000	R
14	S14	78	2.91	72	2.36	43	1.44	43	1.00	4	1.00	0.000	R
"R" denotes H <sub>0</sub> Rejected and "NR" denotes H <sub>0</sub> Not Rejected													

**Table A.20: ANOVA- Monthly Income and HMSW Segregation Desires**

Sr. No.	Desires	Less than Rs.12,000		Rs.12,001- Rs.25,000		Rs.25,001- Rs.40,000		Rs.40,001- Rs.1,50,000		Above Rs.1,50,000		p-value	Status of H <sub>0</sub>
		N	Mean	N	Mean	N	Mean	N	Mean	N	Mean		
1	D1	78	1.88	72	2.04	43	1.74	43	1.02	4	2.00	0.000	R
2	D2	78	1.99	72	2.03	43	1.74	43	1.00	4	2.00	0.000	R
"R" denotes H <sub>0</sub> Rejected and "NR" denotes H <sub>0</sub> Not Rejected													

# Consumer Discontent in Banking Industry: An Exploratory Study

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## Abstract

*Continuous review of consumer behaviour helps to understand consumer's needs, expectations and preferences which drives purchase decisions. Consumer values form the expectations and lead to purchase. Gap in expectations after consumption leads to dissatisfaction and expressed through complaints, dis-loyalty or brand shifts. Dissatisfaction can be addressed through service recovery if consumer complaints. Consumer discontent is not synonymous to consumer dissatisfaction and researches have confirmed its presence in Indian Service Industry. Consumer Discontent is multi transactional experience that develops due to disconfirmation of expectations based on personal values such as ethics, credibility and fair business practices. It is a negative attitude which starts from products or services and spread across to other business practices if disconfirmations are not addressed. Such attitudes are detrimental to organization's image and business. The current study has been undertaken to determine the level of consumer discontent in the Indian banking industry despite the banking services have gained higher operational efficiency and better branch network, ably supported by technology.*

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**Keywords:** Consumer Behaviour, Consumer Dissatisfaction, Credibility, Ethics. Satisfaction model

## Introduction

Consumer Buying Behaviour constitutes the processes involved when individuals, groups and organizations select, purchase, use products and services. The process is highly important as it results in consumers' decisions whether they are satisfied or not. According to Blackwell et al. (2006), buying behaviour is complex as each consumer differs in requirement hence buying behaviour becomes individualistic, dynamic and so the formation of attitude. Oliver (1997) defined satisfaction as the consumer's fulfilment response that a product or service provides after delightful consumption experience. It is the emotional or cognitive response of a consumer after subjective

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assessment and comparison of pre-purchase expectations and actual performance. According to Kotler & Keller (2016), a gratifying performance which surpasses expectations results in consumer loyalty, positive word-of-mouth, and repeat purchases. When consumers put a lot of time, money, and effort into a purchase and it doesn't live up to their expectations, they may experience cognitive dissonance.

A satisfaction model developed by Woodruff & Gardial (1996) focused on the idea of value as a driving force behind expectations and the connection between satisfaction and product choice. The model states that satisfaction is a transient psychological response to an association in a value chain. Providing consumer satisfaction keeping values and expectations in sight is essential because unsatisfied consumers can cause serious repercussions that might undermine image of an organization. Kotler & Armstrong (2015) stated that consumer complains, when below expectation service quality is experienced which leads to negative communication about product or service. The intensity of service failure determine propensity to complaint. In case of very high intensity, consumers simply switch without complaining.

Values are instrumental in formation of expectations. According to Bloemer & Decker (2007), personal values have stronger influence on satisfaction. The perception of how services corresponds to values is far more important and it is a better predictor of satisfaction. At the same time values are intangible such as perception, willingness and attitude. In the modern marketplace, value has long been a key marketing term. With today's increasingly well-informed, selective, and astute consumers, it is even more important.

## **Consumer Discontent**

Bitner & Hubbert (1994) conceptualized satisfaction on a two perspective with two categories, the transaction-specific satisfaction and the overall satisfaction termed as transaction cumulative. The transaction specific satisfaction refers to the consumer's satisfaction with a discrete encounter. Dissatisfaction can originate with a single negative experience and fade away if consumers complain and their concerns are addressed to their satisfaction. The overall or cumulative satisfaction refers to the consumer's overall experience on all interactions with that particular organization. If experiences continue to be unfavourable, dissatisfaction may turn up in to a negative attitude. Such negative attitude and dissonance on account of personal values coupled with multiple failures will lead to a psychological state with high intensity of dissatisfaction and finally to consumer discontent. Such attitude would have negative impact on product, service, organization and industry.

Banking sector in India has undergone frequent transformation in last one and half decade. Many public sector banks have been merged together, technology has taken over manual processes, UPI and net banking has become lightning fast and accurate but it doesn't mean that banking sector and its consumers do not face issues. Such developments have invited issues like cyber-attacks, data theft and frauds. The Reserve Bank of India's Integrated Ombudsman Scheme (RB-IOS) reported a significant 68.2 percent increase in complaints in FY23 compared to the previous financial year, reaching to a total of 7.03 lakh grievances. The current study is undertaken to explore the extent consumer discontent in Indian Banking Industry in present scenario when banks claim higher operational efficiency due to higher penetration of branches, advanced technology and informed customers.

### **Objectives of the study**

1. To explore consumer discontent and its dimensions in Indian Banking Industry.
2. To compare public and private sector banks in terms of consumer discontent and its dimensions.
3. To compare banks of A and B class towns in terms of consumer discontent and its dimensions.
4. To open new vistas of research.

### **Review of Literature**

The literature has been reviewed pertaining to related variables: Satisfaction, Dissatisfaction and Consumer Values. Dewi & Yasa (2019) in banking sector have established a positive and significant relationship between product quality, service quality and satisfaction. Similar findings were noted in telecom and other service sectors. According to Naini et al. (2022), response accuracy, unique product and service and employee's attention in services are the factors that influence consumer satisfaction and loyalty. Consumer satisfaction helps to build trust, brand loyalty and incremental revenue as it helps in consumer retention. According to Chinomona & Dubihlela (2014), post purchase service triggers emotional responses such as joy and surprise, strengthen satisfaction and helps to mellow down negative effect of dissatisfaction.

Sheth et al. (1991) came up with five core values: functional, emotional, social, epistemic and conditional. Huber et al. (2001) identified the personal values like self-esteem, accomplishment, pleasure, and recognition playing role in forming expectations. According to Tripathi and Kumar (2020), values like competence, character and ethics

influence trust formation towards organization and become the means for expectations and drives the consumer behaviour accordingly. Ethical conduct by organizations has progressively drawn consumer's attention that has created positive perceptions (Raghavan, 2024). According to Roy et al. (2022), ethical practices by service providers have the potential to positively impact consumer behaviour by eliciting favourable reactions like positive word-of-mouth, satisfaction, trust, commitment, loyalty and boosting their propensity to make purchases. Consumers have needs and expectations such as self-esteem, justice. Yagil & Medler-Liraz (2019) noted that dissatisfaction has stronger impact on high self-esteem consumer and such consumers have tendency to move away from the product.

Dissatisfaction results in to complaints followed by complaint resolution process and unsuccessful resolution leads to negative consequences. According to Maxham & Netemayer (2002), complaint resolution may result in double deviation behaviour (initial service failure and a failed service recovery leading to possible exit). The dissonance which is induced by disparity and disconfirmed expectations with respect to product or service, induces negative emotions and displeasure. Dissonance can lead to multiple negative emotions such as anger and aggression, resentment and withdrawal behaviours like boycotts and switch (Donoghue & de Klerk, 2013) which are unfavourable to the business.

## Research Method

*The Study:* The current research is exploratory in nature, aimed at to see the impact of independent variables on dependent variable. The independent variables are type of banks and type of town and consumer discontent is the dependent variable. The type of bank has two levels, public and private and type of town has two levels, A and B.

*The Design:* Following 2x2 factorial design was conceptualized to determine the effect of independent variables on dependent variable.

Indian Banking Industry	A Class Town (c)	B Class Town (d)
Public Sector	(a) a*c	a*d
Private Sector (b)	a*b	b*d

*The Sample:* The sample of the study is constituted of existing customers of public and private sector banks from four towns Delhi and Mumbai (A class) and Ahmedabad and Indore (B class). Random sampling was used to collect the data. A total of 224

valid responses were identified. The data was put under 2\*2 matrix after bifurcating sector wise i.e., public and private and town wise i.e., A and B with 56 responses in each cell.

The distribution of sample is presented below.

Indian Banking Industry	A Class Town (c)	B Class Town (d)
Public Sector (a)	56	56
Private Sector (b)	56	56

*Tools for Data Collection:* The Consumer Discontent Scale developed and standardized by Mishra & Dhar (2024) was used for data collection. The scale has 32 items on 7 point Likert Scale with a reliability of 0.71 and validity of 0.95.

*Tools for Data Analysis:* The data was analyzed using Statistical Package of the Social Sciences (SPSS version 24.0) and Microsoft office Excel. The statistical tools used were Analysis of Variance and Z test.

## Results and Discussion

*Analysis of Variance:* Based on design of the study, 48 hypotheses were framed. The 18 hypotheses were tested by applying ANOVA and 30 were tested by z test. Out of 18 hypotheses tested by ANOVA, 3 were found significant (Table-1). Out of 30 hypotheses tested by applying z test, 9 were found significant (Table-2)

The results indicated that type of sector affects **Lack of Credibility** dimension of consumer discontent ( $H_{01}$ ). Lack of Credibility dimension is higher in Public sector banks in B class town than Private sector in A and B class towns ( $H_{07}$  &  $H_{09}$ ).

Organizational credibility is crucial for building and maintaining strong relationships with stakeholders, fostering loyalty among consumers and employees by consistently exhibiting values and commitment. Consumers rated public sector banks low on credibility in the current research. Ariffin and Lim (2022) found that the association between consumer attitude and intention to buy is strengthened by credibility and trust. According to Kujur and Singh (2019), behavioural integrity, ethical communication and consumer engagement backed by service excellence, consistency and timeliness builds believability of the service provider. Positively endorsed e WoM also strengthen credibility, satisfaction and positive attitude (Chih et al., 2020)

The banking reform in 1993 allowed entry of private operators in Indian Banking System. Private operators offered a better overall experience to its consumers along with the routine banking services. According to the report, 'Trend and Progress of Banking in India' by RBI, there were seven major banking frauds unearthed between 2011 and 2017, involving Rs 22400 Crores and nine public sector banks along with a consortium of lenders, severely damaging the credibility of public sector banks. Whereas no such major fraud reported in private sector banks during the period. Kaur & Kiran (2015) reported that consumers rated private sector banks better than public sector banks with respect to services like security and convenience in E-Banking Service quality.

The fierce rivalry in the Indian banking industry has made efficiency and profitability of the utmost significance. Goel & Rekhi (2013) found that efficiency and profitability are correlated as analysis confirmed that private sector banks are more efficient and profitable than public sector banks. Efficiency includes experience of performance on various services like infrastructure, consumer engagement, deposits and loans, savings and investments and efficient complaint handling that increases banks profitability and brand image (Mahalakshmi & Karthikeyan 2018). Corporate consumer also showed greater loyalty towards private sector banks compared to public sector banks. They are delighted to be treated as preferred consumers and ready to refer new consumers and to pay extra charges for personalized services.

The results show that type of sector affects **Communication Overload** dimension of consumer discontent ( $H_{10}$ ). Communication Overload dimension is higher in Private sector than Public sector in both, A and B class towns ( $H_{14}$ ,  $H_{15}$  &  $H_{16}$ ).

A consumer who receives an excessive amount of promotional messages on a daily basis is said to be experiencing communication overload or clutter. Consumers have rated Private sector banks higher on communication overload as compared to Public sector banks. It makes the recipient avoid such communications and develops an adverse perspective about advertising communications. Mobile communications have emerged as a significant and useful instrument for advertisers and marketers due to its rapid dissemination (Wang & Genç, 2019). SMS is more effective advertising medium for targeting particular market segments as it can be tailored and receive response from consumers. Compared to other mobile advertising strategies, SMS advertising is frequently chosen due to its ease of use and less dependency on technology.

Conversely, as a result of mindless advertising clutter and overzealous producers trying to position their products by carving out a "niche" in the already crowded market,

consumers are becoming more and more indifferent to it. Everyday consumers are confronted with too many advertisements; as a result consumers filter out excess advertising stimuli. The advertising clutter lead to different efficacy of the medium and memory creation which affects advertising effectiveness and deteriorate goodwill (De Canha, 2019). Advertisers must recognize that consumers prefer less cluttered environments, a cleaner space attracts more attention, increasing the effectiveness and perceived worth of advertisements. Private sector banks initiated the competition in banking sector after their inception and therefore more aggressive in marketing as well might be one of the reason consumers rated private sector banks high on communication overload.

The results show that type of sector affects **Non responsiveness** dimension of consumer discontent ( $H_{19}$ ). Non responsiveness dimension is higher in Public sector than Private sector in both, A and B class town ( $H_{23}$ ,  $H_{24}$ ,  $H_{25}$  &  $H_{27}$ ).

The ability to respond swiftly, effectively, and favourably is known as responsiveness and consumers indicated that public sector banks are inferior in responsiveness as compared to private sector banks. Service quality is experienced at the moment of delivery or consumption. When the quality of the services falls short of the expected criteria, complaints and discontent arise, therefore responsiveness is crucial for arresting consumer discontent. Private sector banks, being the late entrants, established service framework on latest technology, better infrastructure, consumer relationship and engagement. Kamble et al. (2011) found that consumers perceive private sector bank superior on the service quality dimensions like effectiveness, accessibility and tangibles whereas public sector banks score better on the aspects of price and reliability along with being lower on consumer engagement.

Khatri & Ahuja (2015) endorsed that private banks have more satisfied consumers due to tangibles and behavioural considerations of the bank employees. In case of public sector banks, Ali and Bisht (2018) revealed that behaviours of employees of public sector banks are not supportive in comparison to private sector Banks. Research also highlighted greater problems and glitches were noted relating to infrastructure, tangibles and ATMs operations in public sector banks. According to Sardana & Bajpai (2020), private sector banks have higher ratings for trust and privacy and are the main factors influencing perceptions of the quality of e-banking services hence outperforming public sector banks.

## **Conclusion**

The results have shown sector and type of town do not have any impact on consumer discontent and its dimensions, Non Dependable and Unfair. Nevertheless, irrespective of the sector and the towns, the banks have to be extremely vigilant as they serve the larger masses and need to be dependable and fair. They have to be ethically sound to develop trust among their clients and society as a whole. Banks have to practice business ethics for organization's sincerity (McMurrian & Matulich, 2016). Figors & Rockenbach (2016) in their study concluded that honesty and moral integrity are the parameters of sound banking system. Operational transparency is of paramount importance to reduce consumer discontent and form a favourable image of the bank (Kim et al. 2020).

The future studies can have bigger or different geography and representation from other prominent cities, including C class/ semi urban towns. Research can be specific to a sector, customer segments (corporate, SME and retail) or product for better granular understanding of reasons for consumer discontent. The study can be replicated to industry with high service cost and high consumer involvement, services such as insurance, health care and tourism where consumers have high expectations. Many products once purchased, require periodic services like vehicles, electronics, software as service (SAAS). The study can be replicated for such after sales service scenarios.

There can be many implications for the banks. The study showed public sector banks are rated lower on credibility. Management must take every possible step as per consumer's opinion. Translating consumer's feedback in to suitable actions and showcasing existing practices on integrity, neutrality and reliability must help to build a righteous image. A user friendly complaint management system supported by empathic work force will make a difference. Periodic review and reengineering of complaint management system coupled with refresher training for employees should be an ongoing process. Excessive communication has become a universal problem. Although a consumer can register in 'Do No Disturb' (DND) portal. Banks can definitely work out more intelligent system based on financial status and spending pattern combining with demographic inputs a suitable and more meaningful communication strategy for a group of consumers.

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**Table-1: Showing results of ANOVA**

Dimension	Hypothesis	Discription	p-value	Result
Lack of Credibility	H <sub>01</sub>	Type of Sector does not affect Lack of Credibility Dimension of Consumer Discontent.	0.003	Rejected
	H <sub>02</sub>	Type of Town does not affect Lack of Credibility Dimension of Consumer Discontent.	0.777	Accepted
	H <sub>03</sub>	Type of Sector and Type of Town do not interact to affect Lack of Credibility Dimension of Consumer Discontent.	0.611	Accepted
Communi-cation Overload	H <sub>10</sub>	Type of Sector does not affect Communication Overload Dimension of Consumer Discontent.	0.001	Rejected
	H <sub>11</sub>	Type of Town does not affect Communication Overload Dimension of Consumer Discontent.	0.607	Accepted
	H <sub>12</sub>	Type of Sector and Type of Town do not interact to affect Communication Overload Dimension of Consumer Discontent.	0.352	Accepted
Non Responsi-veness	H <sub>19</sub>	Type of Sector does not affect Non Responsiveness Dimension of Consumer Discontent.	0.00	Rejected
	H <sub>20</sub>	Type of Town does not affect Non Responsiveness Dimension of Consumer Discontent.	0.986	Accepted
	H <sub>21</sub>	Type of Sector and Type of Town do not interact to affect Non Responsiveness Dimension of Consumer Discontent.	0.915	Accepted
Non Responsi-veness	H <sub>28</sub>	Type of Sector does not affect Non Dependable Dimension of Consumer Discontent.	0.175	Accepted
	H <sub>29</sub>	Type of Town does not affect Non Dependable Dimension of Consumer Discontent.	0.612	Accepted
	H <sub>30</sub>	Type of Sector and Type of Town do not interact to affect Non Dependable Dimension of Consumer Discontent.	0.407	Accepted
Unfair	H <sub>37</sub>	Type of Sector does not affect Unfair Dimension of Consumer Discontent.	0.24	Accepted
	H <sub>38</sub>	H38 - Type of Town does not affect Unfair Dimension of Consumer Discontent.	0.614	Accepted
	H <sub>39</sub>	H39-Type of Sector and Type of Town do not interact to affect Unfair Dimension of Consumer Discontent.	0.943	Accepted

**Table-2: Showing results of z tests**

Dimension	Hypothesis	Between Cells	z	p-value	Result
Lack of Credibility	H <sub>04</sub>	a*c	-0.619	0.536	Accepted
	H <sub>05</sub>	a*d	1.821	0.069	Accepted
	H <sub>06</sub>	a*b	1.836	0.066	Accepted
	H <sub>07</sub>	b*c	-2.417	0.016	Rejected
	H <sub>08</sub>	b*d	0.152	0.880	Accepted
	H <sub>09</sub>	c*d	2.349	0.001	Rejected
Communication Overload	H <sub>13</sub>	a*c	-1.061	0.289	Accepted
	H <sub>14</sub>	a*d	-2.749	0.006	Rejected
	H <sub>15</sub>	a*b	-3.288	0.001	Rejected
	H <sub>16</sub>	b*c	2.127	0.033	Rejected
	H <sub>16</sub>	b*d	0.286	0.775	Accepted
	H <sub>16</sub>	c*d	-1.695	0.090	Accepted
Non Responsiveness	H <sub>22</sub>	a*c	-0.093	0.926	Accepted
	H <sub>23</sub>	a*d	2.983	0.003	Rejected
	H <sub>24</sub>	a*b	3.324	0.001	Rejected
	H <sub>25</sub>	b*c	-3.242	0.001	Rejected
	H <sub>26</sub>	b*d	0.063	0.950	Accepted
	H <sub>27</sub>	c*d	2.943	0.003	Rejected
Non Dependable	H <sub>31</sub>	a*c	0.259	0.796	Accepted
	H <sub>32</sub>	a*d	-1.295	0.195	Accepted
	H <sub>33</sub>	a*b	-0.398	0.690	Accepted
	H <sub>34</sub>	b*c	0.617	0.538	Accepted
	H <sub>35</sub>	b*d	-0.856	0.392	Accepted
	H <sub>36</sub>	c*d	-1.469	0.142	Accepted
Unfair	H <sub>40</sub>	a*c	0.331	0.741	Accepted
	H <sub>41</sub>	a*d	-0.483	0.629	Accepted
	H <sub>42</sub>	a*b	-0.861	0.389	Accepted
	H <sub>43</sub>	b*c	1.174	0.241	Accepted
	H <sub>44</sub>	b*d	0.381	0.703	Accepted
	H <sub>45</sub>	c*d	-0.804	0.256	Accepted

# Driving Factors of Internet Banking Usage among Millennials and Post-Millennials

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## Abstract

Banking services are now available to the customers 24x7 through digital mode. The generation next is tech-savvy generation availing the banking services via digital modes. Banks make an attempt to lure customers by providing banking products and services in digital form through internet banking. The aim of this study is to investigate the factors driving the usage of internet banking services among two age groups viz., millennials and post-millennials. Primary survey among millennials and post-millennials using a random sampling method was conducted. Exploratory factor analysis was employed for data analysis. Findings revealed four significant factors viz., convenience and ease of use, security and trust, level of awareness and social influence. Millennials prioritized convenience and ease of use whereas post-millennials prioritized security and trust being the crucial factor driving internet banking usage. This study is relevant for banks to understand the perception of millennials while launching a new internet banking website..

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**Keywords:** Ease of use, Level of awareness, Performance expectancy, Social influence, Trust and security

## Introduction

Technology has brought a big change in the Indian banking sector. Digitalization of the Indian banking sector has transformed the way of delivery of banking products and services to the customers. With the rapid growth of technology over the last decade the banking industry has now become more robust, transparent and effective. Banking products and services are now available to the customers 24x7 through digital mode. Digital banking products and services comprise of internet banking, mobile banking, digital payments, use of smart cards and ATMs. Advancement in technology and plastic money have made cashless transactions efficient and convenient. Internet banking platforms offer customized products and services to their customers at a lower transaction cost, saving time and effort. As the internet is now available on the

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fingertips, it has enabled the customer to avail banking services from anywhere and at any time.

The demand for customized and personalized banking products and services have driven the growth of the internet banking market. The internet banking penetration rate in India was forecast to continuously increase between 2022 and 2028 by 26.6 percentage points (Statista, 2021). Millennials being more tech-savvy are dependent on internet banking applications for availing banking products and services. Internet banking website statistics show that the internet website market is projected to generate \$693 billion from downloads in 2021 (*dataprot report, 2021*). Finances Online statistics show that 244.2 billion websites were downloaded in 2020 – 7, 727 installations per second (*dataprot report, 2021*). There are various factors that contribute to the usage of internet banking services. These factors influence the customers behaviour while performing online financial transactions. In this study, we make an attempt to identify the factors driving the usage of internet banking services. Further, we examine whether the same set of factors are influencing the online behaviour of two age groups viz., millennials (between 18 to 25yrs) and post-millennials (26 to 40yrs).

## **Review of Literature**

Internet banking in India emerged in the mid-nineties as newly introduced private sector banks came up with a new business model revolving around a strong information technology (IT) backbone. ICICI was the first private bank to initiate Internet banking in India in 1998. The phenomenon of internet banking has revamped the banking industry and revolutionised its engagement with the customers. This ease of accessibility has accelerated the use of services and has grabbed the attention of service providers to enhance their services to the customers. This has led to the majority of research examining the antecedents of the adoption and use of internet banking (Nor et al., 2010). In this section, we discuss the works done in the area of adoption and usage of digital banking that provides insights and perspectives on the issues pertaining to our proposed study.

There are several studies that have highlighted the need to identify factors that determine internet usage for a more directed effort towards providing customised services. Alhassany & Faisal (2018), Almaiah et al. (2022), and Aziz et al. (2022) are some of the scholars who have worked for identifying the need to analyse factors influencing internet banking. Aldás-Manzano et al. (2009) analysed the determinants of the use of internet banking in accordance with product involvement, risk and trust. According to the study it was proved risks have direct influence on e-banking adoption

mainly in terms of security, privacy, performance and social factors. Trust is a key factor that reduces risk and product involvement plays an important role in increasing perceived ease to use.

Devi Juwaheer et al. (2012) studied the factors influencing the adoption of internet banking which highlighted that ease to use and usefulness have direct influence on adoption of internet banking. It also identified that trust security issues are important factors for adoption of internet banking. Economic Review (2013) indicated that usage of internet banking services is weak as customers are more concerned about security and privacy. According to Nikghadam Hojjati & Reza Rabi (2013), the use of the internet for work or teamwork, selling and buying or banking operation and reading news has a significant relevance to internet banking adoption. Joshi & Bansal (2015) identified the factors that affect the adoption of internet banking from internet banking users' point of view with the help of 4 dimensions namely usefulness, exposure, trust and ease to use with help of technology acceptance model.

The perceived compatibility, trialability and external variables such as awareness and security were found to have significant influence in the adoption of Internet banking in South African rural areas (Ramavhona and Mokwena, 2016). Perceptions of trust and usefulness are the critical determinants of attitude toward internet banking and intention to adopt internet banking. Sharma & Govindaluri (2014) identified usefulness, ease to use, social influence, awareness, quality of internet connection are primary determinants of the attitude toward use of internet banking (i-banking) in urban India. Attitudinal and perceived behavioral control factors, rather than social influence, play a significant role in influencing the intention to adopt Internet banking (Tan & Teo, 2000).

Yadav (2016) highlighted perceived usefulness, perceived quality and perceived risk are active in influencing the intention of customers to use i-banking, however it has been also observed that ease to use, trust and awareness have not been influencing the intention of bank customers to adopt i-banking. Performance expectancy, effort expectancy, price value, facilitating conditions and habit have a positive influence over the behavioural intention and subsequently lead to the adoption of internet banking (Thaker, 2021). According to Alhawamdeh (2022), familiarity, IT support, and social influence affect the adoption of internet banking services. Arora (2022) explained the influence of perceived usefulness on the desire to utilize online banking services is also partly mediated by the perception of trust. A well-designed web site was also found to be helpful in facilitating easier use and also minimizing perceived risk concerns regarding internet banking usage.

Based on the review of related works, an attempt is made to identify the primary factors influencing different age groups. *Research Question:* What are the driving factors influencing internet banking usage among two age groups viz., millennials and post-millennials?

**Objective 1:** To examine the factors driving the internet banking usage among millennials (18 to 25yrs).

**Objective 2:** To examine the factors driving the internet banking usage among post-millennials (26 to 40yrs).

## **Method**

The present study employed a quantitative research design for the purpose of analysing the research data. The data source used for this study is primary data survey. Survey was designed in a way to fulfil the desired objectives. A structured questionnaire was formulated and circulated among the target respondents consisting of millennials and post-millennials via social media platforms viz., WhatsApp and Facebook. The questionnaire that was circulated sought the information on demographics namely, Gender, Age, Marital Status, Education and Occupation and the frequency of internet banking usage. The second section of the questionnaire consisted of 35 statements on factors influencing the usage of internet banking services. The survey was conducted within the time period of four months (July 2021 to October 2021) and circulated among 300 participants. The respondents were asked to rate the statements on a 4-point Likert scale with a rating of 1 being Strongly Disagree and 4 being Strongly Agree. Out of 300 target respondents 261 responses were considered appropriate for further analysis. The response rate of the survey was 87%.

The data gathered was analysed using SPSS software version 20. The statistical techniques applied to the formulated research question is Exploratory factor analysis (EFA). EFA has been used to explore the factors that influence the use of internet banking services among millennials. Factor analysis is a technique that reduces large numbers of data into smaller sets of inter-correlated general variables making the output useful for further analysis (Field 2000; Rietveld & Hout 1993). The choice of factor analysis is based on the need to determine factors on the variance explained and is a more stringent and conservative approach in extracting relevant factors (Rietveld & Hout 1993). This would bring up a few significant factors that are driving the use of internet banking services amongst the identified set of groups. Demographic variables have been presented in graphical form.

## Results and Discussion

This section has been divided into four sub sections viz., Section I – Demographic Profile of the respondents, Section II – Usage of Internet Banking Services, Section III – Driving factors responsible for the usage of internet banking services among millennials and post-millennials, Section IV – Conclusion.

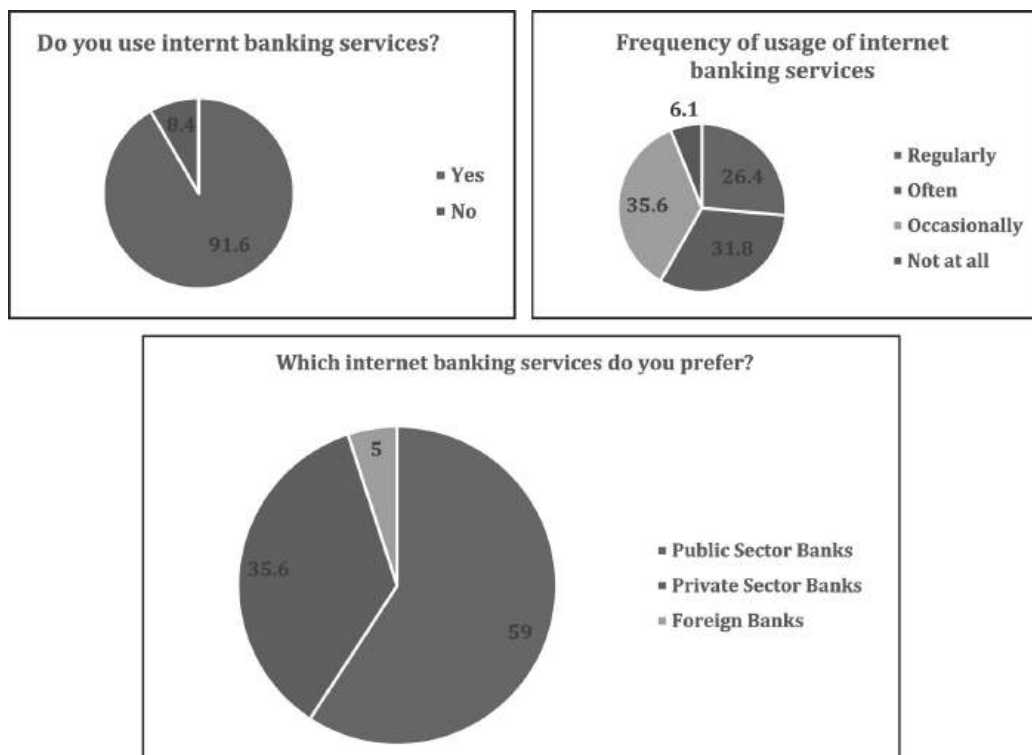
### Section I - Demographic Profile of the Respondents



**Figure 1: Demographic Profile of the Respondents**

Figure 1 exhibits the demographic profile of respondents including millennials and post-millennials. The major share of demographic variables is as under: 65.9% respondents belong to the millennials age group of 18 to 25 years and 34% and post-millennials. 53.6% respondents are females, 45.6% respondents are holding graduation degrees and the same percentage of respondents are holding postgraduate degrees. 74% of the respondents are Single and 39% of the respondents belong to the student category followed by 26% who are employed in the private sector.

## Section II – Usage of Internet Banking Services



**Figure 2: Usage of Internet Banking Services**

Figure 2 displays the usage of internet banking services across the respondents. The graphical representation of data demonstrates that 91.6% of the respondents use internet banking services, out of which 35% use it occasionally, followed by 31% (often) and 26% of the respondents who use it regularly. Majority of the respondents (59%) prefer Nationalized banks/Public sector banks internet banking services followed by 35.6% respondents those prefer the private sector bank's internet banking websites.

Section III – Factor Analysis of the usage of Internet Banking Services

Table 1: Factor Analysis Results of Millennials (Between 18 To 25yrs)

Factor Analysis (Overall $\alpha = 0.936$ )		F1	F2	F3	F4
<b>F1: Convenience and Ease of Use(CE)</b> ( $\alpha=0.93$ )	The use of internet banking makes my transactions very fast.	.856			
	The use of internet banking saves time.	.855			
	Use of internet banking is helpful.	.784			
	Internet banking helps me in managing the banking transactions better.	.759			
	Internet banking is easy to use.	.758			
	The use of internet banking gives me control over the transaction.	.710			
	Internet banking website is easy to navigate.	.675			
	I am comfortable in using internet banking website.	.662			
	Learning to use internet banking does not require extra efforts.	.639			
<b>F2:Trust and Security (TS)</b> ( $\alpha=0.92$ )	I have full confidence in the promises made by internet banking website.		.805		
	I have full trust in internet banking website.		.805		
	I am confident that the internet banking services are financially secured.		.746		
	The information on internet banking website is sincere and honest.		.745		
	If internet banking website is hacked and money is stolen, I am confident that the bank will help me to recover my money.		.739		
	I am confident that my bank offers latest encrypted technology to secure internet banking platform.		.731		
	Internet banking services offer clarity of services offered to customer.		.725		
	The internet banking website does not make false statements.		.658		
	Internet banking website is highly secured and encrypted.		.645		
	In case my internet is stolen, I have confidence that, my bank account would be intact.		.608		
<b>F3:Level of Awareness (LA)</b> ( $\alpha=0.88$ )	I know the products and services offered over internet banking website.			.808	
	I know how to use internet banking website.			.790	
	I know about the benefits of using internet banking services.			.742	
	I have sufficient knowledge about internet banking services.			.707	

<b>F4:Social Influence (SI)(<math>\alpha=0.73</math>)</b>	My family thinks I should use internet banking.				.837
	I use internet banking as my friends recommended it.				.818
	People who influence my behaviour encourage me to use internet banking.				.685
KMO measure of sampling adequacy				0.88	
Eigen Values		10.28	3.48	1.85	1.61
Total Variance Explained		39.55	13.37	7.12	6.19
Cumulative Variance Explained		23.59	46.08	58.57	66.24

Principal Component Analysis, Rotation Method: Varimax

In this section, we present the outcome of Exploratory Factor Analysis (EFA) employed on the two age groups viz., millennials (between 18 to 25yrs) and post-millennials (26 to 40yrs).

Usage of internet banking services among millennials is influenced by certain factors. These factors are being examined using Exploratory factor analysis (EFA). Table 1 presents the results of exploratory factor analysis for millennials (age group of 18 to 25 yrs.) The analysis has highlighted four crucial factors influencing the millennials usage of internet banking services. These four factors explained 66.24% of the cumulative variance. KMO measure of sampling is 0.88 indicates that the data is good for factor analysis. KMO value of more than 0.60 is the indication that Exploratory factor analysis can be performed on the dataset and the data is useful at 1% significance level. Kaiser-Meyer-Olkin (KMO) measure of sampling is used to identify if the variables can be grouped into the smaller set of factors. Bartlette’s Test of Sphericity is also run on the dataset. KMO and Bartlette’s test is used to identify the significance of variables to perform Exploratory Factor Analysis (EFA). Reliability test was employed that is Cronbach’s alpha to check the validity of the data. Cronbach’s alpha should be more than 0.70 to consider the reliability of the data. It means that the instrument provides a good measurement tool and hence is considered to be reliable.

The four factors influencing internet banking usage among millennials consist of; *F1: Convenience and ease of use*, *F2: Trust and security*, *F3: Level of awareness* and *F4: Social influence*. Among the four factors identified, convenience and ease of use has been the most weighted factor having the highest factor loadings, with Eigen value of 10.38 and total variance of 39.55. It is interesting to note that, younger population prioritizes convenience and ease of use of internet banking services over trust and security or social influence.

*Driving Factors of Internet Banking Usage among Millennials and Post-Millennials*

F1: Convenience and ease of use (CE): Millennials use internet banking services as it offers the following benefits; it saves their time (FL: 0.85) and efforts (FL: 0.63), performs speedy transactions (FL:0.85), it's easy to use (FL:0.75) and easy to navigate (FL:0.67). Convenience and ease of use is followed by trust and security, level of awareness and social influence.

F2: Trust and Security (TS): Millennials are concerned about the security and safety of their financial transactions online without compromising on convenience and ease of use. The trust component indicates the confidence of the customers in undertaking the transactions with the banks. Millennials prefer to use the internet banking services provided they are safe, secure and encrypted. A safer mode of transaction boosts confidence in them, they feel even if the internet banking website is hacked, they are confident that their savings will be intact or the bank will help in the recovery.

F3: Level of Awareness (LA): The next driving factor of internet banking usage among millennials is the level of awareness. Millennials prefer to use internet banking websites as they have sufficient knowledge on the use and navigation features of the banking website. Millennials are aware of the products and services offered to them via internet banking websites as well as they are well aware of the benefits offered to them by such websites.

F4: Social Influence (SI): Though social influence is being extracted as an important factor driving the usage of internet banking services among millennials, it has been prioritised least among the four factors extracted. Young population gets least influenced by the influence of social groups around them which includes their family, friends and the people who influence their behaviour.

**Table 2: Factor Analysis Results of Post-Millennials (Between 26 To 40yrs)**

Factor Analysis (Overall $\alpha = 0.89$ )		F1	F2	F3	F4
<b>F1: Trust and Security (TS)(<math>\alpha=0.90</math>)</b>	I have full confidence in the promises made by internet banking website.	.884			
	I have full trust in internet banking website.	.824			
	The internet banking website does not make false statements.	.788			
	If internet banking website is hacked and money is stolen, I am confident that the bank will help me to recover my money.	.752			
	Internet banking services offer clarity of services offered to customer.	.720			
	I am confident that the internet banking services are financially secured.	.720			

	Internet banking website is highly secured and encrypted.	.710			
	I am confident that my bank offers latest encrypted technology to secure internet banking platform.	.535			
<b>F2: Convenience and Ease of use (CE)(<math>\alpha=0.89</math>)</b>	The use of internet banking gives me control over the transaction.		.878		
	The use of internet banking makes my transactions very fast.		.853		
	Use of internet banking is helpful.		.831		
	Internet banking website is easy to navigate.		.769		
<b>F3: Social Influence (SI)(<math>\alpha=0.73</math>)</b>	I use internet banking as my friends recommended it.			.865	
	My family thinks I should use internet banking.			.839	
	People who influence my behaviour encourage me to use internet banking.			.724	
<b>F4: Level of Awareness (LA)(<math>\alpha=0.83</math>)</b>	I know how to use internet banking website.				.876
	I know about the benefits of using internet banking services.				.776
KMO measure of sampling adequacy		0.81			
Eigen Values		7.204	2.541	1.611	1.239
Total Variance Explained		28.367	21.317	12.936	11.467
Cumulative Variance Explained		28.367	49.684	62.620	74.087
<b>Cronbach Alpha (overall)</b>		.891			

Principal Component Analysis, Rotation Method: Varimax

Table 2 presents the results of exploratory factor analysis for post-millennials (age group of 26 to 40yrs.) The analysis has extracted four significant factors influencing the post-millennials usage of internet banking services. These four factors explained 74.087% of the cumulative variance. KMO measure of sampling is 0.81 indicates that the data is good for factor analysis and exploratory factor analysis can be performed on the dataset and the data is useful at 1% significance level.

The four factors influencing internet banking usage among post-millennials comprise of; *F1: Trust and security*, *F2: Convenience and ease of use*, *F3: Social influence* and *F4: Level of awareness*. Among the four factors identified, trust and security has been loaded as factor 1 with highest factor loadings, having Eigen value of 7.20 and total variance of 28.36. The data analysis has highlighted interesting findings. Post-millennials belonging to the age group of 26 to 40yrs prioritize trust and security as an essential factor while using the internet banking services rather than convenience and ease of use or social influence.

### *Driving Factors of Internet Banking Usage among Millennials and Post-Millennials*

*F1: Trust and Security (TS):* The trust component indicates the confidence of the customers in undertaking the transactions with the banks. Post-millennials prioritise on the safety and security of their online financial transactions through the internet banking website. As an individual reaches the middle age, having sufficient earnings and savings, he/she tends to reduce their risk-taking appetite and take up safer platforms for online financial transactions. They prefer to use an internet banking website only when they have full confidence and trust in the internet banking website. Even if the website is hacked by financial fraudsters, they are confident enough that the bank will aid them in the recovery of their savings. Post-millennials prefer to use the internet banking services provided they are safe, secure and encrypted.

*F2: Convenience and ease of use (CE):* Second factor that has been extracted in factor analysis highlights the convenience and ease of use. Post-millennials prefer using internet banking services due to its varied benefits viz., control over transactions (FL:0.87), speedy transactions (FL:0.85), website is helpful (FL:0.83) and easy to navigate (FL:0.76).

*F3: Social Influence (SI):* Post-millennials get influenced by the social groups around them that includes their family and friends and people who influence their behaviour. Social influence being extracted as the third important factor in influencing the usage of internet banking services among post-millennials.

*F4: Level of Awareness (LA):* The least driving factor of internet banking usage among post-millennials include level of awareness. Post-millennials prefer to use internet banking websites only when they are possessing the required knowledge and awareness to navigate and use the internet banking website and they are aware of the benefits offered to them by such websites.

## **Conclusion**

The advancement in technology in providing digital banking products and services has drastically changed the traditional banking sector providing basic products and services. The present customers are well informed and tech-savvy possessing knowledge on the use of various online platforms. Bank customers demand customized and personalized products and services offered via various digital platforms, one of them being the internet banking website that offers banking products and services on the fingertip. The present study focuses on the factors that influence the usage of internet banking services among two age groups viz., millennials (between 18 to 25yrs) and post-millennials (between 26 to 40yrs) from Goa. Simple random sampling method was used to collect the data from 300 respondents.

The demographic profile of the respondents highlighted that 65.9% of respondents belong to the millennials age group of 18 to 25 years and 34% and post-millennials. 53.6% respondents are females, 45.6% respondents are holding graduation degrees and the same percentage of respondents are holding postgraduate degrees. 74% of the respondents are Single and 39% of the respondents belong to the student category followed by 26% who are employed in the private sector.

Further, the study presented the usage of internet banking services across the target respondents. The graphical representation of data demonstrated that 91.6% of the respondents use internet banking services, out of which 35% use it occasionally, followed by 31% (often) and 26% of the respondents who use it regularly. Majority of the respondents (59%) prefer Nationalized banks/Public sector banks internet banking services followed by 35.6% respondents those prefer the private sector bank's internet banking website.

To study the driving factors determining the usage of internet banking services among millennials and post-millennials, exploratory factor analysis (EFA) was employed. Comparing the two age groups of millennials (18 to 25yrs) and post-millennials (26 to 40yrs), the results highlighted that, millennials are more concerned about the convenience and the easy usage of internet banking website, whereas post-millennials prioritise safety, security and trust of the internet banking website. As an individual reaches the middle age, having sufficient earnings and savings, he/she tends to reduce their risk-taking appetite and take up safer platforms for online financial transactions. They prefer to use an internet banking website only when they have full confidence and trust in the internet banking website. Even if the website is hacked by financial fraudsters, they are confident enough that the bank will aid them in the recovery of their savings. Post-millennials prefer to use the internet banking services provided they are safe, secure and encrypted. Millennials prioritize safety and security without compromising on the convenience and easy usage.

Further, it was interesting to note that, between these two age groups, millennials supported that having knowledge and awareness about using and navigating internet banking websites is essential rather than influencing societal factors. However, post-millennials supported that influence of social groups is of primary importance for usage of internet banking services over awareness and knowledge of using the internet banking website. The results of this research will aid the policy makers in designing appropriate marketing plans and strategies to deliver the customized digital banking products and services to the target market customers.

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# GST in Informal Sector: Some Insights from the Guwahati City of Assam

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## **Abstract**

*GST in India was aimed at creating a common, unified and integrated domestic market, allowing the free flow of goods and services across different Indian states making conducive platform for economies of scale of big businesses. But it nullifies regional tariffs creating detrimental position for informal sector and small businesses. The informal sector in India is mostly unregulated and untaxed. Despite being unregulated, informal sector has been reported as one of the most important sectors for economic growth of the Indian economy. But haphazard implementation of GST has reduced the competitiveness of the informal sector creating problems of viability of the sector which in turn limits the potential entrepreneurialiability of the region. Subsequently, general people dependent on the unregulated informal sector especially the non-salaried people of the country expressed their widespread dissatisfaction over GST. Based on the statement, the study endeavours to investigate to assess the different economic impacts of GST especially on non-salaried individuals of informal sector particularly in the Guwahati city in Assam. Using descriptive statistics and graphical tools, the study revealed that GST in India has negatively impacted the consumption pattern resulting from higher prices of goods and services which in turn, adversely affected the informal sector. The study also showed that most of the respondents viewed GST as an unfair tax and badly affected people's lifestyle and income in the post-GST period.*

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**Keywords:** Descriptive statistics, Entrepreneuriability, Informal sector, Non-salaried persons, Taxation.

**JEL Classification:** E26; H21; H26

## **Introduction**

Tax is a compulsory monetary payment to state, levied by the government on its worker's overall income. Taxes are levied primarily to raise revenue for government expenditures providing welfare services to its citizens in returns. Direct taxes are

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imposed mainly on the income of the individual, whereas indirect taxes are imposed on goods and services. Unlike direct tax, indirect tax is usually borne by the end consumers including rich and poor people. Some of these indirect taxes are levied by state government whereas some are levied by central government in most countries including India. All types of indirect taxes in India, however, are unified into one tax formally known as Goods and Services Tax (GST) implemented on July 1, 2017 in the country.

Thus, GST has replaced all the existing indirect taxes as well as the multiple cascading taxes levied by the government including taxes at every step in the production process. The GST is divided into five tax slabs for collection of tax, i.e. 0%, 5%, 12%, 18% and 28% slabs. However, only some products namely petroleum products, alcoholic drinks, and electricity are not covered under GST. But these products are taxed separately by the state governments. Moreover, precious and semi-precious stones are taxed at a special rate of 0.25% and gold at 3% slab. However, all the tax slabs and other special tax rates of GST are subject to change time to time.

The main aim of the GST was to create a common, unified and well-connected domestic market which, in turn, will help the free flow of commodities across different states of the country realizing the economies of scale of all kinds of businesses especially for manufacturing sectors of the Indian economy. But the GST nullifies regional tariffs, hence, creating detrimental position for informal sector and small businesses. Several studies argued that because of the GST implementation the Indian economy is expected to unify regional markets and overall tax burden of goods and services, with reduced tax evasion and distortion, will reduce which covers almost 25% to 30% of the tax (Vasanthagopal, 2011; Sarma & Baskar, 2012; Mussaiyib, 2016; Devi, 2016). Additionally, the impact of the GST on agricultural sector has been expected to be positive because one of the major issues faced by the agricultural sector is the transportation of agriculture produces across state all over India. It is highly probable that the GST shall resolve the issue of transportation across the states in the country.

One of the main characteristics of Indian informal sector is that this sector is mostly untaxed and unregulated. However, the informal sector of India reported as being one of the valued sectors of Indian economy for rapid economic growth. This sector contributes about 31% of the country's gross domestic product (GDP) and nearly half of India's total exports employing about 30% of the labour force of the country according to the Govt. of India (Annual Reports of 2007-18 to 2015-16, Ministry of MSME, New Delhi). However, large part (almost 24 percent) of this share comes from MSME service

sector in comparison to the MSME manufacturing sector which contributes about 6 percent of the total MSME's contribution. However, more than 90% of these enterprises are unregulated and unregistered in India. Thus, the above mentioned figures can even be greater if the informal sector is included in the economy.

According to the International Labour Organization (ILO), informal employment consists of about 62% of all workers in the world and constitutes almost 90% of workers in low-income countries, 67% in middle-income and 18% in high-income countries (ILO, 2020). But growth of these sectors in India has gone through many ups and downs especially constrained in the last decades especially the sudden instigation of demonetization of Indian currency in 2016 and haphazard execution of GST (Goods and Services Tax) in July, 2017. One recent study by Ghosh (2020) stated that implementation of GST reduced the competitiveness and the problem of viability of the informal sector will emerge. That is why; this type of reform must be implemented systematically and judiciously (Purohit, 2020). Hence, GST became onerous for the informal sector and its growth has been thwarted by the implementation of GST (Banerjee & Prasad, 2017; Bhattacharjee & Bhattacharya, 2018; Srinivasan & Shankar, 2018). Furthermore, unprecedented and unexpected outbreak of COVID-19 has worsened the situation leading to massive employment loss and output fall.

As informal sector units will be unregistered, their inability to raise a GST compliant invoice will hamper the input tax credit transfer to formal units lower down in the supply chain. This will force to formal players to either shift to other formal sources leading to a marginalization of informal services and manufactures. To avoid losing market shares, informal businesses will have to formalize. Admittedly, formalization is not necessarily something to forebode. The informal sector by operating outside the ambit of legislation is the breeding ground for a host of labour violations including minimum wages, discrimination, working environment, and other exploitative practices, etc. This results in substantial exploitation of labour in the informal sector, both in terms of precariousness of employment and paucity of wages. But with formalization of these units into mainstream economy, their labour too will obtain access to legal rights and redressal mechanisms and possibly better wages and working and employment conditions.

Besides, formalization will also allow informal units to access credit from financial institutions. Moreover, GST is not entirely free from criticism and contradiction as triggered by academicians and media persons. The opposition parties reported that there is no difference between the GST and the existing taxation system in the country

and claimed that it is merely a rebranding of the current taxation system. Besides, they argued that the GST would increase existing rates on necessary goods while reducing rates on luxury goods hence it adversely affects many common Indians especially the middle and lower income groups of the population. In addition, electronic bill payments of some specific value fall under GST.

However, after the implementation of the GST general people especially non-salaried people of the country expressed their mass disapproval and dissatisfaction over GST because it levies and collects tax at each stage of sale or purchase of every goods and services. So, we have to pay this tax in every step or moment of time which affect us positively as well as negatively. Thus, based on the above background, we want to explore the different economic impacts of GST through qualitative perception.

### **Objectives of the study**

The present study endeavours to investigate the different economic impacts of GST on non-salaried individuals from the informal sector measuring through qualitative perceptions particularly in the city of Guwahati in Assam.

### **Method**

#### *Sampling and Data Collection*

This study is based mainly on primary data which has been collected through direct personal interview with the help of a structural schedule employing the simple random sampling of data collection, we have collected a sample of the study is 100 respondents subject to time constraint and other limitations from the occupational segment of non-salaried individuals in the informal sector. The data collection has been done in the months of October and November, 2020. The study has been carried out in the Guwahati city of Assam.

#### *Statistical Tools and Methods*

The study employed different statistical tools and methods based on the collected data. The socio economic characteristics of the respondents as mentioned in the first objective was investigated with the help of statistical tools like descriptive statistics, frequency distribution, percentage tabulation, bar and pie diagrams.

## Results and Discussion

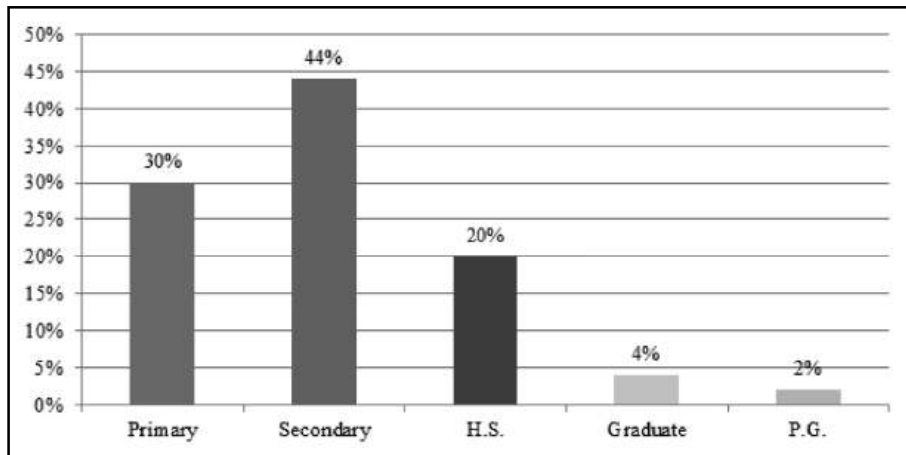
### *Socio-economic Status of the Respondents*

It is important to know their socio-economic conditions can be explained with the help of different social parameters like occupation, education, and other various demographic features. Table-1 displays that the major occupations in sample are wage earners, street vendors, and self-employed persons sharing 24%, 26% and 28% of the sector respectively. However, the share of drivers stands at 14%. The table indicates that most of the non-salaried persons in the informal sector in Guwahati city are wage earners, street vendors, and self-employed. Figure-1 shows that 30% of the respondents have at least primary and 44% of them are secondary level education. But only 4% and 2% of them are graduates and post graduates respectively.

**Table-1: Occupational Structure of the Respondents**

Occupation	Frequency	Percentage (%)
Wage Earners	24	24%
Street Vendors	26	26%
Self Employed	28	28%
Drivers	14	14%
Others	8	8%

*Source: Field Survey*



**Figure-1: Educational Level of the Respondents**

People’s Perceptions about GST

Figure-2 displays that only 78% of the respondents are aware of GST as reported by the field survey and the rest of them are not aware of GST at all which may be due to their lack of higher education among the non-salaried persons.

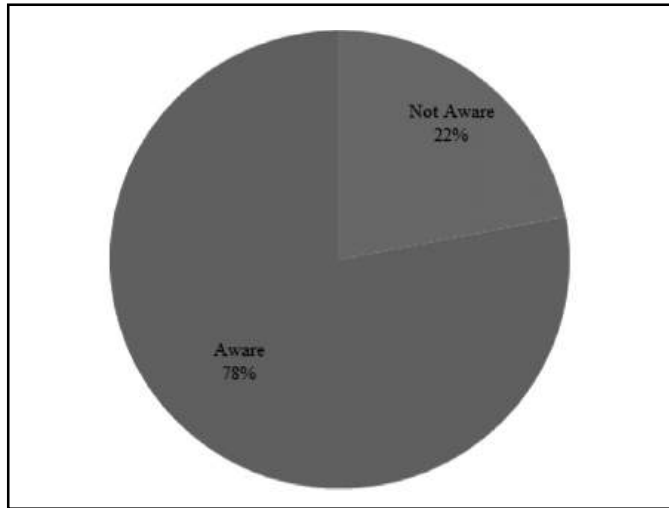


Figure-2: Awareness of GST among the Respondents

It is found that most of the respondent did not accept that GST is a fair tax but if we observe the following table (Table-2) regarding age-wise distribution, it reveals that GST is completely not fair for the respondents with age 30 years or less but other age groups accepted it positively and Table-3 shows all the wage earners viewed that GST is not fair. In addition, most of all other age groups also stated GST as being not fair.

Table-2: Fairness of GST according to Various Age Group

Age Group	GST is Fair	GST is not Fair
Below 30	0%	100%
30-40	23%	77%
40-50	17%	83%
50-60	33%	67%
Above 60	50%	50%

Source: Field Survey

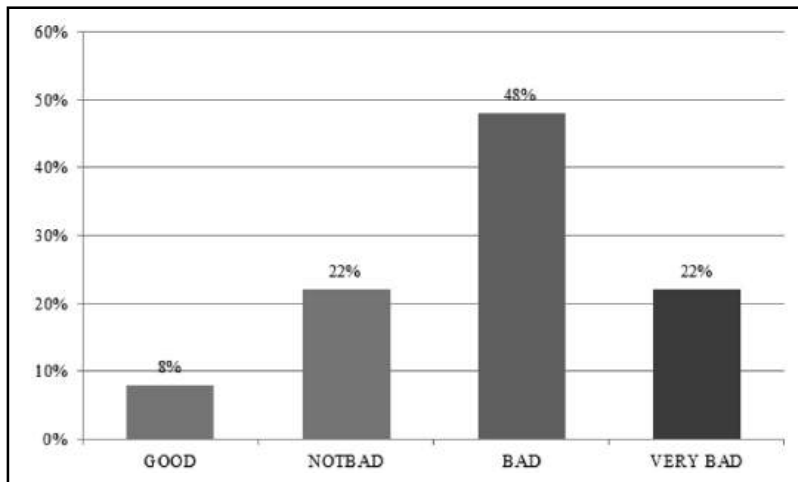
**Table-3: Fairness of GST according to different Occupation**

Occupation	GST is Fair	GST is not Fair
Wage Earners	0%	100%
Street Vendors	60%	40%
Self Employed	36%	64%
Drivers	29%	71%
Others	25%	75%

*Source: Field Survey*

*Impact on Prices*

From the qualitative analysis of the opinion about GST, it is found that most of the respondents (about 70%) voted that their life after implementation of GST has been badly affected (Figure-3). The prime reason of the badly affected lifestyle could be inflated prices of goods and services after GST implementation. Table-4 displays that 82% of the respondents reported that the prices of food items has increased after the introduction of GST in Guwahati city whereas only 14% of them reported the opposite. Similarly, it also displays that most of the respondents (94%) reported that the price of non food items also increased after GST whereas only 4% of them said that it has decreased.



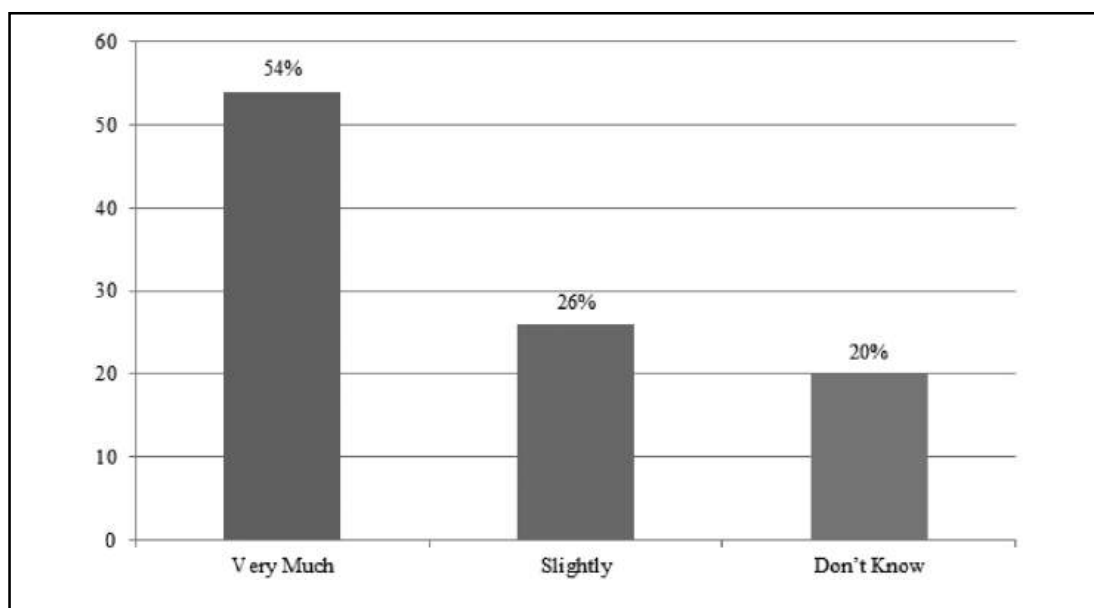
**Figure-3: Impact of GST on Lifestyle**

**Table-4: Impact of GST on Price of Food and Non Food Items**

Impact on Price	Food Items		Non Food Items	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Increased	82	82.0	94	94.0
Decreased	14	14.0	4	4.0
Can't Say	4	4.0	2	2.0

Source: Field Survey

However, Figure-4 exhibits the seriousness or severity of this impact of GST on overall price including food and non-food items. It shows that 54% of the respondents agreed that GST has affected the price very much and 26% said it has slightly affected whereas 20% of them don't know about the impact.



**Figure-4: Severity of GST on Price**

*Impact on Income*

When asked about possible income variation, it is found that 48% of the respondents reported their income being badly affected and 16% of them have voted the impact of GST on income was very bad and even worst in post-GST era.

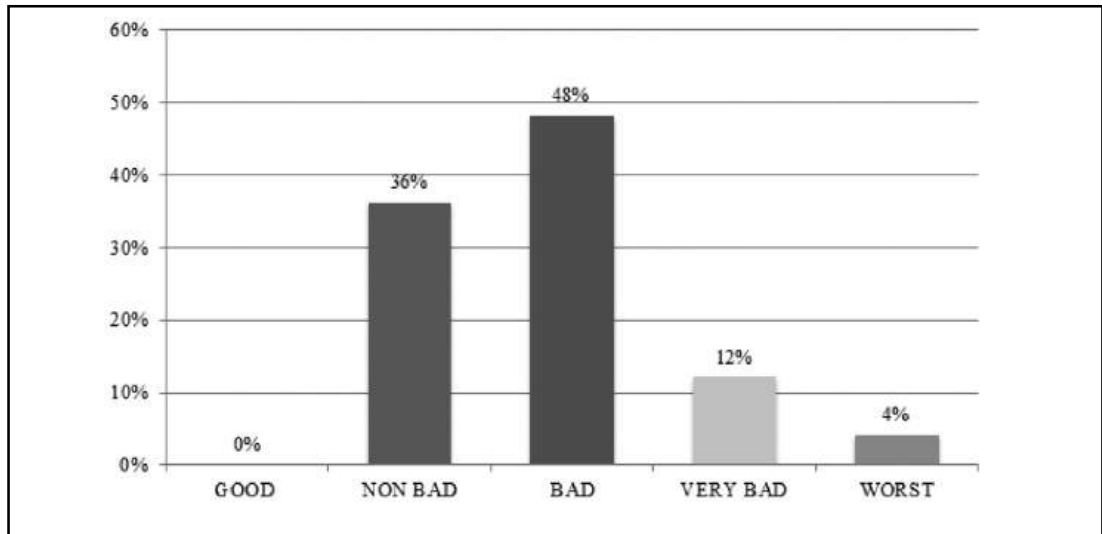


Figure-5: Impact of GST on Income

## Conclusion

The study has exhibited that how the potential entrepreneuriality of the informal sectors has been affected due to the unexpected implementation of GST in India. We have seen that GST in India has negatively impacted on the consumption pattern in India resulting from higher prices of goods and services affecting the informal sector the most especially wage earners, street vendors, self-employed, drivers, and many more. The study shows that most of the respondents accepted that GST is not a fair tax and lifestyle in the post-GST period has been badly affected. The percentage of respondents who reported GST is bad is very high amongst all other opinions. Such effect has been seen as higher prices of both food and non food items. The findings show that 82% of the respondents reported that the prices of food items and non-food item has increased in the post-GST period in the Guwahati city whereas only small proportion of the respondents stated price decline.

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# JAM Trinity: A Turning Point for the Transfer of Government Subsidies during the Pandemic Period

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## Abstract

*In search of better prosperity and inclusive development, the government of India has continuously planned and organized different schemes or policies at different levels. JAM (Jan Dhan, Aadhaar and Mobile) is one of the initiatives by the government of India to increase financial inclusion and ensure comprehensive growth. JAM is the trinity reform of India to eliminate intermediaries and directly transfer government funds and subsidiaries to beneficiaries. During the pandemic period, the government used Aadhaar-enabled Jan Dhanbank accounts to transfer funds under the Pradhan Mantri Garib Kalyan Yojana. The government of India announced various cash relief funds which are digitally transferred to the beneficiaries. The Jan Dhan Aadhaar-enabled bank accounts connected with the mobile number are the enablers for the country's DBT (Direct Benefit Transfer) scheme. This study examines the work done by the government under the JAM trinity considering the past seven years and draws a pattern of growth using secondary data.*

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**Keywords:** COVID-19, DBT, Financial Inclusion, PMJDY, Relief package, Subsidies

## Introduction

After independence, poverty and illiteracy remain the major problems in India. As per the economic survey, a country's economic development depends on the life of its citizens, if they are fighting with poverty, illiteracy, poor nutrition, gender discrimination, and poor learning opportunities then how can a country become great (Ministry of Finance, 2015). To improve the economic life of poor and vulnerable people there is a need for government support and financial assistance.

Poverty and inequality can be reduced by providing access to financial services to the poor and weaker sections of society. Financial inclusion is significant for providing

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investment platforms to the savings of people in a beneficial way. It acts as a promoter of overall economic development. The RBI (Reserve Bank of India), NABARD (National Bank for Agriculture and Rural Development), and the government make various efforts to increase the pace of financial inclusion in India by increasing the number of bank branches, especially in rural areas. In addition to this, they focused on providing ATM services, encouraging and promoting the SHGs (Self Help Groups), use of mobile technology and by giving stress on financial literacy.

The government of India proposed the JAM trinity in the Economic survey 2014-15 to extend the banking facilities, to provide government financial services, and address the challenge of leakages in subsidy delivery. JAM trinity – Jan Dhan Yojana, Aadhaar and Mobile connectivity – an effort to plug leakages in government subsidies. The three components Jan Dhan, Aadhaar, and Mobile connectivity are called the trinity reforms of India. JAM is to link the Jan Dhan bank accounts, Aadhaar cards and Mobile numbers of Indians to eliminate intermediaries and directly transfer the government subsidies to beneficiaries. The Finance Minister in his speech pointed out that the database of 1.2 billion bank accounts when linked with a billion Aadhaar numbers and about 900 million mobile phones would effectively ensure that the government subsidies reach only the real beneficiaries (Jaitley, 2016).

## **Review of Literature**

The government of India and the RBI made efforts to provide financial services to all sections of society. To provide financial services there must be a bank account for every citizen. So PMJDY is the main initiative that provides a bank account to every citizen without any minimum balance. The aadhaar card is another effort in the way to provide financial assistance to real beneficiaries. It provides a unique ID to every citizen of India that helps the government to identify the real and fake beneficiaries of their subsidies. But the main challenge in expanding financial inclusion is financial illiteracy in India. No matter how many schemes, policies or banks are there for the public, but there is no meaning if a person does not know how to use these financing options (Gandhi, 2018). Mobile phones are the digital way to increase financial literacy and financial inclusion most effectively and economically. Today more than 70% of India's population holds a mobile phone. So the government should use the digital platform to spread financial literacy among people.

JAM (Jan Dhan-Aadhaar-Mobile) trinity played a vital role in expanding financial inclusion, especially in rural areas. Ghosh (2017) and Samant et al. (2017) analyze the inter-linkage of three components of JAM i.e. PMJDY, Aadhaar& Mobile connectivity,

and how they interact with each other. The result shows that there is a strong relationship between these three components of the JAM trinity. The present study describes the concept and role of the JAM trinity and how it helps the government during the pandemic period. The COVID-19 outbreak forced people to stay at home which affected their economic and financial well-being. During the lockdown, many industries shut down and this severely impacted the jobs of workers and migrants. It not only affected the weaker section but also affected the lives of the other sections of society. The government of India recognized the problems faced by people in different parts of the country and try to help them by providing financial assistance to them. In this situation, JAM trinity helped the government to provide relief packages to the people around the country.

### **Objectives of the Study**

1. To understand the concept of the JAM trinity.
2. To measure the growth of the JAM trinity.
3. To study the role of the JAM trinity during the pandemic period.

### **Research Method**

The present study is an attempt to understand the conceptual framework of the JAM trinity and its usage under the different schemes to provide benefits to the general public during the pandemic period. The growth of the JAM trinity helps in understanding the present scenario from its launch in the economic survey of 2014-15 to 2020-21. It includes the number of bank accounts opened under the PMJDY scheme, the total amount deposited in bank accounts, direct benefit transfers by the government, and the use of mobile payments during the period.

The data has been collected from secondary sources mainly including government and RBI publications, speeches, news, research papers, and articles. The official website of PMJDY ([www.pmjdy.gov.in](http://www.pmjdy.gov.in)) has bank-wise details regarding the growth of bank accounts opened and the amount of money deposited in these accounts. The details regarding digital payments are provided by the official website of RBI ([www.rbi.org.in](http://www.rbi.org.in)). Data regarding direct benefit transfer is available on the website of the government of India i.e. (<https://dbtbharat.gov.in/>).

## **The Concept of JAM (Jan Dhan-Aadhaar-Mobile) Trinity**

The government of India is running several subsidy plans to guarantee a minimum standard of living for poor people. Through the Public Distribution System (PDS) the central and state government supplies wheat, sugar, rice, pulses, and oil at hugely subsidized prices. But due to the leakages, corruption and middlemen, the motivation or purpose behind such plans is defeated or has extremely low viability. According to the Economic Survey 2014-15, there were 15%, 54% and 41% leakages in PDS rice, wheat and kerosene respectively. These leakages can be reduced by transferring the subsidies directly to the real beneficiaries' accounts.

Cash transfer and Direct Benefit Transfer (DBT) can improve the living of poor people, and raise the financial situation by diminishing corruption and leakages. DBT program transfers the government subsidies directly to the real beneficiaries' bank accounts and minimizes the role of the middleman in disbursing subsidies.

## **Components of JAM Trinity**

The failure to identify the real beneficiaries leads to leakages; as well as corruption and benefits which are for needy people might flow to rich and non-existing persons. If the government is unable to transfer the money and, the beneficiaries are unable to access their money then it leads to an exclusion error. So in order to transfer benefits, the government of India requires a system to recognize the real beneficiaries and a means to transfer the cash to real beneficiaries as well as the beneficiaries also require a system or means to get their cash effortlessly (Ministry of Finance, 2016). Therefore, the Government of India ensures that the three components of the JAM trinity could be of tremendous assistance:

- Pradhan Mantri Jan Dhan Yojana
- Aadhaar
- Mobile Connectivity

JAM trinity was first mentioned in the economic survey of 2014-15, at that time over 720 million people had Aadhaar cards. Aadhaar helped the government to identify the real beneficiaries by providing an accurate database. The government of India started sowing the seeds of linking the Aadhaar card with bank accounts which is a key to effective cash transfer. Jan Dhan bank accounts linked with Aadhaar numbers act as a means to transfer cash directly to their bank accounts. The last mile of the JAM trinity is to connect the mobile number with the unique identification codes

while registering for an Aadhaar card which offers a complementary instrument of delivering benefits to the population (Ministry of Finance, 2015). Beneficiaries can get their money by using mobile payment technology.

Aadhaar allows easy identification of real beneficiaries, Jan Dhan bank accounts and mobile phones permitting direct exchange of funds into their records. The three components of the JAM trinity have the potential to move benefits to expected beneficiaries without any corruption and drainage by the middleman. It helps in different ways:

- To eliminate the ghost beneficiaries: Ghost beneficiaries mean an existing or non-existing person, under whose name benefits are illegally drawn (Barnwal, 2014). Because of these ghost beneficiaries, government welfare funds leak like a sieve. Aadhaar card helped in identifying a large number of ghost and duplicate beneficiaries of various government schemes.
- To help in transferring the cash into the real beneficiary's bank account directly: Jan Dhan bank accounts which are linked with the Aadhaar number, minimize the role of local authorities by transferring the cash directly to the real beneficiaries' bank account and reducing the leakages of subsidies.
- To easy access of subsidized money: In rural areas, getting money from the bank is the main problem in the beneficiaries' hands due to fewer bank branches within a 5 km area. In this contrast, mobile penetration is strong in India which can be used to transfer money quickly and securely. By licensing more mobile money operators and widening the agent network in rural areas we can improve the last mile financial connectivity.

## **Growth and Intensity of the JAM Trinity**

### **1. Pradhan Mantri Jan-Dhan Yojana**

PMJDY (Pradhan Mantri Jan Dhan Yojana) is an initiative to provide formal banking facilities to every household in the country. On August 15, 2014, "Pradhan Mantri Narendra Modi" announced the PMJDY which was launched on August 28, 2014. It's an inclusive financial inclusion plan with a strong emphasis on the usage of technology. PMJDY is a National Mission for the government of India to provide easy access to banking facilities by offering people zero bank balances. Apart from having a bank account; the facility of credit, remittance, pension, insurance, and overdraft is available at a reasonable cost. The Jan-Dhan Aadhaar-linked bank accounts have Rs.5000 overdraft facility. It also provides a Rupay

debit card having inbuilt insurance of Rs.1 lakh which is enhanced to Rs.2 lakh for newly opened PMJDY accounts after August 28, 2018.

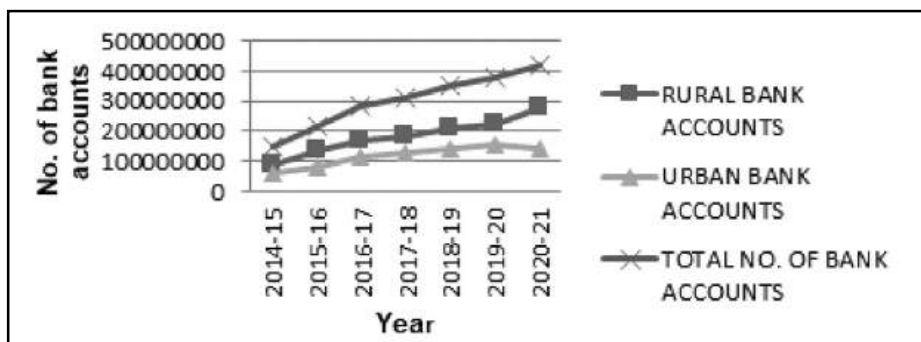
## 2) Growth in Opening New PMJDY Bank Accounts

**Table 1: Number of bank accounts opened under the PMJDY Scheme**

Year	Rural Bank Accounts	Urban Bank Accounts	Total No. of Bank Accounts
2014-15	87844803	59318676	147163479
2015-16	131707034	82568440	214275474
2016-17	168663484	113014787	281678271
2017-18	185196106	129243023	314439129
2018-19	208996445	143665785	352662230
2019-20	225188256	155555839	380744095
2020-21	278490432	143515212	422005644

Source: [www.pmjdy.gov.in](http://www.pmjdy.gov.in)

**Graph 1: Trends in PMJDY bank accounts**



Source: Data compiled from PMJDY website

Table 1 indicates the increase in the number of Jan Dhan bank accounts opened in India's rural and urban areas. By the end of 2014-15, 14 crores accounts were opened under the PMJDY scheme which increased to 42 crores approximately by the end of 2020-21. The number of bank accounts opened in rural areas is more as compared to the number of bank accounts opened in urban areas. It indicates that PMJDY meets

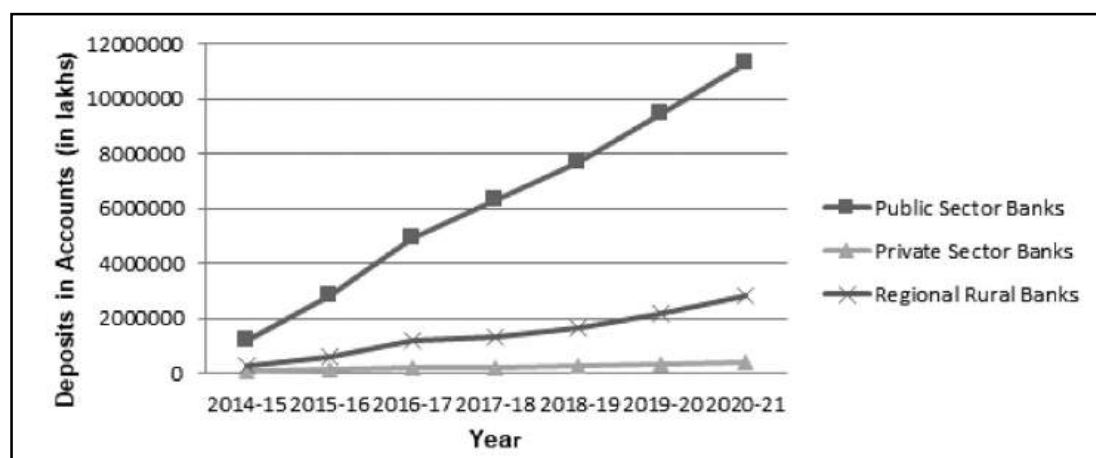
the financial needs of rural people and they are satisfied with the banking services. According to Chetia(2018), due to PMJDY, there is a 6% reduction in the gender gap in the ownership of bank accounts in 2018. There is a total of 23.95 crores rural-urban female beneficiaries out of the total number of 43.23 crores beneficiaries as of September 2021(Pradhan Mantri Jan Dhan Yojana Progress Report).

### 3) Growth in the Deposit of Accounts

**Table 2: Bank-wise total deposits in PMJDY bank accounts**

Year	Public Sector Banks (in lakhs)	%	Private Sector Bank (in lakhs)	%	Regional Rural Banks (in lakhs)	%	Total deposit (in lakhs)	%
2014-15	1218505.25	77.76	90813.06	5.80	257711.1	16.44	1567029.41	100
2015-16	2813916.93	78.89	135471.91	3.80	617811.88	17.31	3567200.72	100
2016-17	4926550.19	78.23	209801.78	3.33	1160890.8	18.44	6297242.81	100
2017-18	6302187.35	80.29	217579.48	2.78	1329632.4	16.93	7849399.24	100
2018-19	7669682.8	79.80	281977.9	2.93	1659074.4	17.27	9610735.1	100
2019-20	9483870.88	79.24	328800.82	2.75	2155414.4	18.01	11968086.1	100
2020-21	11314570.2	77.74	428280.57	2.94	2812202.21	19.32	14555052.9	100

Source: Data compiled from PMJDY website



**Graph 2: Amount of deposits in PMJDY bank accounts**

In table 2, public sector banks show the highest deposits (77.76%) as compared to regional rural banks (16.44%) and private sector banks (5.80%) of total deposits in PMJDY accounts in 2014-15. In the year 2017-18, the deposits in accounts of PMJDY rose to 7849399.24 lakh from 6297242.81 lakh in 2016-2017, of which 80.29% of the amount was deposited in public sector banks, 16.93% of the amount was deposited in regional rural sector banks, and 2.78% of the amount was deposited in private sector banks. Similarly in the year 2020-21, the deposits in the PMJDY bank accounts were 14555052.9 lakh, of which 77.74% of the amount was in public sector banks, 19.32% of the amount was in regional rural sector banks, and 2.94% of the amount was in private sector banks. The number of deposits in bank accounts was found to increase every year which clearly indicates that people have started to use bank services at a progressive rate.

## **2. Aadhaar**

For the economic empowerment of Indians, there should be a proper link between citizens and the government. The government needs a platform for identifying the citizens or real beneficiaries to transfer the services directly. To provide the efficient delivery of services Indian government launched the Aadhaar in 2009. Aadhaar is a 12-digit unique identification number and the world's largest biometric ID system. In January 2009 the government of India established a statutory authority called the Unique Identification Authority of India (UIDAI) for collecting the data. The main objective of UIDAI is to provide a unique identity and a digital platform to the residents of India. This project is launched to collect demographic and biometric data like photographs, iris-scan, fingerprints of residents of India, and store them in a centralized database. The Aadhaar card shows the database of an individual, which is used by the government to provide services that increase efficiency, transparency, and benefits to the people.

A Direct Benefit Transfer (DBT) scheme was launched by Prime Minister Manmohan Singh on November 26, 2012. The main aim of this project is to directly transfer the money to the recipient's bank account without any middlemen and leakages. For reducing the leakages, firstly it is important to identify the real beneficiaries. To identify the real beneficiaries' the government uses the Aadhaar database because it replaces human discretion. On 1 January 2013, the project was introduced in 51 districts and then expanded to all of India (Sanyal, 2012). National child labour projects, student scholarships, and LPG subsidies are part of DBT. The Aadhaar project is linked to the domestic LPG scheme, in this, the subsidy money is directly transferred to a bank account that is Aadhaar-linked.

Direct Benefit Transfer distributes benefits for 420 schemes under 56 ministries by 2020. According to the UIDAI, there is a total of 1,30,65,39,959 Aadhaar generated to the public till August 2021. The government uses the Aadhaar Payment Bridge (APB) system implemented by NPCI, to transfer benefits and subsidiaries directly to the intended beneficiaries (Sengupta, 2020).

**Table 3: Direct Benefit Transfer 2020-21**

<b>Scheme Group Name</b>	<b>Total Direct Benefit Transfer (₹)</b>
PAHAL (Pratyaksh Hanstantrit Labh)	1,50,54,89,60,104
MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme)	6,72,18,29,17,741
NSAP (National Social Assistance Scheme)	72,30,55,74,500
Scholarship Scheme	91,21,29,24,926
PMAYG (Pradhan Mantri Awaas Yojana Gramin)	4,82,51,14,74,550
PDS (Public Distribution System)	16,70,99,13,70,521
Fertilizer	8,36,60,90,36,590
Others	15,48,91,02,23,587
<b>Grand Total</b>	<b>55,25,27,24,82,520</b>

**Source:** <https://dbtbharat.gov.in/reportnew/scheme-group-report>

In the FY 2020-21, the government has transferred Rs.5,52,527 crores to the beneficiaries through direct benefit transfer under various schemes like PAHAL, MGNREGS, NSAP, PMAYG, PDS, Fertilizer, Scholarship scheme, and others. Due to the strong foundation of the Aadhaar-enabled DBT platforms, there is a jump in the direct benefit transfer. There has been an increase in the transfer of subsidies and a decrease in the fake beneficiaries through direct benefit transfer. In every government scheme, there were duplicate/fake beneficiaries which means the benefits intended for the poor flow to the rich and nonexistent households. By eliminating non-existent or ghost beneficiaries, the government saved Rs.1,78,396.65 crores up to March 2020 (Direct Benefit Transfer: **Estimated Benefits/Gains from DBT and Other Governance Reforms**).

### **3. Mobile Phones Connectivity**

Mobile phones and the internet play a vital role in providing financial services to people. The main challenge in expanding financial inclusion is financial illiteracy in India. No matter how many schemes, policies or banks are there for the public, but there is no meaning if a person does not know how to use these financing options. Mobile phones are the digital way to reach people and to increase financial literacy and financial inclusion in the most effective or economical way. Today more than 70% of India's population holds a mobile phone (Gandhi, 2018). It creates new opportunities for expanding financial inclusion through digital technology. So the government should use the digital economy to spread financial literacy among people.

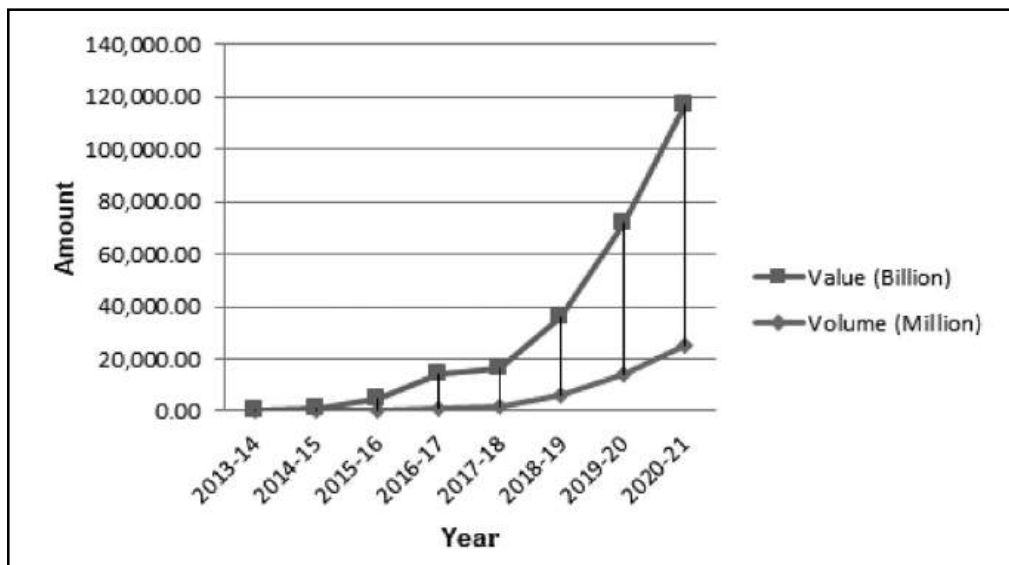
In terms of users, India became the world's second-largest smartphone market. India's huge young population offers strong growth for smartphone acceptance. According to the IMAI report, there is an increase in the number of smartphone owners from 292 million in 2016 to 445 million in 2020. Mobile phones are helpful, simple to use and an incredible method to reach over. Mobile phones can take care of the number one challenge of reaching across people, with financial inclusion and literacy, in the most economical way. Mobile phones are also used to improve the Direct Benefit Transfer system, by informing the beneficiaries about the arrival of food or fertilizers at local retail outlets and the transfer of subsidized money to their bank account.

Mobile banking could be convenient with significantly lower working expenses compared to internet banking and branch banking (Gandhi, 2018). Now mobile phones are used as a tool for promoting branchless banking. For social and economic development in India, the government has initiated the Digital India program which increases the use of mobile payment. Indian government takes advantage of deep mobile penetration by utilizing mobile payment technology. There had been an increase in the number of mobile banking transactions as given below:

**Table 4: Mobile Banking Transactions in India**

Year	Volume (Million)	Growth (%)	Value (Billion)	Growth (%)
2013-14	94.71	-	224.18	-
2014-15	171.92	81.52	1,035.30	361.82
2015-16	386.55	124.84	4,017.84	288.08
2016-17	976.83	152.70	13,104.26	226.15
2017-18	1,870.02	91.43	14,722.19	12.35
2018-19	6,194.80	231.26	29,577.05	100.90
2019-20	13,926.24	124.80	57,815.10	95.54
2020-21	25,343.17	81.98	91,261.11	57.85

Source: Data compiled from [www.rbi.org.in](http://www.rbi.org.in)



**Graph 3: Volume and value-wise Mobile Banking Transaction**

There has been a remarkable growth in mobile banking transactions during the period 2014-15 to 2020-21. The volume-wise growth rate increased tremendously from 81.52 % in 2014-15 to 152.7% in 2016-17 which shows an upward trend but it declined to 91.43% in 2017-18. Mobile banking transaction further shows an increase in the growth

rate of volume from 91.43% in 2017-18 to 231.26% in 2018-19. There has been a growth of 124.8% in 2019-20 and 81.98% in the year 2020-21.

Likewise, table 4 shows the value-wise growth rate of mobile banking transactions having the highest percentage growth of 361.82% in 2014-15. Value-wise, the growth rate decreased from 288.08% to 12.35% in 2015-16 and 2017-18 respectively which further increased to 100.9% in 2018-19. Thereafter, the value-wise growth rate is 95.54% in 2019-20 and 57.85% in 2020-21 registering a wide fluctuation trend of mobile banking transactions. But overall, graph 3 shows an upward trend of both volume and value-wise transactions of mobile banking.

### **Role of JAM Trinity during the Pandemic Period**

Jan Dan Yojana, introduced by the Modi government, is providing financial assistance to millions of Indians during the COVID-19 lockdown. The inter-linkage of bank accounts with the Aadhaar number and mobile number of beneficiaries has enabled the direct transfer of money to their accounts without any leakage or corruption. During the COVID-19 situation, JAM infrastructure helped the Indian government in transferring money directly to the poor and needy people's bank accounts.

During this pandemic period, the lockdown put huge pressure on the domestic budget of some sections of society, but JAM trinity acted as a savior and distributed money to the people in need. To maintain social distance during the COVID-19 situation, JAM trinity promotes online banking; there is an increase in the use of ATMs, cards, and mobile payments instead of the use of physical banknotes. The digital linking of Jan Dhan accounts, Aadhaar, and mobile numbers (JAM trinity) expanded the coverage of the Direct Benefit Transfer program and provided the necessary backbone for financial inclusion in India.

*Financial Assistance under JAM Trinity as per Schemes:* On 26 March 2020, Finance minister Nirmala Sitharaman offered a relief package of 1.70 lakh crores under the Pradhan Mantri Gareeb Kalyan Yojana (PMGKY) to help the people in the current COVID-19 crisis (Ministry of Finance, 2020).

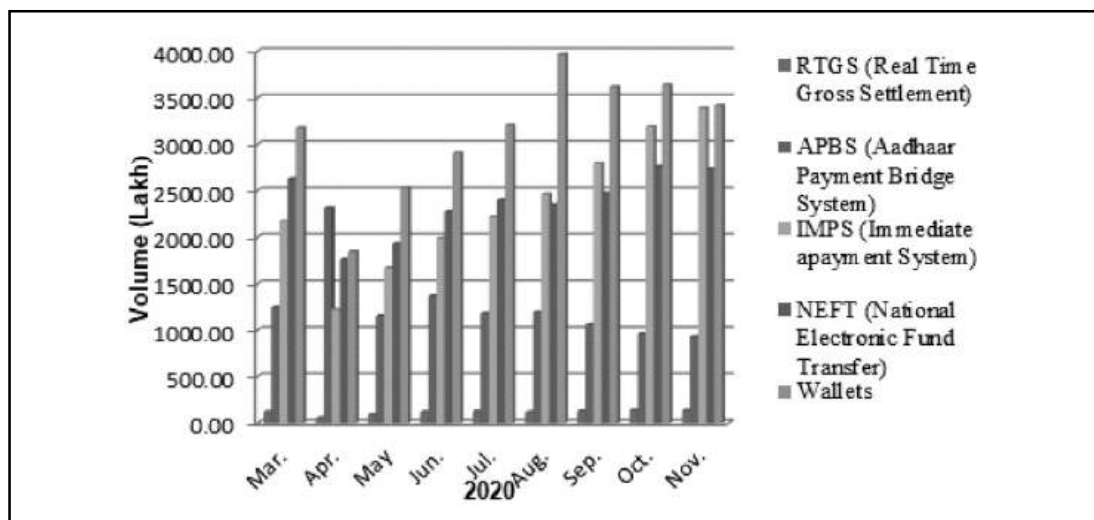
- Rs.13855 crores are distributed to 6.93 crores farmers under the *PM-KISAN scheme*. Through the announcement of the relief package, the Finance minister said an installment of Rs.2000 will be transferred to the farmer's bank account directly in the first week of April 2020 through Direct Benefit Transfer.

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- The 3 crores widows, pensioners, and divyang people received an ex-gratia amount of Rs.1000 under the scheme of the *National Social Assistance Programme*. A total of Rs.1400 crore was distributed in two installments for three months to the beneficiaries.
- The government provides 5 kg food grain for every individual beneficiary and 1 kg daal for every family free of cost under the *Pradhan Mantri Garib Kalyan Anna Yojana* to all ration cardholders. The beneficiary must have an Aadhaar and ration card to access this scheme.
- Rs.9930 crores distributed to the 19.86 crores Indian women holders of Jan Dhan accounts. The support of Rs.500 will be deposited by the government to the women Jan Dhan account holders during April, May, and June of 2020. In April Rs.500 will be deposited by the government and holders will be able to withdraw money in May. To maintain the social distance there will be a proper schedule for the disbursement of money according to the last digit of the beneficiaries' account number. According to the IBA (Indian Bank Association), beneficiaries will be able to withdraw money on 4 May, 5 May, 6 May, 7 May, 8 May, and 11 May depending on their account numbers.
- Total of Rs. 27,442.08 crores amount directly transferred to the account of 11,42,02,592 beneficiaries under all the *centrally sponsored schemes* through the Public Financial Management System (PFMS) during the Covid-19 lockdown. These centrally sponsored schemes are National Social Assistance Program (NSAP), PM KISAN, National Rural Livelihood Mission (NRLM), Mahatma Gandhi National Employment Guarantee Scheme (MNREGS), National Health Mission (NHM), and National Scholarship Portal (NSP).

*State Government Welfare Schemes:*

- The 2.16 crores construction workers received financial support from the Building and Construction Workers' Fund managed by the State government. The total disbursement under the head was Rs.3066 crores.
- Many state governments like Madhya Pradesh, Maharashtra, UP, Tripura, J&K, Bihar, and others have directly transferred cash amounting to Rs.9,217.22 crores in the bank accounts of 4,59,03,908 beneficiaries under the 180 welfare schemes using PFMS (Public Financial Management System) during COVID-19 lockdown.



Graph 4: Volume-wise Digital Payment Methods

Source: Data compiled from RBI website

However, during the pandemic period, the digital modes of payment show a sharp fall due to the lockdown in April 2020. Graph 4 shows the RTGS transactions volume fell by 54%, IMPS transactions volume fell by 44%, and NEFT transaction volume fell by 33% in April 2020 as compared to March 2020. The other modes of transactions also show a fall during the same period. But there is an exception to the trend i.e. APBS (Aadhaar Payment Bridge System), the government uses this system to transfer funds or subsidiaries directly to the Aadhaar-enabled accounts of beneficiaries. All the funds transferred by the government under the Pradhan Mantri Garib Kalyan Yojana use the Aadhaar Payment Bridge System which increases the transaction volume by 85% to 2312.36 lakh in April 2020 from 1247.79 lakh in March 2020. But after the lockdown, there is an increase in the volume of other digital modes of payment as we can see below: RTGS, IMPS, NEFT, and wallet transactions increased by 153%, 176%, 55%, and 85% respectively in November 2020 as compared to April 2020.

*Other than financial assistance:* The Modi government promotes the use of digital technology to improve policy implementation and transparency in operations. Nowadays, to identify and link the people with the government, platforms like [Mygov.in](http://Mygov.in) have been widely appreciated and used. During the COVID-19 crisis, digital technology is used to disseminate information related to healthcare services; it also connects citizens with the government and allows all users to access reliable information.

Aarogyasetu is a digital platform launched by the government to keep people informed about the risk of covid-19 infection. It records the details of individuals you have interacted with and caution you if any of them test positive. It also gives significant clinical advice related to the Covid-19 pandemic. This app is available in 11 different Indian languages.

DIKSHA (Digital Infrastructure for Knowledge Sharing) is a national platform for school education launched by the vice president of India in 2017. It can be accessed by teachers and students across India and currently support more than 18 languages. COVID-19 disturbs schooling but DIKSHA makes it possible to enable learning at home via innovative programs (<https://diksha.gov.in/>).

## **Conclusion**

All three components of the JAM trinity have their own life cycle. Jan Dhan is a financial inclusion program, its main objective is to reduce poverty by bringing poor and vulnerable people into the formal banking sector. Aadhaar was a flagship program to give 12 digits unique identification numbers to the citizens of India and in the economic survey 2014-15, it was suggested to link Aadhaar with bank accounts. Over the last decade, the ownership of mobile phones and their connectivity has increased in a speculator way, their versatilenature makes it easier to transfer cash.

During the lockdown situation, if there was not a JAM trinity as a means to transfer the relief packages to the poor people then the transfers would have been deferred. In such a situation if middlemen were used by the government then there might be a possibility of corruption and transfer of a minimal amount to the real beneficiaries. JAM trinity and Aadhaar Payment Bridge System (APBS) has been used by the government as a gateway to transfer subsidies to the poor and vulnerable people during the lockdown without any leakages. The three components of the JAM trinity have acted as a boom for the weaker sections of society during the pandemic period.

Despite the huge implementation of the JAM trinity, some indicators affect its effectiveness. Like people are less aware of the financial services given by the bank, even the bank accounts opened under the Jan Dhan scheme mostly remained at zero bank balance. Likewise, due to illiteracy and unawareness, people do not know how to operate a mobile phone properly. Due to these limitations, the benefits of the JAM trinity cannot be fully utilized. Therefore it is suggested that the government should take more steps to aware people about the financial services given by the bank and make them literate about digital technology.

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# Pandemic Changes: Impact of Situational Factors on the Outputs

Sheeja Krishnakumar\*, Geethu Anna Mathew\*\*, Roshen Therese Sebastian\*\*\*

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## Abstract

*The spread of COVID-19 has created tremendous changes on the work front. These changes are new to everyone, and such pandemics may occur in the future and hence cannot be ignored. Hence, understanding the situational factors will help the organization face such consequences with ease in future. The impact of situational factors (physiological, psychological, financial and social) on productivity and well-being is carried out among employees working in ITES. 214 respondents participated in the study. The impact of well-being on productivity is tested first. The variables under different situational factors are tested to determine the effect on productivity and well-being. Further, the study tries to determine whether there is any distinction between extroverts and introverts on the impact of the said changes. As confirmed by other research scholars, well-being significantly affects productivity. The study unfolds that the psychological and financial factors impact the productivity and well-being of employees and individual's personality has no role on the situational factors.*

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**Keywords:** Cyberslacking, Organisational performance, Self-isolation, Telepsychology, Well-being.

## Introduction

The COVID-19 pandemic's global spread has challenged society in a number of ways, compelling people to alter a wide range of habits, including their work environment, socialisation style, travel plans, and recreational pursuit. Despite the individual impacts, it also has social and economic consequences which affect globally. COVID-19 is a contagious disease spreading among the human population since December 2019. On 31 January 2020 the World Health Organization announced the COVID epidemic as a universal health disaster (WHO, 2020) causing a dangerous risk to

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people's life (Ghobadian et al., 2022). As the virus was spreading rapidly the government placed restrictions on people's freedom of travel. In order to stop the virus from spreading further, businesses and many companies allowed their employees to work from home.

The understanding of the current situation and managing the pandemic help to take precautionary measures in the future when such an untoward situation occurs. The anxiousness about the future creates tension as they suffer from unsolicited stress perceiving that the past will reoccur and affect their living condition. This study examined the impact of these changes among employees working in ITES (Information Technology Enabled Services). Even though ITES employees are habituated to digital tools and remote working, an unprecedented situation like the pandemic is new to everyone. This paper focuses on the impact of situational factors like physiological, psychological, financial, and social on the productivity and well-being of the employees. Through this study, the relevant situational factor that has to be given relevance can be identified for future purposes when such pandemic conditions reoccur.

There has been some research done on ITES personnel in the Indian context, despite the fact that earlier studies (Brooks et al. 2020) identified a variety of characteristics that were either positively or negatively connected with people's well-being amid unforeseen occurrences. In addition to that, the association of these factors with employees' productivity is also to be assessed. The study is relevant; as ITES companies have work from home options to manage the uncertain situation (Duffy 2020) with new stringent guidelines to overcome it. The previous study on remote work (Donnelly & Thomson 2015) was conducted in a scenario where everything was normal. It is interesting to understand the factors affecting the well-being and productivity (Kurdy et al., 2023) of ITES employees when changes are brought in the company with the advent of the pandemic. The impact of situational factors like physiological, psychological, financial and social on the outputs like productivity and well-being among the employees were assessed. Though the severity of pandemics has reduced, this study will be helpful for such contingencies in the future.

## **Review of Literature**

### **Situational Factors**

The fear of the viral infection has developed physiological, psychological and behavioural changes in individuals. The studies conducted during SARS, H1N1, Ebola and Covid -19 revealed the psychological concern of the contagion, quarantine (Barbisch et al., 2015) and fear of spreading the diseases to dear ones. These thoughts develop anxiety, and the fear of illness leads to self-isolation and curtails the

relationship among fellow beings. The pandemic has disconnected individuals from their loved ones, and a sense of insecurity developed regarding the contagion (Li & Wang, 2020; Cao et al., 2020). The constant anxiety of the infection (Brooks et al., 2020) resulted in less contact and reduced social interaction.

Orgilés et al. (2020) studied the psychological problems like anxiousness, boredom, impatience, irritability, uneasiness, aloneness, and fears among youngsters during the Covid pandemic. Further, a study through an online survey (Li et al., 2020) also revealed almost the same problems experienced in other studies like anxiety, depression and tension during the Covid pandemic. On the other hand, viewing the suffering friend or relative aggravated the stress levels (Saladino et al., 2020).

Anxiety among the individuals abated due to the mediation of financial stability and acquaintance support (Cao et al., 2020). The medical facilities and the official support to counteract the pandemic have brought tranquillity among the individuals. The economic issues and academic disruption developed nervous signs among the youth who participated in a study during the spread of the pandemic (Alvarez et al., 2020). Individuals longed to connect with their loved ones and colleagues when isolation happened during the pandemic. Pasetti (2020) mentioned the desire of the people together together and appreciate each other after a long time of virtual connection.

## **Output Factors**

The success of any organization depends on their product quality and the service quality of its employees (Baptiste, 2008). Organizational performance is highly dependent on the individual employees' contributions (Sirgy, 2017). The majority of people believe that their jobs have a substantial impact on both their physical and mental health (Kara et al., 2013). Positive attitudes and behaviours are strongly correlated with employee well-being (Kooji et al., 2013). Employee well-being is based on the idea that one's happiness, health, comfort, and tranquilly while working contribute to an improvement in one's quality of life. The intensity of the association between well-being and productivity varies from small firms to large ones (Cohen 1992). This indicates that disregard for well-being has a severe repercussion on productivity.

The findings of (Ralph et al.'s 2020) indicate that compelling employees to contribute more to productivity will not produce the expected results. In their study, the emphasis on the well-being of employees for higher productivity is recommended strongly. According to a study on employee well-being, improving employee well-being awareness has a favourable impact on work-life balance, job satisfaction, mental health, and organisational commitment (Baptiste, 2008; Sirgy & Lee, 2016).

Health authorities have provided solutions to reduce the spread of virus by instructing people to isolate and improve their well-being. A study (Bazarko et al., 2013) highlighted the lower outcome level due to increased unrelenting stress levels at the workplace. A sound sleep predicts mindfulness and well-being (Howell et al. 2008). Distraction from household members and cyberslacking create a disturbance while working from home (Dictionary 2020). Boredom is another factor that has to be considered while working remotely (Russo et al. 2021); suggested assigning challenging work with opportunities to interact with others to make the remote work enjoyable.

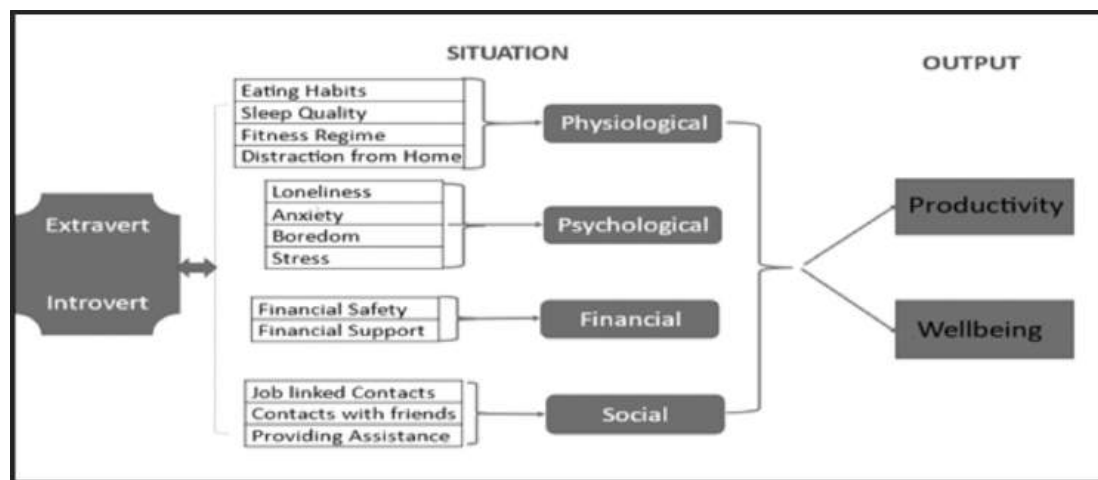
Some of the components are outside the limitation of individuals, such as the time frame for the isolation, lockdown restrictions, and travel guidelines (Brooks et al., 2020). Hence the particular study focuses on those factors under the control of individuals. Those factors are interrelated, and investigating them can throw light on their effect on outcomes. Assessing the relation between anxiety and stress and its impact on well-being it is clear that both anxiety and stress are negatively related to well-being (De Castella et al., 2014). Hence, understanding the impact of both variables on the well-being of individuals is relevant for organizations to develop activities and programmes to reduce the stress level of employees and thereby improve the well-being of their employees. Anxiety requires professional attention; hence it is long-lasting and unspecific (Johnston 2020). Examining those situational factors and their effect on well-being is significant in the current context.

The government regulations and restrictions had an impact on the well-being and productivity of employees. However, though they had initial repercussions, most technology-based companies could manage their work by allowing their employees to work from home. Before the pandemic working from home was associated with a better work-life balance, reduced stress, and fewer carbon emissions because remote workers commute less. However, continuing to work from home has become difficult. The remote employees find difficulty to adjust and cope with new issues, which could increase stress and anxiety and impair an individual's capacity to work (Russo et al., 2021). As a result, the benefits of remote work may be diminished or even reversed.

Kotera & Vione (2020) mentioned the relevance to understand the factors that enables people to operate productively from home when isolated. Hence the study assesses the situational factors like physiological, psychological, financial and social aspects on the outputs like productivity and well-being of the ITES employees. Further, the study tries to determine whether there are any differences when considering extroverts and introverts. There is a perception that introverts adapt to loneliness leading to decreased well-being than extroverts (Russo et al., 2021).

## Research Question

What is the impact of situational factors like physiological, psychological, financial and social on the outputs like productivity and wellbeing among the employees working in ITES companies?



Source: Compiled from literature

Figure 1: Model – Impact of situational factors on output

## Materials & Methods

The pandemic has affected the way of life of individuals. It has caused some disturbances in physical, psychological, financial and social factors. This study tries to understand the factors that have an impact on the productivity and well-being of individuals. With the changing scenario of working remotely, understanding the influence of the factors is crucial for the companies to take further measures while encountering such situations in future. Thus, the independent variables chosen are situational factors like physiological, psychological, financial and social situations and the dependent variables are productivity and well-being. The extent of the relationship between these four variables are tested using statistical tools to understand its impact on the dependent variables, productivity and well-being. Additionally, the study tries to determine whether there is any distinction while considering extroverts and introverts.

The data has been collected from employees working in information technology-enabled services, including data entry and processing, telecommunication services, data warehousing and medical transcription. The structured questionnaire was

prepared and forwarded to the participants through email and WhatsApp. The collected data was from individuals working in information technology-enabled services who are known directly or indirectly. Direct emails were sent to fifty-one individuals. They forwarded it to their friends and colleagues working in the allied areas. A total of about two hundred and twenty-eight samples were collected. Two hundred and fourteen samples were only considered for the study as the remaining were not complete or not suitable.

The questionnaire used was a standard one that was tried and tested by different scholars was used for the study. The variables studied under physiological situations are eating habits, sleep quality, fitness regime and distractions at home. For psychological situations, the variables considered are loneliness, anxiety, boredom and stress. Financial safety and financial support are used to study the financial situation. Under social, job linked contacts, contacts with friends and providing assistance are considered. The study tries to find any difference between the two personalities, extrovert and introvert, in different situations. The demographic variables included in the study are gender, age, education, nature of the job, the status of working (all days from home, two or three days from office, on requirement only), and marital status. The data was collected during the COVID pandemic period, during September, October, November, and December 2021. The statistical tools used for the study include regression and discriminant analysis.

For measuring well-being, questionnaire scale (Diener et al. 1985) having five items are used with a five-point scale. In order to measure productivity, the expected output based on the last week is considered for the study. Three items are included (Russo, et.al 2021), that include: A). No. of hours worked last week, approximately (Q1). B). No. hours worked if there were no pandemic. (Q2). C). A comparison of last week outcome to any other normal week. In order to measure this, the scale provided is <100%, =100%, >100% productive. While coding -100, 0 and +100 is used. Further, a formula used is  $(Q1/Q2) \times (Q3 +100)/100$ . Based on the final values, productivity is considered. (eg:-  $(10/9) \times (100+100)/100$ ). The values less than one indicate less productive and values more than one indicate high productive.

The variables like the physiological, psychological, financial, and social situations were measured considering respondents' experience for the last one week. For physiological situations, the variables considered are eating habits, sleep quality, physical regime, and distraction from home. Eating habits (European Social Survey, 2014) was measured using a five-point scale with two items. The sleep quality (Russo et al. 2021) is measured using a five-point scale with one item. For physical regime (Godin and Shephard, 1985), the hours spent for exercise for the past one week was considered. Those not doing exercise marked zero. For distraction from home (Russo et al. 2021), a five-

point scale is used with two items. The psychological situation considered is loneliness (Gierveld and Tilburg 2006) used a five-point scale with two items. In the case of anxiety (Spitzer et al. 2006), a five-point scale is used with three items.

Boredom (Russo et al., 2021) and stress (Cohen, 1992) were considered boring and stressful situations experienced over one week. The two variables from financial situations include financial safety (Glei et al. 2019) measured using two items and financial support with three items. Both the variables used a five-point scale. The social situation is learned using job-linked contact variables (Russo et al. 2021) contacts with friends (Russo et al. 2021), and providing assistance (Russo et al. 2021). Five-point scales were used for all three variables with two items each for 'contacts with friends', and 'job linked contacts' while 'providing assistance' is measured using one item. For extroversion, four items were used (de Vries 2013) using a five-point scale. The lower values marked on the scale are considered introverts and higher for extroverts.

## **Results**

The mean age of the participants was 32.8 years (range is 26 – 55 years). Most (86 percent) of the respondents were graduates, and the remaining (11 percent) has done diploma courses. In that two hundred and fourteen participants, one hundred and seventy-four were males and remaining forty females. Majority (89 percent) employees participated in the study were working from home. About (9 percent) employees went to company two days in a week. The remaining percentage (2 percent) employees went to company only whenever required. Considering the nature of job, 25 percent respondents were involved in data entry and processing, telecommunication services (43 percent) data warehousing (21 percent), medical transcriptionists (9 percent) and other respondents has not mentioned (2 percent). Among the participants 56% respondents were married and the remaining (44 percent) were unmarried. The items with reliability ( $\alpha$  value) more than 0.6 is considered. Based on the fig 1, various variables taken under physiological, psychological, financial and social situations are tested with the dependent variable, productivity and then with well-being.

The regression test for well-being and productivity was also done to find the effect of the predictor on the dependent variable. The R square value is 0.52 and the model is fit with the (F value = 128.41) and the significant relation with p value is less than 0.05 (t value = 11.332). This shows that well-being has an impact on the productivity. Further the relationship between productivity and various situational factors like physiological, psychological, financial and social are examined.

**Table.1 Regression test – Dependent Variable Productivity**

Variables	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant)	4.577	1.104		4.147	.000		
Eating habits	.136	.166	.082	.818	.415	.509	1.966
Sleep quality	-.140	.138	-.097	-1.014	.312	.551	1.814
Fitness regime	-.044	.133	-.034	-.328	.743	.470	2.127
Distractions from Home	-.322	.178	-.185	-1.811	.048	.486	2.057
Loneliness	.108	.183	.056	.587	.558	.557	1.797
Anxiety	.157	.277	.083	.566	.572	.237	4.222
Boredom	-.084	.114	-.054	-.735	.463	.923	1.083
Stress	-.376	.190	-.281	-1.962	.040	.927	1.079
Financial Safety	.010	.121	.006	.083	.934	.974	1.027
Financial support	-.037	.108	-.025	-.345	.731	.953	1.049
Job linked contacts	.267	.074	.166	2.249	.026	.932	1.073
Contact with friends	.155	.086	.149	1.792	.075	.729	1.372
Providing assistance	.057	.087	.055	.657	.512	.733	1.364

Dependent Variable: productivity Source: Primary

It is revealed that the independent variables create 36.6% variance related to productivity ( $R^2=0.366$ ). The model is significant as the F value is 1.864 and p value is less than 0.05 (0.48). There is a relationship between the job linked contacts and productivity, between stress and productivity and also between distraction from home and productivity as the p values are less than 0.05.

**Table 2: Regression Test: Dependent Variable, Well-being**

Variables	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant)	2.514	1.113		2.260	.025		
Eating habits	.064	.167	.038	.386	.700	.509	1.966
Sleep quality	-.015	.139	-.011	-.111	.912	.551	1.814
Fitness regime	.124	.134	.095	.922	.358	.470	2.127
Distractions from Home	-.042	.180	-.024	-.237	.813	.486	2.057
Loneliness	.085	.087	.081	.974	.331	.729	1.372
Anxiety	.098	.280	.051	.352	.725	.237	4.222
Boredom	-.152	.115	-.097	-1.320	.189	.923	1.083
Stress	-.193	.098	-.137	-2.206	.034	.916	1.091
Financial Safety	.375	.122	.220	3.073	.002	.974	1.027
Financial support	.242	.108	.162	2.230	.027	.953	1.049
Job linked contacts	.011	.075	.010	.143	.886	.932	1.073
Contact with friends	.251	.113	.158	2.227	.029	.557	1.797
Providing assistance	-.063	.088	-.059	-.719	.473	.733	1.364

Dependent Variable: wellbeing  
Source: Primary

From the analysis it is found that the R<sup>2</sup> value is 0.346, indicating 34.8% variance related to the wellbeing. The model is fit with F value 1.821 and the p value is less than 0.05 (0.043). There is a relationship between job security and wellbeing and also between financial support and wellbeing.

**Table 3: Regression Test – Situational factors on Productivity & Well-being**

Variables	T	P value	T	P value
(Constant)	3.538	.001	2.176	.031
Physiological	-1.524	.129	1.126	.262
Psychological	2.886	.037	-2.090	.038
Financial	-.257	.798	3.599	.000
Support	.927	.355	.497	.620
Dependent variable: productivity		Dependent variable: well-being		

Source: Primary

The analysis has been done by combining all the items of physiological, psychological, financial and social situations to find out the impact of these predictors on the dependent variable. The results shows that psychological situation has an impact on the productivity. It is found that psychological and financial situation has a greater impact on wellbeing.

**Table 4 Regression test - Well-being and Productivity**

Variables	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
(Constant)	1.119	.057		.000	1.032
Well-being	.621	.055	.637	11.332	.000

Dependent Variable: Productivity Source: Primary

The Rsquare is with 40percentage and the model is fit with the (F value = 128.41) and the significant relation with (t value = 11.332). This shows that productivity has an impact on the well-being of the individual.

**Table: 5 Discriminant Analysis**

Eigen Value	% of Variance	Canonical Correlation	Wilks' Lambda	Chi-square	df	Sig.
.091	100.0	.289	.917	15.796	13	.260

Source: Primary

The classification table reveals that different situations of respondents like physiological, psychological, financial and social are classified at 62.1 per cent. This indicates that discriminant function is classified correctly at 62.1 percentage. The significance of the discriminant function is explained using Wilks Lambda test and the value is 0.917. Since the value is not close to zero the discrimination is not fit. The p value is more than 0.05 indicating that the function that discriminates the two groups is insignificant.

## **Discussion**

The COVID-19 pandemic lockdown and subsequent changes brought in lot of situational (Physiological, psychological, financial and social) changes among the employees working in information technology-enabled services, this study tries to understand the factors that have significance relation on the productivity and well-

being of the employees. Some factors of the situational variables have an impact on the productivity and well-being. The relationship between productivity and well-being was found to be positive. Ralph et al. (2020) indicate that overlooking the well-being of their employees results in lowering productivity. From the results, it is clear that distraction from home ( $t=-1.811$ ), stress ( $t=-1.962$ ) and job contacts ( $t=2.249$ ) impact productivity. The 'distraction from home' ( $B= -0.322$ ) and 'stress' ( $B= -0.376$ ) can be explained that for one unit decrease in these two independent variables will cause an increase in productivity by 0.322 and 0.376, respectively. This explains that various interferences from the family have an impact on productivity. Continuous stress results in negative outcomes (Bazarko et al., 2013).

Training programs to reduce employee stress have to be emphasized to increase productivity. Some respondents clarified that the disturbances from the other members of the family were more in the initial days of lockdown, and it tapered as they realized the seriousness of the work. The job contact ( $B= 0.267$ ) has a significant relationship explaining an increase in one unit of job-related contact with colleagues results in an increase in 0.267 units of productivity. Interacting and having a constructive discussion with colleagues help complete the work effectively. The respondents are confirming that interaction with colleagues increases productivity. Such interactions are important for taking various decisions. During the pandemic, though there was no direct interaction, all employees were connected technologically. Occasional technical glitches delayed decision making, impacting productivity. The respondents value the importance of their interaction for the smooth accomplishment of the task.

The different variables that have an impact on well-being include stress ( $t=-2.206$ ), financial safety ( $t=3.073$ ), financial support ( $t=2.230$ ) and contact with friends ( $t=2.227$ ). The stress ( $B= -193$ ), financial safety ( $B=375$ ), financial support ( $B=242$ ), and contact with friends ( $B=251$ ) influences well-being, but one unit increase of stress results in 193 units of decrease in well-being. However, the B values are positive in the case of financial safety, financial support and contact with friends. This explains that financial safety, support and friendships are essential for the well-being of the individuals. The earnings of an individual (finance) is crucial for the happiness and comfort living. The pandemic has severely shaken the roots of many businesses resulting in job loss or reduction in the salary of many employees. The wild spread of the disease and increasing fatality rate also increased employees' stress levels. These incidents disturb the individuals badly, causing reduced well-being.

Further, the analysis of physiological, psychological, financial and support situations was tested with productivity and well-being separately. The results reveal that psychological situation has a significant role in productivity and well-being. Financial stability also has importance in well-being. A focus on providing mental strength and

financial stability can bring tremendous changes in the success rate of the business. Many individuals who fell sick due to the COVID-19 attack had suffered from financial scarcity due to the high medical and hospital expenses. The reduction in salary and the declaration of no increment has disturbed some individuals very severely. Some individuals suffered psychologically when they understand their friends or relatives' financial difficulties and health issues.

Studies are revealing the positive relationship between well-being and productivity. Human relations theory states that the well-being of employees is linked with increased morale, leading to higher productivity (Strauss 1968). The primary focus on the well-being of the employees is because content employees improve productivity. Well-being has a relationship with productivity (Russo et al., 2021); when the well-being of an individual increase, productivity also increases. The correlation test reveals a strong positive relationship between well-being and productivity ( $r=0.78$ ). The regression analysis divulges the significant relationship ( $t=11.332$ ,  $p=0.04$ ).

This implies that the well-being of the individuals is vital for the increase in productivity. This conforms with the study conducted by Krekel, Ward, & De Neve (2019), stating the association of higher well-being with higher productivity and a firm's performance by conducting a study linked with Gallup, including nearly two million employees across companies in 73 countries. The discriminant analysis reveals that the discriminant function between the two groups, extroverts and introverts, is insignificant. Hence, it is clear that there is no difference between extroverts and introverts when the impact of variables like physiological, psychological, financial and social situations are considered. This finding contradicts (Ludvigh and Happ 1974) explanation that extroverts are more affected than introverts as they prefer to socialize with people. This study reveals no difference between extroverts and introverts related to situational factors.

### **Managerial Implications**

The study unfolds the mental and financial difficulties that impacted the productivity and well-being of the employees working in information technology-enabled services. The advent of the pandemic has disturbed the lives of many employees working in different sectors, but this study focused only on a specific sector. The work from home option and the lockdowns at different intervals have changed their working style and interaction with society or family. The psychological and financial situations have impacted the lives of many employees in information technology-enabled services. Stress is the leading cause to decrease productivity and well-being.

The working environment at home has to be made conducive for the employees to reduce stress. Allowing them to work from the office a few days a week will be a

stress buster for many individuals. The dearth in financial matters is another cause of a decrease in well-being and productivity. The salary reduction or delay in payment has impacted the well-being and productivity. The absence of social gatherings or meeting with friends and relatives is another reason that lessened productivity and well-being. No doubt humans are social beings, the opportunity to interact and enjoy with their co-workers and friends is essential for the employees' happiness and the organization's growth. Providing breaks from work to enjoy their life in their own space is vital.

From the study, psychological situation opts for the support most. With the tremendous technological up-gradation, online psychological therapy played a crucial role in supporting employees to overcome psychological setbacks. Based on the online policies and guidelines related to privacy and customer security, screening can be conducted to provide valuable recommendations (Duan & Zhu, 2020; Zhou et al., 2020). The technological progress in psychotherapy has been complex due to advancements in cloud computing, virtual reality, and online therapy tools (Saladino et al., 2020). Organizations can utilize the benefits of telepsychology (Maheu et al., 2012) by providing awareness through awareness programs. Connecting online psychotherapy with the employees working in different geographical areas will be helpful to all employees. Recording the patient-therapist sessions and comparing them to evaluate the progress and recommend a suitable method is effective online. These online supports develop a good relationship between the therapist and the patient (Algeri et al., 2019).

The interaction between man and machine has become intense, interrupting the interpersonal connection between individuals. Hence providing space for inter social communication and exclusive online psychological counselling will be helpful. Introducing new tools for psychological treatment and providing information on telepsychology are some of the areas companies can ponder upon for the well-being of their employees. Designing employees' savings plans has to be thoughtfully implemented and provide awareness. The training of the financial counsellors is another area to be focused on knowing the latest economic methods of savings that are useful for employees during contingencies. Based on the current disaster, the company should encourage employees to save money beyond retirement to face such uncertainties.

## **Conclusion**

As most of the restrictions have been lifted and many organizations are continuing with the work from home space, care has to be taken to support their psychological situation. Distraction from home is the only variable under the physiological situation that impacts productivity. A choice to work from home or office would be an ideal

thoughtfulness. There is no difference between introverts and extroverts when encountering different situational factors. Both personalities face the problem equally revealed in this study. Even though introverted individuals focus more on internal feelings and thoughts, they adore being with their family members and friends. Hence, understanding the difficulties faced by the employees and taking measures would be helpful for the companies when facing future contingencies. A study based on different physiological, psychological, financial, and social variables can throw more light on their impact on productivity and well-being.

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# Reboot, Reflect, Revive: Analysing the Factors of TQM

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## Abstract

*The key to a blooming business depends on the work performance of the firms. This paper examines Total Quality Management (TQM) principles and their impact on organizational performance. Descriptive methodology was used for the study. Benefits of TQM methodology were reviewed from previous literature. Means of the items of TQM principles were obtained and ranks were provided to those items. The review analysed the need of TQM to enhance the performance and productivity. Managers need to observe the rankings provided to the various items of TQM principles and derive the policies or make amendments as and where needed, according to the priority of the items. This will enhance the overall performance of the firm as suggested in the study. The uniqueness of this study is, prioritizing the items of TQM principles with respect to firm's performance by using GREY analysis.*

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**Keywords:** Continuous improvement, GREY approach, Organization performance, Prioritizing, Total quality management.

## Introduction

Today, achieving customer satisfaction is the most essential goal for businesses, and total quality management (TQM) is the most effective way to accomplish this goal. TQM is a collection of quality-improvement principles, methodologies, and applications. It is a philosophy that promotes organizational transformation for industrial companies to get tangible benefits from increased quality and competitiveness. Firms must learn faster and lead in best practices in order to achieve business excellence.

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Gosen et al. (2005), conveyed that to gain competitive advantage, implementation of TQM principles is very essential. Those considerations in the developed world helped to generate huge literature on quality management. Prasad & Tata (2009) illustrated that advanced countries steered numerous trainings on quality management. Many researchers like Mahanti & Antony (2009), Kakkar & Narag (2007), Khanna (2009) have studied about quality management and its implementation have been done in Indian background. The current study intends to discover the TQM principles implemented by firms in India under many serious success features of TQM.

TQM contains continuous improvement events which connect all the stake holders with joined determination to maximize performance every time. Enough time and tolerance as well as proper planning and control are required and nothing should be missed during TQM execution. Attempts should be made to describe quality from customer's point of view. Enhancing user satisfaction by applying continuous process improvement as well as consistent management techniques is the main objective of TQM implementation. TQM is the suitable tool to maximize the productivity of the firm, to obtain the solution of various business problems, to identify the defects and to prevent those defects. The successful deployment of TQM is aided by effective communication. Every person of the company must be involved in its execution, which emphasizes the need of teamwork.

### **Importance of the Study**

The significance of this study lies in its exploration of TQM practices in various organizations, which advocates the introduction of TQM fundamentals. In addition, this is a complete study of TQM as it evaluates TQM principles from an incorporation point of view.

Instead of concentrating on meeting the needs and expectations of employees only, efforts need to be taken to enhance quality through the design and development of production operations, and involving all the employees in TQM implementation.

### **Review of Literature**

According to Rahman (2004), implementation of TQM will be driven by top managers. TQM is generating values, goals and systems to enhance customer satisfaction and maximize organization's performance. Hendricks & Singhal (1999) and Gharakhani et al. (2013), informed that implementation of TQM boosts the performance of firms. According to Boone & Wilkins (1995), performance goals can be achieved by

benchmarking which helps an organization repeatedly. Saizarbitoria (2006) specified that there is a positive straight relation among TQM and performance of the organisation. All nonconformities are correctly measured, restrained and consistently responded by the analysis process (Shores, 1992).

In many organizations, TQM is mentioned as management approaches which are used to increase excellence and throughput. But Mensah et al. (2012) specified that TQM practices could hamper organisations to achieve their goals. In fact, Green (2012) said that there exists a positive influence of TQM practices on organizational performance. Douglas & Judge Jr, (2001), specified that quality products and services can fulfil the expectation of the customers. The association between TQM implementation and organization excellence were analyzed by Brah & Tee (2002). Saizarbitoria (2006) explained that performance of organisations was influenced positively by implementation of TQM but Shin et al. (1998) showed that in few cases anticipated organizational goals, cannot be achieved by the execution of TQM.

According to the study done by Fotopoulos & Psomas (2009) and Ketikidis et al. (2006), to improve profits and reduce costs, firms need to implement TQM practices. Zhang (2000) recognized the substantial effect of TQM practices on the quality of processes in order to maximize firm's performance was recognized by researchers. Prajogo & Sohal (2003) conveyed that there is a remarkable association among quality and novelty regarding performance enhancement. They confirmed that the contribution of TQM in this regard is high. Leonard & McAdam (2003) advised the strategy formulators about the importance of TQM which helps to improve robustness in all operations.

During implementation of TQM, there exists different hindrances and barriers. Sebastianelli & Tamimi (2003) researched about barriers of TQM implementation. They conveyed insufficient human resources, poor leadership quality, lack of planning for perfection, poor communication, unwillingness to change, absence of focusing the clients are the reasons which create problems during execution of TQM practices. Ugboro & Obeng (2000) illustrated that cultural transformation needs to be accepted by the organization which is very much essential during TQM implementation.

According to Beer (2003), the main reason for TQM failure is due to improper implementation and not because of the philosophy and techniques of TQM. Top management should have the capacity to identify the gaps amongst the genuineness of actual exercises and TQM principles. Soltani, Lai & Gharneh (2005) have instructed about the reasons of unsuccessful TQM implementation. According to them, unions affect TQM implementation due to various reasons to overcome this problem,

commitment of high-level managers and effective communication between administration and workers are very much needed.

## **Objectives**

Current study reviews TQM principles and their impact on organizational performance. Following are the objectives of the present study:

1. To review and understand the relation between the factors of TQM and its benefits.
2. To prioritize the items of TQM principles with respect to their impact on organizational performance using Grey analysis.

## **Method**

The convenience sampling approach was employed to collect the data. A questionnaire was distributed to 120 people, and 100 valid responses were received, with an 83.33 percent response rate. A total of 20 items were included in the questionnaire, all of which were connected to different areas of total quality management principles. The questionnaire employed a 5-point Likert scale. The data was analysed using the grey relational analysis tool.

The responses for the study were collected from the employees of manufacturing organizations in Bangalore city of India. An online survey questionnaire containing twenty questions designed in google form was distributed to the employees of the organizations selected for the study. Convenience sampling technique was employed to collect the responses. Out of 120 forms distributed among the employees of different organizations, 100 completed forms were received from the respondents which constitute the response rate of 83.3 per cent. The reliability of the data was checked with the help of Cronbach alpha performed in SPSS 21. The reliability score was found to be 7.8 which a good score.

In the research process, analysis and interpretation are crucial processes. The goal of the analysis is to organize, classify, and summarize the obtained data so that it can be better understood and analyzed in order to provide answers to the research questions. The search for the broader significance of discoveries is referred to as interpretation. Without interpretation, analysis is incomplete, and interpretation is impossible without analysis. As a result, they are both interdependent.

**Table 1: Shows responses to the items related to implementation of TQM principles**

SN	Items of TQM principles	SA	A	N	DA	SDA
1	Awareness of TQM implementation	43	47	10	0	0
2	Management involvement in quality management initiatives	40	35	25	0	0
3	Having quality circle for quality management system	30	30	34	3	3
4	Having quality information system and updating it regularly	30	43	27	0	0
5	Practicing six -sigma for error control	50	30	10	7	3
6	Implementing 5 - S method is required	51	26	20	3	0
7	Using just in time method is essential for improving quality	29	43	12	12	4
8	Total productive maintenance methods need to be applied	40	30	27	3	0
9	Leadership commitment towards TQM	75	25	0	0	0
10	Decisions based on facts is essential	45	42	7	6	0
11	Proper communication in TQM implementation	40	35	25	0	0
12	Continuous improvement of products and services	80	20	0	0	0
13	Employee involvement in TQM implementation	60	30	10	0	0
14	Culture change in implementation of TQM	38	22	16	17	7
15	Customer focus during TQM implementation	48	25	18	9	0
16	Allocating critical resources for the implementation of quality initiatives.	25	35	14	13	13
17	Empowering employees with the required skills and knowledge.	60	20	10	10	0
18	Effective training program is essential during TQM implementation	67	23	10	0	0
19	Supplier quality is a key factor	32	46	6	9	7
20	Performance review of products & services	26	38	14	15	7

**Table 2: Shows Descriptive Statistics of Items**

	Mean	Std. Deviation	Cronbach's Alpha
X1	4.33	.652	.988
X2	4.15	.796	.988
X3	3.81	1.002	.988
X4	4.03	.758	.988
X5	4.17	1.064	.988
X6	4.25	.880	.988
X7	3.81	1.107	.988
X8	4.06	.886	.988
X9	4.74	.441	.989
X10	4.26	.836	.988
X11	4.13	.800	.988
X12	4.79	.409	.989
X13	4.50	.674	.988
X14	3.65	1.321	.988
X15	4.12	1.008	.987
X16	3.46	1.344	.988
X17	4.30	1.010	.988
X18	4.57	.671	.988
X19	3.98	.953	.988
X20	3.87	1.169	.988

We can see from the table 2 that the category with the highest mean value is "Continuous improvement of products and services." It indicates that there is a high level of agreement. The arrangement of scale items can be as follows, based on the magnitude of the mean values of scale items presented in table 2.

X12 (4.79) > X9 (4.74) > X18 (4.57) > X13 (4.50) > X1 (4.33) > X17 (4.30) > X10 (4.26) > X6 (4.25) > X5 (4.17) > X2 (4.15) > X11 (4.13) > X15 (4.12) > X8 (4.06) > X4 (4.03) > X19 (3.98) > X20 (3.87) > X7 (3.81), X3 (3.81) > X14 (3.65) > X16 (3.46)

## Grey Relational Analysis

Grey Relational Analysis was proposed by J. Deng, which is a method in statistical regression and is used in decision making by predicting or establishing a relationship between variables. In the current study this method is used for ranking the different principles of total quality management. This method has been widely used in the field of the supply chain (Rajesh & Ravi, 2015) analysis of machine efficiency (Samvedi & Jain, 2012; Zuo, 2016) and manufacturing (Rapeti et al., 2018).

The data was analyzed using GRA, and then the hypothesis was tested using the Kruskal-Wallis test. The first step in GRA is to normalize the data: Since the responses in the data were diverse, they cannot be compared with each other. Hence, to make the data comparable to each other, they must be normalized. The formula used for normalization is:

$$\xi = \frac{\Delta \min + 0.5 \Delta \max}{\Delta n_{jk} + 0.5 \Delta \max}$$

Here,  $n_{jk}$  represents the normalized value of the  $j^{\text{th}}$  response of the  $k^{\text{th}}$  sample

After the data is normalized, the second step is the *Calculation of Grey Relation Coefficient* (GRC). The GRC exhibits the association between the best and the normalized responses (Zhang and Kovacevic, 2016). For the calculation of GRC, the grey relation degree needs to be calculated. The grey relation degree ( $p$ ) is obtained by calculating the total difference of the referential and the compared series. It is alternatively also taken as 0.5 (Pawade and Joshi, 2011). The grey relational coefficient was calculated by using the below formula:

$$\xi = \frac{\Delta \min + 0.5 \Delta \max}{\Delta n_{jk} + 0.5 \Delta \max}$$

The relational degree was calculated using  $r_j = [w(k)(k)]$  where  $w(k)$  is the proportion of the number  $k$ . Table 3 exhibits the relational degree and the ranking of the items. Reference data series was generated and comparison data series was developed with the help of 220 responses. There were 20 comparison data series and each comparison data series contain 220 values. Then difference data series was computed. The global maximum value and the global minimum value were identified. Every data point was transformed into grey relational coefficient. Then grey relational grade was computed for each difference data series.

**Table 3: Shows the difference data series  
 $\tilde{A}$  Values signify levels of agreement with scale items**

	Items	Relational Degree	Ranking
X1	Awareness of TQM implementation	0.793333	7
X2	Management involvement in quality management initiatives	0.758333	11
X3	Having quality circle for quality management system	0.692	19
X4	Having quality information system and updating it regularly	0.721667	15
X5	Practicing six -sigma for error control	0.788	9
X6	Implementing 5 - S method is required	0.795333	6
X7	Using just in time method is essential for improving quality	0.698	17
X8	Total productive maintenance methods need to be applied	0.743667	13
X9	Leadership commitment towards TQM	0.913333	2
X10	Decisions based on facts is essential	0.789	8
X11	Proper communication in TQM implementation	0.753333	12
X12	Continuous improvement of products and services	0.93	1
X13	Employee involvement in TQM implementation	0.85	4
X14	Culture change in implementation of TQM	0.693	18
X15	Customer focus during TQM implementation	0.772667	10
X16	Allocating critical resources for the implementation of quality initiatives.	0.648667	20
X17	Empowering employees with the required skills and knowledge.	0.823333	5
X18	Effective training program is essential during TQM implementation	0.873333	3
X19	Supplier quality is a key factor	0.724667	14
X20	Performance review of products & services	0.716	16

## Results and Discussion

It was found that the larger  $\tilde{A}$  value belongs to “Continuous improvement of products and services”. It indicates that there is a high level of agreement. The arrangement of scale items can be as follows, based on the magnitude of the  $\tilde{A}$  values of scale items indicated in table 3.

X12(0.93) > X9 (0.913333) > X18(0.873333) > X13 (0.85) > X17 (0.823333) > X6(0.795333) > X1 (0.793333) > X10 (0.789) > X5 (0.788) > X15 (0.772667) > X2 (0.758333) > X11 (0.753333) > X8 (0.743667) > X19 (0.724667) > X14 (0.721667) > X20 (0.716) > X7 > (0.698) > X14 (0.693) > X3 (0.692) > X16 (0.648667)

From this order, determinants of total quality management can be arranged. ‘Continuous improvement of products and services followed by ‘Leadership commitment towards TQM services’, ‘Effective training program is essential during TQM implementation’, ‘ Employee involvement in TQM implementation’, ‘ Empowering employees with the required skills and knowledge’, ‘Implementing 5 - S method is required’, ‘ Awareness of TQM implementation’, ‘Decisions based on facts is essential’, ‘ Practicing six -sigma for error control’, ‘ Customer focus during TQM implementation’ and so on.

**Table 4: Descriptive statistics of the Factors of TQM Techniques**

	Mean	Std. Deviation	Skewness	Kurtosis
Organization related	4.2183	.32798	-.144	.086
Quality related	3.9880	.33372	-.544	1.086
Stakeholders related	4.3725	.43736	-.451	-.293

From table 4 it was found that the mean score for the factor “Stakeholders related” is the highest with a mean score of 4.3725, followed by the factor “Organization related” with a mean score of 4.2183. Least mean score of 3.9880 belongs to the factor “Quality related”.

**Table 5: Results of Quartiles of the Factors of TQM**

		Organization related	Quality related	Stakeholders related
Percentiles	25 (Q1)	4.0000	3.8000	4.0000
	50(Median)	4.3333	4.0000	4.5000
	75(Q3)	4.4583	4.2000	4.7500

From table 5, we can observe that the score of 25% of the respondents regarding Organization related factor is below 4.0000 and the score of 75% of the respondents regarding Organization related factor is above 4.0000. Also, the score of 50% of the respondents regarding Organization related factor is below 4.3333 and the score of 50% of the respondents regarding Organization related factor is above 4.3333. Moreover, the score of 75% of the respondents regarding Organization related factor is below 4.4583 and the score of 25% of the respondents regarding Organization related factor is above 4.4583.

Also, the score of 25% of the respondents regarding Quality related factor is below 3.8000 and the score of 75% of the respondents regarding Quality related factor is above 3.8000. Also, the score of 50% of the respondents regarding Quality related factor is below 4.0000 and the score of 50% of the respondents regarding Quality related factor is above 4.0000. Moreover, the score of 75% of the respondents regarding Quality related factor is below 4.2000 and the score of 25% of the respondents regarding Quality related factor is above 4.2000.

Also, the score of 25% of the respondents regarding Stakeholders related factor is below 4.0000 and the score of 75% of the respondents regarding Stakeholders related factor is above 4.0000. Also, the score of 50% of the respondents regarding Stakeholders related factor is below 4.5000 and the score of 50% of the respondents regarding Stakeholders related factor is above 4.5000. Moreover, the score of 75% of the respondents regarding Stakeholders related factor is below 4.7500 and the score of 25% of the respondents regarding Stakeholders related factor is above 4.7500.

**Table 6: Results of Quartiles of TQM**

Percentiles	25	12.2208
	50	12.6750
	75	12.9458

**Table 7: Levels of TQM Techniques**

	Frequency	Percentage
Low	25	25
Moderate	50	50
High	100	100
Total	100	100

**Inferential Analysis**

**H<sub>1</sub>:** In terms of TQM Factors, there is no difference between male and female employees.

**Table 8: Results of t test between Male and Female employees with respect to Factors of TQM**

Factors of TQM	Gender				t value	P value
	Male		Female			
	Mean	SD	Mean	SD		
Organization related	4.2135	.29765	4.2269	.38038	.181	.857
Quality related	3.9656	.33057	4.0278	.34026	.551	.583
Stakeholders related	4.3906	.43158	4.3403	.45179	.544	.588
Overall TQM Techniques	12.5698	.69196	12.5949	.66836	.178	.859

There is no significance difference between male and female Managers with regard to Organization related, Quality related, Stakeholders related and Overall TQM Techniquessince P value is greater than 0.05. As a result, the null hypothesis is accepted at a 5% level when it comes to Organizational, Quality, Stakeholders, and Overall TQM Techniques.

**H<sub>2</sub>:** In terms of TQM Factors, there is no difference in age groups of employees.

**Table 9: Results of one-way ANOVA among age groups with respect to Factors of TQM**

Factors of TQM	Age	N	Mean	Std. Deviation	F value	P value
Organization related	21-31	67	4.2413	.30468	4.277	.007
	31-41	24	4.0625	.31780		
	41-51	8	4.5000	.36732		
	Above 51	1	4.1667			
	Total	100	4.2183	.32798		
Quality related	21-31	67	4.0239	.33079	1.107	.350
	31-41	24	3.9500	.33101		
	41-51	8	3.8250	.36154		
	Above 51	1	3.8000			
	Total	100	3.9880	.33372		
Stakeholders related	21-31	67	4.4067	.41932	.908	.440
	31-41	24	4.2604	.45132		
	41-51	8	4.3750	.55097		
	Above 51	1	4.7500			
	Total	100	4.3725	.43736		
Overall TQM Techniques	21-31	67	12.6719	.67415	2.212	.092
	31-41	24	12.2729	.68909		
	41-51	8	12.7000	.52569		
	Above 51	1	12.7167			
	Total	100	12.5788	.68027		

Since P value is less than 0.01, null hypothesis is rejected at 1% level with regard to organization related factor. Hence there is significant difference among age groups with regard to organization related factor. There is no significant difference among age groups with respect to Factors of Quality related, Stakeholders related and Overall TQM Techniques, since P value is greater than 0.05. Hence the null hypothesis is

accepted at 5% level with regard to the factors of Quality related, Stakeholders related and Overall TQM Techniques.

$H_3$ : There is no difference among job levels of employees with respect to Factors of TQM.

**Table 10: Results of one-way ANOVA between levels of employees with respect to Factors of TQM**

Factors of TQM	Levels	N	Mean	Std. Deviation	F value	P value
Organization related	Lower	32	4.1615	.30375	.736	.482
	Middle	62	4.2419	.33562		
	Upper	6	4.2778	.38968		
	Total	100	4.2183	.32798		
Quality related	Lower	32	4.0031	.29346	.075	.928
	Middle	62	3.9839	.34555		
	Upper	6	3.9500	.45935		
	Total	100	3.9880	.33372		
Stakeholders related	Lower	32	4.3984	.45286	.135	.874
	Middle	62	4.3548	.42113		
	Upper	6	4.4167	.58452		
	Total	100	4.3725	.43736		
Overall TQM Techniques	Lower	32	12.5630	.74865	.036	.965
	Middle	62	12.5806	.66946		
	Upper	6	12.6444	.46196		
	Total	100	12.5788	.68027		

Since P value is greater than 0.05, null hypothesis is accepted at 5% level with regard to Organization related, Quality related, Stakeholders related and Overall TQM Techniques. Hence there is no significant difference among job levels of employees

with regard to Organization related, Quality related, Stakeholders related and Overall TQM Techniques.

$H_4$ : There is no difference in the nature of employee occupations in terms of TQM Factors.

**Table 11: Results of t test between Full time and Part time employees with respect to Factors of TQM**

Factors of TQM	Nature of Job	N	Mean	Std. Deviation	F value	P value
Organization related	Full time	43	4.2093	0.35091	0.238	0.812
	Part time	57	4.2251	0.31259		
Quality related	Full time	43	3.9186	0.3347	1.827	0.071
	Part time	57	4.0404	0.32616		
Stakeholders related	Full time	43	4.3663	0.41672	0.123	0.902
	Part time	57	4.3772	0.45592		
Overall TQM Techniques	Full time	43	12.4942	0.60468	1.082	0.282
	Part time	57	12.6427	0.73091		

There is no significance difference between part time and full-time employees with regard to Organization related, Quality related, Stakeholders related and Overall TQM Techniques since P value is greater than 0.05. Hence the null hypothesis is accepted at 5% level about Organization related, Quality related, Stakeholders related factors and Overall TQM Techniques.

$H_5$ : When it comes to TQM Factors, there is no difference in employee experience levels.

**Table 12: Results of ANOVA among age groups with respect to Factors of TQM**

Factors of TQM	Experience in years	N	Mean	Std. Deviation	F value	P value
Organization related	Below 1 year	27	4.2222	.34592	.037	.991
	From 1 to 5 years	52	4.2147	.29583		
	From 5-10 years	18	4.2130	.38690		
	10 years and more	3	4.2778	.50918		
	Total	100	4.2183	.32798		
Quality related	Below 1 year	27	4.0222	.38464	.859	.465
	From 1 to 5 years	52	4.0115	.29081		
	From 5 to 10 years	18	3.8778	.38586		
	10 years and more	3	3.9333	.15275		
	Total	100	3.9880	.33372		
Stakeholders related	Below 1 year	27	4.3796	.44055	.098	.961
	From 1 to 5 years	52	4.3606	.43839		
	From 5 to 10 years	18	4.3750	.46376		
	10 years and above	3	4.5000	.43301		
	Total	100	4.3725	.43736		
Overall TQM Techniques	Below 1 year	27	12.6241	.84867	.240	.868
	From 1 to 5 years	52	12.5869	.64930		
	From 5-10 years	18	12.4657	.55541		
	10 years and above	3	12.7111	.02546		
	Total	100	12.5788	.68027		

With reference to Organizational, Quality, Stakeholders, and Overall TQM Techniques, the null hypothesis is accepted at a 5% level because the P value is bigger than 0.05. As a result, there is no discernible variation in employee experience levels in terms of organization-related, quality-related, stakeholder-related, and overall TQM techniques.

## Correlation Analysis

**Table 13: Correlation between Factors of TQM**

Factors of TQM		Organization related	Quality related	Stakeholders related	Overall TQM Techniques
Organization related	Pearson Correlation	1	0.156	-0.05	.526**
	p value		0.12	0.618	0
Quality related	Pearson Correlation	0.156	1	0.112	.638**
	p value	0.12		0.266	0
Stakeholders related	Pearson Correlation	-0.05	0.112	1	.674**
	p value	0.618	0.266		0
Overall TQM Techniques	Pearson Correlation	.526**	.638**	.674**	1
	p value	0	0	0	
**. Correlation is significant at the 0.01 level (2-tailed)					

The correlation coefficient between Organization related and Overall TQM Techniques is 0.526, indicating a 27.67 percent positive link between Organization related and Overall TQM Techniques ( $0.5262 = 0.2767$ ), which is significant at the 1% level. The correlation coefficient between Quality related factor and Overall TQM Techniques is 0.638, which indicates a 40.70 percent positive association between the two variables and is significant at the 1% level. The correlation coefficient between Stakeholders related factor and Overall TQM Techniques is 0.674, which indicate 45.43 percentage positive relationships between Stakeholders related factor and Overall TQM Techniques and is significant at 1% level.

## Implications

To achieve business excellence, organizations must understand the needs of its customers and fulfil their expectations. This research will assist managers in being proactive in developing policies and strategies for successful TQM implementation in order to enhance organizational performance by increasing customer satisfaction and gaining a competitive edge.

There is much discussion on the principles and advantages of TQM. But there is a scarcity of literature guiding the practitioners in designing the programs to meet those expectations. Grey relational technique of analysis is extensively used in the discipline of engineering, health sciences and decision-making sciences, but has failed to gain popularity in the field of management. This study is a major contribution to the literature on grey relational analysis which will help it to gain popularity in social sciences.

### **Limitations and Future Scope**

Like all other researches, this research is not free of limitations. It was conducted on a small sample collected from one specific city. The future researchers can extend it further and conduct the study with larger sample with greater number of factors.

### **Conclusion**

This project investigated TQM techniques and principles in order to improve the product quality and customer satisfactions and overall improvement of market. Three most important TQM practice stood out as center for manufacturing and service organizations: top-management commitment; customer focus and satisfaction; and training and education. Also, managers must introduce and develop employee involvement practices in their organization by delegating authority and empowering employees. Hence, by focusing on these principles and practices, an organization can develop quality improvement programs which will create positive influence on business performance.

The study concludes that top management commitment, employee training, continuous improvement of goods and services, communication and organizational culture were very critical, since they have strong impact in the implementation of TQM principles. The outcomes of the current paper offer the preferences of TQM principles by ranking TQM principles using grey analysis. The study concludes that top management commitment, employee training, continuous improvement of goods and services, communication and organizational culture are the pillars of TQM implementation. Continuous improvement is critical for a company's success, and it must be implemented consistently in order to attain business excellence.

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# Stock Futures Listing, Market Liquidity and Stock Behaviour: Evidence from India

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## Abstract

*Liquidity measures an investor's ability to sell an asset quickly and at a reasonable price. The primary objective of the study is to quantify the effect of the launch of single stock futures (SSF) on the underlying liquidity by treating the Stock Futures listing date as an event. We analyse the effect of listing SSF on liquidity using data for the 210 days pre-listing and post-listing. The present study uses price-impact liquidity as well as volume and turnover. The findings revealed substantial evidence of a rise in the illiquidity ratio, implying that the liquidity of the majority of the sample stocks in the study has decreased. Similarly, the introduction of futures has resulted in a reduction in the trading volume of stocks. However, there is no evident impact on turnover. A possible explanation for the observed phenomenon could be the migration of traders from spot to futures markets. Due to the benefits of leverage and the lack of short-selling prohibitions, traders consider derivatives to be superior investments.*

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**Keywords:** Illiquidity Measure, Liquidity, Paired Sample t-test, Single Stock Futures, Turnover.

## Introduction

Liquidity enhances the marketability and ease of dealing of financial assets, which is paramount for the efficient functioning of stock exchanges. Liquidity is a necessary condition for the efficient exchange of securities on stock markets, as it promotes the marketability and ease of trading of financial assets. If the stock market is liquid, then assets can be quickly converted into cash and vice versa. The economy also benefits from the unimpeded movement of capital between different types of assets. The sudden erosion of this can cause ripple effects throughout the increasingly interdependent and interconnected financial markets around the world, irrespective of one market area or one instrument. Assets can have different degrees of liquidity. According to Stange & Kaserer (2009), the degree of liquidity is determined by the asset type, position

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size, and liquidation horizon. A fully liquid asset can be transacted at no cost and without delay, regardless of the quantity traded. Cash is the ideal illustration of a perfectly liquid asset (Narasimhan & Kalra, 2014a). Direct trading expenses consist of commission charges and transaction taxes that are explicit in nature. When a trader sets huge orders, it is difficult to find a suitable counterparty in a short amount of time, which results in selling at a significant price reduction or buying at a high premium (Lakshmi & Joshi, 2018). The various dimensions of liquidity include tightness, depth, resilience, immediacy, and breadth. In addition to these three criteria, the most important things that determine the degree of liquidity are the liquidation horizon, the type of asset, and the size of the position (Sarr & Lybek, 2002; Stange & Kaserer, 2009).

**Table 1: NSE Derivative Segment Turnover**

Year	Index Futures Turnover	Stock Futures Turnover	Index Option Turnover	Stock Option Turnover	No. of contracts
2017-2018	4810454.34	15597519.71	460653.71	148217.50	1913878548
2016-2017	4335940.78	11129587.14	350021.53	95570.09	1399746129
2015-2016	4557113.64	7828606.00	351221.01	61118.39	2098610395
2014-2015	4107215.20	8291766.27	265315.63	61732.59	1837041131
2013-2014	3083103.23	4949281.72	244090.71	46428.41	1284424321
2012-2013	2527130.76	4223872.02	184383.24	34288.56	1131467418
2011-2012	3577998.41	4074670.73	253068.22	19612.93	1205045464
2010-2011	4356754.53	5495756.70	192637.87	20474.97	1034212062
2009-2010	3934388.67	5195246.64	124416.58	15272.89	679293922
2008-2009	3570111.40	3479642.12	91715.58	8250.53	657390497
2007-2008	3820667.27	7548563.23	29286.09	13581.77	425013200
2006-2007	2539574	3830967	17650.87	5904.31	216883573
2005-2006	1513755	2791697	5770.52	4895.23	157619271
2004-2005	772147	1484056	2356.98	4948.95	77017185

*Source:* Compiled from NSE website

(₹ cr.)

Since the commencement of trading in single stock futures on the NSE in 2001, the futures and options (F&O) category has grown consistently in terms of new offers,

traded volume, and value. In 2019-2020, the F&O segment of the NSE outpaced the equity segment, with an average daily turnover of 2, 37, 590, 973 Cr compared to 6, 81, 983 Cr in the equity segment. In terms of equity derivatives trading, the NSE outpaced the CME group in 2019, with more than 6 billion contracts traded on the NSE in comparison to the CME group.

Derivatives serve as a hedging instrument and enhance market liquidity, thereby enhancing the market's overall performance. Listing equity futures on underlying assets enhances traders' trading opportunities and can be implemented through a combination of stock positions (Ross, 1989). The introduction of derivatives makes the fragmented market exhaustive, hence increasing the investment opportunities available to investors. Derivatives provide a means for hedging risk or a risk component, such as protecting only against downside risk. Informed traders participate in the derivatives market because they perceive that the benefits of leverage and the lack of short-selling restrictions make derivatives superior investments. The fall in the share of informed traders reduces market makers' adverse selection costs.

## **Review of Literature**

The Securities and Exchange Board of India (SEBI) introduced derivatives to Indian markets to enhance price discovery, liquidity, and volatility reduction. Numerous studies have been conducted on the impact of derivatives on the liquidity of the underlying market. However, empirical research on the role of this financial tool in achieving the intended goal is inconclusive. With context to the global scenario, numerous studies have been undertaken. The launch of futures trading in the Hang Seng index (HSI) led to an increase in the spot market liquidity (Kan, 1999). These findings contradict Jegadeesh and Subrahmanyam (1993), which imply that the spread of S&P 500 stocks has increased significantly. The disparities in findings can be traced to the distinct market microstructures of the United States and Hong Kong. Increased participation of knowledgeable and informed traders in the underlying market can lead to a rise in market liquidity in Hong Kong. A decrease in market liquidity in the United States may be attributable to the transfer of traders from the underlying segment to the futures market (Lakshmi & Joshi, 2018).

Hasan & Chowdhury (2011) found that when options were introduced, trading activity went up in Hong Kong, Japan, Korea, Taiwan, and Thailand, but the opposite was true for the stock markets in India, Malaysia, and Singapore. Damodaran & Lim (1991) concluded that, after the launch of AMEX and CBOE options, institutional investors' increased participation contributed to an effective price adjustment for new information and enhanced liquidity. The listing of options on the Canadian stock exchange has

had no effect on the underlying stock price behaviour, trading volume, or liquidity (Chamberlain et al., 1993a). However, Chaudhury and Elfakhani (1997a) noticed a decline in trade volume after the options listing on the Canadian stock market. The S&P 500 futures contracts' impact on the stocks' liquidity in the spot index was analysed by Jegadeesh and Avanidhar (1993), who argued that index futures trading lowers liquidity by shifting uninformed traders from spot markets to futures markets. Studies such as Hayes and Tennenbaum (1979a) and Mihov and Mayhew (2000) observed a rise in the underlying trading volume post the introduction of derivatives trading.

According to Lakshmi & Joshi(2018), lower liquidity stocks had a greater increase in long-run liquidity. However, in the post-future period, there was a minor reduction in the long-run liquidity of highly liquid shares. Similarly, Narasimhan and Kalra(2014b) concluded that less liquid stocks in the pre-derivatives period improved in liquidity during the post-derivatives period. Sadathand Kamaiah (2009) used log-linear regression to analyse the effect of SSF on spot market liquidity and found that it had a favourable influence on Indian spot market liquidity. In contrast to the preceding findings, Narasimhan & Kalra (2014b) showed a decrease in spot market liquidity following the start of SSF trading in India. Shastri et al. (1996) noted a decline in volatility, an increase in trading volume, and an increase in open interest in currency futures following the introduction of option contracts. They determined that derivatives improve market stability and promote liquidity.

Kumar et al. (1998) argued that option listing improves the market quality of the underlying stocks in terms of depth, trading volume, frequency of trading, and size of transactions. John et al. (1993) proposed a model in which they stated that informed traders move to risky derivatives markets because they perceive derivatives as superior speculative instruments due to leverage benefits and lack of restrictions on short selling. The number of knowledgeable traders in the underlying market goes down, which lowers the adverse selection costs for market makers. There are distinct dimensions of liquidity. Previous studies were based on the spread. Three aspects or dimensions of liquidity, namely tightness, depth, and resilience, are recognised by Kyle (1985) and Harris (1989). Liquidity measurement aims to describe the cost structure faced by investors, as the relevant cost structure has many dimensions and there is no single method for measuring market liquidity. The literature offers various proxies of liquidity, which are listed as follows:

**Turnover:** It is the ratio of share volume to the number of outstanding stocks. To investigate the cross-sectional relationship between stock returns and liquidity, Datar et al. (1998) used turnover as a liquidity measure.

**Bid-ask spread:** it is the difference between the securities' ask price and bid price that is used in numerous studies (Amihud& Mendelson, 1986; Arisoy, 2008; Chamberlain et al., 1993b; Sadath & Kamaiah, 2009; Stoll & Whaley, 1983).

Amihud and Noh (2002) introduced a new liquidity measure known as the price-impact liquidity metric. It is the average daily ratio of absolute return to daily volume over the month. It is estimated as follows:

$$Illiq_{i,d} = \frac{|R_{i,d}|}{V_{i,d}} \quad (1)$$

$$Illiq_i = \frac{1}{N} \sum_{d=1}^N \frac{|R_{i,d}|}{V_{i,d}} \quad (2)$$

Where,  $R_{i,d}$  is the return of the stock  $i$  on the day  $d$ ,  $V_{i,d}$  is the amount volume for stock on day  $d$  and  $N$  is the number of trading days per month or duration.

**Trading volume:** The total number of shares traded during a given period is known as the trading volume. It is a technical indicator representing the overall activity level of the security market.

In India, the research on the derivatives market is mainly limited to index futures. Analysis of SSF has been relatively untouched. Although there are studies that examine the impact of the listing of derivatives on the underlying, these studies are based on European markets. However, there is a dearth of studies conducted in the Indian context. Also, there is limited evidence of studies focusing on the liquidity aspects of derivatives listed in the Indian context. Several studies carried out in the United States till date report an increase in liquidity post-derivative listing. Chamberlain et al. (1993b) show no effect on trading volume, return volatility, or Canada's underlying stock liquidity. The present study extends the existing literature by examining the impact of derivative trading on liquidity in the Indian context.

Index futures are the primary focus of derivatives market research in India. SSF analysis has received little attention. Although there have been studies that look at the impact of derivatives listings on the underlying, they have all been conducted on European markets. However, there is a scarcity of studies undertaken in India. Furthermore, there is a scarcity of studies focused on the liquidity characteristics of derivatives listed in the Indian setting. Several studies conducted in the United States to date demonstrate an increase in liquidity following the listing of derivatives. Chamberlain et al. (1993b) demonstrate no influence on trading volume, return volatility, or

underlying stock liquidity in Canada. This study adds to the existing body of literature by investigating how derivative trading affects liquidity in India.

## **Method**

In this study, an attempt is made to understand the impact of SSF trading on the liquidity of underlying stocks traded on the NSE by taking a sample of select companies on which futures are available. We examine the liquidity impact of listing SSF on the market by using data for 210 days pre-SSF listing and 210 days post-SSF listing. Due to the different listing dates of stocks in the derivatives category, the study period differs from stock to stock. We aim to study liquidity by employing three commonly used proxies for liquidity, viz. volume of trading, Amihud and Noh (2002) illiquidity measure and turnover as suggested by Kamara et al. (1992). Data for the volume of trading and turnover is collected from the NSE official website. Sample selection has been applied based on the following criteria as used by Lakshmi and Joshi (2018):

- a) The stocks that are available for trading in the futures segment for a minimum period of four years.
- b) The stocks which are not delisted from the Futures Segment more than once.
- c) The stocks for which IPO listing day and Futures listing date are not the same.

The stocks matching the above requirements were chosen as a final sample for analysis. The resultant sample comprises 86 stocks with Single Stock Futures.

### *Paired Sample T-Test*

The paired sample t-test is a statistical technique used to determine if the mean difference between two sets of measurements is equal to zero. In a paired sample t-test, each subject or item is evaluated twice, resulting in pairs of observations. We must first identify the differences between the two matched data sets.  $d$  defines the distinctions between all pairs. The standard deviation  $d$  is compared to 0. If there is a significant discrepancy between the two sample pairs, the mean of  $d$  is expected to be far from 0. The t-test statistics value can be determined as follows:

$$t = \frac{\bar{m}}{s \sqrt{n}}$$

Once the t value is calculated, one must read the student t distribution's significant value, corresponding to the alpha importance of the preference in the t-test table (5 percent). The degrees of freedom (df) used in this test are as follows:

$$(df = n - 1)$$

#### *Hypothesis of the Study*

H<sub>0</sub>: There is no statistically significant difference between Pre-Futures Volume and Post-Futures Volume.

H<sub>1</sub>: There is a statistically significant difference between Pre-Futures Volume and Post-Futures Volume.

#### *Objective of the Study*

The study aims mainly to measure the impact of the introduction of single stock futures on the liquidity of the underlying by keeping the listing date of stock futures as an event.

#### *Limitations of the Study*

Besides the usual limitations of time and resources, corporate actions such as payments of dividends have not been considered while analysing the impact of stock futures on the underlying liquidity.

### **Results and Discussion**

To investigate any variation in the selected liquidity measures, we employed the Paired Sample t-test. These include trade volume, turnover, and Amihud illiquidity measures for sample stocks during the post-stock futures and pre-stock futures periods. We analyse the liquidity effect of the market by comparing the trade volume, turnover, and the Amihud illiquidity measure before and after futures. The detailed analysis for the Amihud illiquidity measure and volume is presented in Table 2, Table 3 and Table 4.

**Table 2: Results of the Paired Sample T-Test for Amihud Illiquidity Measure**

Underlying	Mean	T-value	Sig (2 mean tailed)	Inference
ACC Limited	-9.68E-11	-1.9423	0.0540	no significant change
Adani Enterprises Limited	1.25E-09	7.0006	0.0000	significant increase
Amara Raja Batteries Ltd.	4.12E-11	1.9747	0.0501	significant increase
Apollo Hospitals Enter. Ltd.	2.28E-11	1.2221	0.2236	no significant change
Apollo Tyres Ltd	1.06E-10	6.6436	0.0000	significant increase
Ashok Leyland Ltd	1.99E-10	2.7429	0.0069	significant increase
Asian Paints Limited	-4.21E-10	-1.4656	0.1449	no significant change
AurobindoPharma Ltd	3.23E-10	0.8310	0.4074	no significant change
Axis Bank Limited	3.24E-10	6.0524	0.0000	significant increase
Bajaj Finance Limited	1.70E-10	5.8556	0.0000	significant increase
Bajaj Auto	-2.04E-09	-4.5895	0.0000	significant decrease
Balkrishna Industries	2.11E-10	6.7014	0.0000	significant increase
Bank of Baroda	7.02E-11	3.3651	0.0010	significant increase
Bank of India	3.03E-10	5.9678	0.0000	significant increase
Bata India Ltd	6.29E-11	2.3111	0.0222	significant increase
Bharat Petroleum Corp Lt	-1.36E-09	-4.0507	0.0001	significant decrease
Bharti Airtel Limited	-7.86E-12	-0.3445	0.7310	no significant change
Biocon Limited.	-2.01E-10	-3.2348	0.0015	significant decrease
Bosch Limited	9.36E-11	8.1356	0.0000	Significant Increase
Cadila Healthcare Limited	4.52E-11	6.1731	0.0000	Significant Increase
CECS Ltd	4.88E-10	5.4417	0.0000	Significant Increase
Cipla Ltd	5.73E-11	2.1238	0.0487	Significant Increase
Container Corp of Ind Ltd	-3.03E-09	-1.9909	0.0483	Significant decrease
Cummins India Ltd	6.21E-11	3.0627	0.0026	Significant Increase
Dabur India Ltd	1.73E-11	0.3912	0.6962	No Significant Change
Eicher Motors Ltd	6.86E-11	7.9090	0.0000	Significant Increase
Escorts Limited	-3.76E-11	-1.6364	0.1039	No Significant Change
Exide Industries Ltd	5.95E-11	3.5237	0.0006	Significant Increase

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Federal Bank Ltd	1.14E-10	1.6468	0.1017	No Significant Change
GAIL (India) Ltd	5.32E-10	5.2954	0.0000	Significant Increase
Glenmark Pharmaceuticals	2.90E-11	3.6092	0.0004	Significant Increase
Godrej Industries Ltd	-2.97E-11	-0.9671	0.3351	No Significant Change
Havells India Limited	-1.91E-10	-4.7598	0.0000	Significant decrease
HCL Technologies Ltd	-4.30E-11	-3.4969	0.0006	Significant decrease
HDFC Bank Ltd	1.06E-09	4.3781	0.0000	Significant Increase
HDFC Ltd	-3.37E-10	-2.4266	0.0164	Significant decrease
Hero Motocorp Limited	1.60E-10	3.1794	0.0018	Significant Increase
Hexaware Technologies Ltd	1.59E-10	3.2969	0.0012	Significant Increase
Hindalco Industries Ltd	-1.62E-09	-2.2394	0.0266	Significant decrease
Hindustan Unilever Ltd.	-2.56E-11	-1.8629	0.0644	No Significant Change
ICICI Bank Ltd.	5.45E-10	5.7016	0.0000	Significant Increase
Indian Oil Corp Ltd	3.52E-10	5.9916	0.0000	Significant Increase
Indraprastha Gas Ltd	6.10E-11	1.4824	0.1404	No Significant Change
Indusind Bank Limited	3.83E-11	3.0018	0.0031	Significant Increase
Infosys Limited	-2.01E-09	-2.9477	0.0038	Significant decrease
ITC Ltd	-4.16E-11	-4.0607	0.0001	Significant decrease
Justdial Ltd.	-4.92E-10	-2.9489	0.0049	Significant decrease
Kotak Mahindra Bank Ltd	3.57E-10	2.5253	0.0127	Significant Increase
L&T Finance Holdings Ltd	1.30E-11	0.5454	0.5863	No Significant Change
Larsen & Toubro Ltd.	-1.02E-09	-0.9878	0.3250	No Significant Change
Mahindra & Mahindra Ltd	-2.09E-09	-2.3638	0.0194	Significant decrease
Marico Limited	4.17E-11	5.7495	0.0000	Significant Increase
Maruti Suzuki India Ltd.	1.04E-11	3.7534	0.0004	Significant Increase
Max Financial Services	-4.27E-10	-4.4135	0.0000	Significant decrease
Mindtree Limited	1.46E-11	1.3002	0.1955	No Significant Change
MothersonSumi Systems Lt	2.60E-11	5.3765	0.0000	Significant Increase
MRF Ltd	-8.39E-11	-3.5355	0.0005	Significant decrease
National Aluminium Company Ltd.	-6.02E-11	-0.5522	0.5817	No Significant Change

NCC Limited	3.97E-12	0.4709	0.6384	No Significant Change
Oil And Natural Gas Corp.	4.87E-11	2.0424	0.0429	Significant Increase
Page Industries Ltd	6.21E-11	3.4990	0.0006	Significant Increase
PetronetLng Limited	3.53E-10	7.7798	0.0000	Significant Increase
Pidilite Industries Ltd	1.67E-11	1.0014	0.3183	No Significant Change
Piramal Enterprises Ltd.	-4.81E-10	-2.8399	0.0051	Significant decrease
Raymond Limited	-1.28E-11	-0.6765	0.4998	No Significant Change
Reliance Industries Ltd	5.00E-10	1.4634	0.1456	No Significant Change
Reliance Infrastructure Ltd	-2.56E-11	-2.4935	0.0137	Significant decrease
State Bank Of India	-3.15E-10	-3.4499	0.0007	Significant decrease
Shriram Transport Fin Co.	1.09E-10	3.5647	0.0005	Significant Increase
Siemens Ltd	3.62E-10	4.7368	0.0000	Significant Increase
Srf Ltd	2.68E-11	1.4976	0.1363	No Significant Change
Steel Authority Of India	1.43E-11	4.5912	0.0000	Significant Increase
Tata Motors Limited	-5.87E-10	-4.2766	0.0000	Significant decrease
Tata Chemicals Ltd	8.67E-11	2.9438	0.0038	Significant Increase
Tata Power Co Ltd	-4.59E-10	-3.9834	0.0001	Significant decrease
Tata Steel Limited	-1.05E-09	-1.9567	0.0523	No Significant Change
Tata Consultancy Serv Lt	3.44E-09	6.0589	0.0000	Significant Increase
Torrent Power Ltd	1.78E-10	4.0954	0.0001	Significant Increase
Tvs Motor Company Ltd	1.61E-13	0.0087	0.9931	No Significant Change
United Breweries Ltd	3.61E-11	3.9081	0.0001	Significant Increase
United Spirits Limited	2.37E-11	3.4855	0.0006	Significant Increase
Vedanta Limited	1.31E-10	10.7521	0.0000	Significant Increase
Voltas Ltd	1.72E-10	3.4272	0.0008	Significant Increase
Wipro Ltd	-2.26E-12	-3.6850	0.0003	Significant decrease
Yes Bank Limited	1.64E-10	2.3470	0.0203	Significant Increase
Zee Entertainment Ent Ltd	-3.30E-10	-3.9488	0.0001	Significant decrease

Source: Authors' Compilation

**Table 3: Results of the Paired Sample T-Test for Turnover**

Underlying	Mean	T-value	Sig (2 mean tailed)	Inference
ACC Limited	501609701	10.7137	0.0000	Significant Increase
Adani Enterprises Limited	-288061041	-5.7386	0.0000	Significant Decrease
Amara Raja Batteries Ltd.	-90557358	-3.5292	0.0006	Significant Decrease
Apollo Hospitals Enter. Ltd.	68618263	2.2005	0.0293	Significant Increase
Apollo Tyres Ltd	-221136144	-6.4357	0.0000	Significant Decrease
Ashok Leyland Ltd	-39104460	-4.3152	0.0000	Significant Decrease
Asian Paints Limited	29849858	1.7608	0.0803	No Significant Change
Aurobindo Pharma Ltd	-25963548	-5.0624	0.0000	Significant Decrease
Axis Bank Limited	-27943470	-3.8016	0.0002	Significant Decrease
Bajaj Finance Limited	-197429525	-7.9542	0.0000	Significant Decrease
Bajaj Auto	267324501	8.2680	0.0000	Significant Increase
Balkrishna Industries	-184981146	-5.8341	0.0000	Significant Decrease
Bank of Baroda	-4184139	-0.1191	0.9054	No Significant Change
Bank of India	-61626102	-4.8117	0.0000	Significant Decrease
Bata India Ltd	-37345774	-2.2515	0.0258	Significant Decrease
Bharat Petroleum Corp Lt	37539925	7.5885	0.0000	Significant Increase
Bharti Airtel Limited	150140648	3.2700	0.0013	Significant Increase
Biocon Limited.	15777788	1.0589	0.2913	No Significant Change
Bosch Limited	-899310133	-5.5881	0.0000	Significant Decrease
Cadila Healthcare Limited	-361763043	-4.3686	0.0000	Significant Decrease
CECS Ltd	-31350329	-4.8489	0.0000	Significant Decrease
Cipla Ltd	4432750	0.4092	0.6830	No Significant Change
Container Corp of Ind Ltd	16393832	2.0478	0.0423	Significant Increase
Cummins India Ltd	-68171338	-2.1675	0.0318	Significant Decrease
Dabur India Ltd	-32576280	-4.6012	0.0000	Significant Decrease
Eicher Motors Ltd	-566364130	-11.1899	0.0000	Significant Decrease
Escorts Limited	11721971	1.0093	0.3145	No Significant Change
Exide Industries Ltd	-64477007	-4.9732	0.0000	Significant Decrease

Federal Bank Ltd	-20348022	-2.7254	0.0072	Significant Decrease
GAIL (India) Ltd	-1131780565	-14.0976	0.0000	Significant Decrease
Glenmark Pharmaceuticals	-49218955	-1.6075	0.1102	No Significant Change
Godrej Industries Ltd	16358781	0.9573	0.3400	No Significant Change
Havells India Limited	144200653	13.2795	0.0000	Significant Increase
HCL Technologies Ltd	197333609	5.9933	0.0000	Significant Increase
HDFC Bank Ltd	157576113	5.4216	0.0000	Significant Increase
HDFC Ltd	-64245886	-8.3006	0.0000	Significant Decrease
Hero Motocorp Limited	15561990	5.2918	0.0000	Significant Increase
Hexaware Technologies Ltd	-77773625	-6.7560	0.0000	Significant Decrease
Hindalco Industries Ltd	-29629593	-2.1987	0.0294	Significant Decrease
Hindustan Unilever Ltd.	35382295	6.8268	0.0000	Significant Increase
ICICI Bank Ltd.	182867712	6.2948	0.0000	Significant Increase
Indian Oil Corp Ltd	-299504959	-13.2243	0.0000	Significant Decrease
Indraprastha Gas Ltd	34414722	2.9978	0.0032	Significant Increase
Indusind Bank Limited	-155947768	-3.3136	0.0012	Significant Decrease
Infosys Limited	-660449321	5.4136	0.0000	Significant Decrease
ITC Ltd	-92868768	3.8645	0.0002	Significant Decrease
Justdial Ltd.	129857172	0.6670	0.5079	No Significant Change
Kotak Mahindra Bank Ltd	-17653212	-2.7345	0.0070	Significant Decrease
L&T Finance Holdings Ltd	154598079	2.6385	0.0092	Significant Increase
Larsen & Toubro Ltd.	320273010	8.3539	0.0000	Significant Increase
Mahindra & Mahindra Ltd	62723467	6.1870	0.0000	Significant Increase
Marico Limited	-41998524	-0.5785	0.5638	No Significant Change
Maruti Suzuki India Ltd.	-762595109	-5.5206	0.0000	Significant Decrease
Max Financial Services	64384969	5.8206	0.0000	Significant Increase
Mindtree Limited	-57116104	-3.2084	0.0016	Significant Decrease
MothersonSumi Systems Lt	-405340687	-4.9565	0.0000	Significant Decrease
MRF Ltd	30269743	1.8351	0.0685	No Significant Change
National Aluminium Company Ltd.	-13010483	-1.2346	0.2189	No Significant Change

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NCC Limited	176579848	5.2666	0.0000	Significant Increase
Oil And Natural Gas Corp.	-122929314	-5.7831	0.0000	Significant Decrease
Page Industries Ltd	-40483718	-1.3628	0.1750	No Significant Change
PetronetLng Limited	-485254578	-11.1812	0.0000	Significant Decrease
Pidilite Industries Ltd	46227784	2.2332	0.0270	Significant Increase
Piramal Enterprises Ltd.	63863284	2.1795	0.0309	Significant Increase
Raymond Limited	128363840	3.7302	0.0003	Significant Increase
Reliance Industries Ltd	222561270	3.1008	0.0023	Significant Increase
Reliance Infrastructure Ltd	945246087	10.0408	0.0000	Significant Increase
State Bank Of India	310654498	10.1898	0.0000	Significant Increase
Shriram Transport Fin Co.	-160752298	-5.0105	0.0000	Significant Decrease
Siemens Ltd	-32119690	-8.5377	0.0000	Significant Decrease
Srf Ltd	37939786	0.9178	0.3602	No Significant Change
Steel Authority Of India	-45031713	-0.5737	0.5670	No Significant Change
Tata Motors Limited	101763210	5.5418	0.0000	Significant Increase
Tata Chemicals Ltd	-57253651	-4.6652	0.0000	Significant Decrease
Tata Power Co Ltd	86680357	7.8612	0.0000	Significant Increase
Tata Steel Limited	282375240	12.7306	0.0000	Significant Increase
Tata Consultancy Serv Lt	121828405	3.5284	0.0005	Significant Increase
Torrent Power Ltd	-112435806	-5.4266	0.0000	Significant Decrease
Tvs Motor Company Ltd	93862	0.0030	0.9976	No Significant Change
United Breweries Ltd	42281973	1.6489	0.1014	No Significant Change
United Spirits Limited	-220417255	-3.1203	0.0022	Significant Decrease
Vedanta Limited	-491926281	-8.1335	0.0000	Significant Decrease
Voltas Ltd	-2967410	-0.1320	0.8951	No Significant Change
Wipro Ltd	402483766	7.0354	0.0000	Significant Increase
Yes Bank Limited	-105287040	-5.2455	0.0000	Significant Decrease
Zee Entertainment Ent Ltd	37018909	0.8709	0.3852	No Significant Change

Source: Authors' Compilation

**Table 4: Results of the Paired Sample T-Test for Volume**

Underlying	Mean	T-value	Sig (2 mean tailed)	Inference
ACC Limited	2935475	11.1938	0.0000	Significant Increase
Adani Enterprises Limited	-443723	-4.7182	0.0000	Significant Decrease
Amara Raja Batteries Ltd.	-55098	-1.9011	0.0592	No Significant Change
Apollo Hospitals Enter. Ltd.	70288	2.2491	0.0260	Significant Increase
Apollo Tyres Ltd	-1989055	-4.3376	0.0000	Significant Decrease
Ashok Leyland Ltd	47106	0.1625	0.8711	No Significant Change
Asian Paints Limited	168869	1.1208	0.2642	No Significant Change
Aurobindo Pharma Ltd	-337168	-2.7328	0.0071	Significant Decrease
Axis Bank Limited	-268645	-1.6268	0.1060	No Significant Change
Bajaj Finance Limited	-301807	-5.6572	0.0000	Significant Decrease
Bajaj Auto	3230	0.0823	0.9345	No Significant Change
Balkrishna Industries	-149628	-3.7741	0.0002	Significant Decrease
Bank of Baroda	5743564	4.2979	0.0000	Significant Increase
Bank of India	-564566	-2.5367	0.0122	Significant Decrease
Bata India Ltd	-29343	-0.3044	0.7612	No Significant Change
Bharat Petroleum Corp Lt	1464187	8.3583	0.0000	Significant Increase
Bharti Airtel Limited	4091197	1.9712	0.0507	Significant Increase
Biocon Limited.	620315	1.7379	0.0843	No Significant Change
Bosch Limited	-33871	-5.5844	0.0000	Significant Decrease
Cadila Healthcare Limited	-1019655	-4.3253	0.0000	Significant Decrease
CECS Ltd	-84978	-2.6823	0.0081	Significant Decrease
Cipla Ltd	155181	0.3389	0.7386	No Significant Change
Container Corp of Ind Ltd	62683	1.3250	0.1872	No Significant Change
Cummins India Ltd	-123606	-3.4528	0.0007	Significant Decrease
Dabur India Ltd	1810774	3.8929	0.0001	Significant Increase
Eicher Motors Ltd	-23784	-5.9320	0.0000	Significant Decrease
Escorts Limited	-139034	-1.8950	0.0600	No Significant Change
Exide Industries Ltd	-181188	-1.9089	0.0582	No Significant Change

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Federal Bank Ltd	2619950	2.2761	0.0243	Significant Increase
GAIL (India) Ltd	-23810932	-14.6943	0.0000	Significant Decrease
Glenmark Pharmaceuticals	-85304	-1.5425	0.1252	No Significant Change
Godrej Industries Ltd	75583	0.9013	0.3689	No Significant Change
Havells India Limited	2936442	6.4250	0.0000	Significant Increase
HCL Technologies Ltd	610454	3.7639	0.0002	Significant Increase
HDFC Bank Ltd	465459	0.6140	0.5402	No Significant Change
HDFC Ltd	292033	4.7888	0.0000	Significant Increase
Hero Motocorp Limited	-65325	-2.3938	0.0179	Significant Decrease
Hexaware Technologies Ltd	-561642	-1.9726	0.0504	Significant Decrease
Hindalco Industries Ltd	438519	5.9087	0.0000	Significant Increase
Hindustan Unilever Ltd.	883572	6.4932	0.0000	Significant Increase
ICICI Bank Ltd.	2619040	0.6858	0.4939	No Significant Change
Indian Oil Corp Ltd	-2027055	-3.1033	0.0023	Significant Decrease
Indraprastha Gas Ltd	728226	3.5707	0.0005	Significant Increase
Indusind Bank Limited	-445081	-2.6462	0.0090	Significant Decrease
Infosys Limited	846558	2.1385	0.0342	Significant Increase
ITC Ltd	8574370	3.3476	0.0010	Significant Increase
Justdial Ltd.	365038	1.2786	0.2070	No Significant Change
Kotak Mahindra Bank Ltd	289755	0.7330	0.4648	No Significant Change
L&T Finance Holdings Ltd	2004737	2.7074	0.0076	Significant Increase
Larsen & Toubro Ltd.	7192763	8.4435	0.0000	Significant Increase
Mahindra & Mahindra Ltd	2128978	3.9232	0.0001	Significant Increase
Marico Limited	-45869	-0.1369	0.8913	No Significant Change
Maruti Suzuki India Ltd.	1048	0.0018	0.9985	No Significant Change
Max Financial Services	347353	5.3795	0.0000	Significant Increase
Mindtree Limited	59462	1.4904	0.1382	No Significant Change
MothersonSumi Systems Lt	-1676464	-2.5180	0.0129	Significant Decrease
MRF Ltd	2133	1.0382	0.3009	No Significant Change
National Aluminium Company Ltd.	-230417	-0.6475	0.5183	No Significant Change

NCC Limited	1400867	3.8216	0.0002	Significant Increase
Oil And Natural Gas Corp.	-2714970	-4.7255	0.0000	Significant Decrease
Page Industries Ltd	-361	-0.1520	0.8794	No Significant Change
PetronetLng Limited	-11851604	-12.8684	0.0000	Significant Decrease
Pidilite Industries Ltd	101350	2.8103	0.0056	Significant Increase
Piramal Enterprises Ltd.	219073	2.3304	0.0211	Significant Increase
Raymond Limited	344563	4.0306	0.0001	Significant Increase
Reliance Industries Ltd	-14642763	-0.8484	0.3976	No Significant Change
Reliance Infrastructure Ltd	7079979	6.8936	0.0000	Significant Increase
State Bank Of India	13856106	10.5205	0.0000	Significant Increase
Shriram Transport Fin Co.	-119811	-2.5904	0.0105	Significant Decrease
Siemens Ltd	-2998	-0.1071	0.9148	No Significant Change
Srf Ltd	105665	2.2816	0.0239	Significant Increase
Steel Authority Of India	2148258	2.6680	0.0085	Significant Increase
Tata Motors Limited	5892937	6.6797	0.0000	Significant Increase
Tata Chemicals Ltd	-216992	-3.1476	0.0020	Significant Decrease
Tata Power Co Ltd	6565705	9.1955	0.0000	Significant Increase
Tata Steel Limited	2713389	13.7827	0.0000	Significant Increase
Tata Consultancy Serv Lt	-3309062	-8.3750	0.0000	Significant Decrease
Torrent Power Ltd	-448659	-4.6756	0.0000	Significant Decrease
Tvs Motor Company Ltd	229633	0.4767	0.6343	No Significant Change
United Breweries Ltd	77793	2.5351	0.0123	Significant Increase
United Spirits Limited	-327595	-0.7788	0.4373	No Significant Change
Vedanta Limited	-4284924	-5.9794	0.0000	Significant Decrease
Voltas Ltd	81034	0.4097	0.6826	No Significant Change
Wipro Ltd	17195530	2.4759	0.0144	Significant Increase
Yes Bank Limited	-763479	-3.0780	0.0025	Significant Decrease
Zee Entertainment Ent Ltd	-9697	-0.1390	0.8896	No Significant Change

Source:Authors Compilation

If the p-value is greater than 0.05, we can conclude that the introduction of SSF had no significant effect on liquidity. Nevertheless, if the p-value is less than 0.05 and the mean is negative, we can conclude that liquidity measures decreased significantly after the implementation of SSF. Also, if the p-value is less than 0.05 and the mean is positive, it is assumed that liquidity has soared post the introduction of stock futures.

The findings of the paired sample t-test indicate that the illiquidity ratio grew considerably for 43 (50%) of the stocks and declined significantly for 21 (24%) of the stocks. Therefore, it could be concluded that the illiquidity of most of the sample stocks has increased following the advent of futures trading, which could be considered a negative outcome. 39 stocks (45%) suffered a major fall in trading volume, while 29 stocks (34%) reported an increase. At the 5% significance level, the null hypothesis "no significant change between trading volume in the pre-futures and post-futures periods" was not rejected for 18 stocks (21%). Overall, the findings indicate a mixed outcome. The number of stocks having a significant increase in turnover is 32 stocks (37%), and the number of stocks having a significant decline in turnover is 25 stocks (29%). The null hypothesis of "no significant difference between turnover in the pre-futures and post-futures period" has not been rejected at a 5% level of significance for 29 stocks (34%).

The percentage of illiquidity has increased significantly for 43 (50%) of the equities, while it has decreased for 21 (24%) of the stocks. It may be the result of a shift in trading activity from the spot segment to the futures segment, indicating an overall mixed trend. With the advent of futures, the volume of trading on the spot market has shown a marginal decline. There is a significant decrease in the trading volume of 39 stocks (45%) and a rise in the trading volume of 29 stocks (34%). A negative correlation was established between trading volume pre-derivative listing and trading volume post-listing. Contrary to the expected outcome of the introduction of derivatives trading, it is observed that derivatives have a negative impact on the liquidity of the underlying market.

## **Conclusion**

This study contributes to the existing body of literature by analysing the effect of the listing of SSFs on the Indian stock market's liquidity. This analysis utilises the price-impact liquidity measure, volume, and turnover to quantify liquidity, despite the fact that liquidity can be measured in multiple ways. There is strong evidence of an increase in the illiquidity ratio, showing that the liquidity of the majority of the sample stocks has decreased. Similarly, the introduction of futures results in a marginal decline in

the trading volume of sample stocks. However, the volume of sales is unaffected. It could be attributable to a shift in trading activity from the spot segment to the futures segment. Due to the advantages of leverage and the absence of short-selling prohibitions, derivatives are viewed as superior assets by informed traders. The decline in the proportion of informed traders reduces market makers' adverse selection costs. These findings are congruent with the findings of previous study (Chaudhury & Elfakhani, 1997b; Hayes & Tennenbaum, 1979b; Jegadeesh & Subrahmanyam, 1993; Narasimhan & Kalra, 2014a). These insights will help regulatory authorities evaluate market conditions and devise effective regulatory actions to achieve their goals.

Additionally, market participants and analysts will be able to evaluate the profitability of their trading strategies. Price discovery and price volatility could be affected by derivatives. However, high-frequency data may provide a more accurate depiction of liquidity impacts. In addition to the liquidity measures included in the study, additional metrics such as bid and ask prices, the Amivest measure, Roll's-1984 measure, the fraction of zero daily returns, the Return Reversal Method, and the log illiquidity ratio can be used.

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APPENDIX A

Table 1a: List of sample stocks with stock futures with their Listing dates

Stocks	Date of Listing of Futures	Stocks	Date of Listing of Futures
ACC Limited	2-Jul-01	Indusind Bank Limited	29-Oct-10 Re-introduced
Adani Enterprises Limited	19-Feb-10	Infosys Limited	2-Jul-01
Amara Raja Batteries Ltd.	6-May-15	ITC Ltd	2-Jul-01
Apollo Hospitals Enter. Ltd.	16-Dec-13	Justdial Ltd.	2-Apr-13
Apollo Tyres Ltd	19-Feb-10	Kotak Mahindra Bank Ltd	29-Dec-05
Ashok Leyland Ltd	20-Apr-05	L&T Finance Holdings Ltd	2-Apr-13
Asian Paints Limited	21-Aug-08	Larsen & Toubro Ltd.	15-Sep-06
Aurobindo Pharma Ltd	12-May-05	Mahindra & Mahindra Ltd	2-Jul-01
Axis Bank Limited	20-Apr-05	Marico Limited	24-Sep-15
Bajaj Auto	26-May-08	Maruti Suzuki India Ltd.	8-Jul-03
Bajaj Finance Limited	6-May-15	Max Financial Services	29-Oct-10
Balkrishna Industries	28-Apr-17	Mindtree Limited	10-Sep-14
Bank of Baroda	29-Aug-03	MothersonSumi Systems Lt	10-Sep-14
Bank of India	29-Aug-03	MRF Ltd	29-Oct-10
Bata India Ltd	29-Oct-10	National AluminiumCo.Ltd.	31-Jan-03
Bharat Petroleum Corp Lt	2-Jul-01	NCC Limited	24-Sep-15
Bharti Airtel Limited	20-Apr-05	Oil And Natural Gas Corp.	31-Jan-03
Biocon Limited.	6-Sep-07	Page Industries Ltd	6-May-15
Bosch Limited	20-Nov-14	PetronetLng Limited	14-May-07
Cadila Healthcare Limited	24-Sep-15	Pidilite Industries Ltd	6-May-15
CECS Ltd	12-May-05	Piramal Enterprises Ltd.	15-Feb-08
Cipla Ltd	2-Jul-01	Raymond Limited	29-Apr-11
Container Corp of Ind Ltd	21-Aug-08	Reliance Industries Ltd	2-Jul-01
Cummins India Ltd	2/26/2016	Reliance Infrastructure Ltd	16-May-08
Dabur India Ltd	20-Apr-05	Shriram Transport Fin Co.	30-Jul-10

Eicher Motors Ltd	10-Sep-14	Siemens Ltd	20-Apr-05
Escorts Limited	29-Oct-10	Srf Ltd	6-May-15
Exide Industries Ltd	28-May-10	State Bank Of India	2-Jul-01
Federal Bank Ltd	12-May-05	Steel Authority Of India	15-Sep-06
GAIL (India) Ltd	26-Sep-03	Tata Chemicals Ltd	20-Apr-05
Glenmark Pharmaceuticals	28-Sep-13	Tata Consultancy Serv Lt	23-Aug-04
Godrej Industries Ltd	30-Dec-15	Tata Motors Limited	2-Jul-01
Havells India Limited	29-Oct-10	Tata Power Co Ltd	2-Jul-01
HCL Technologies Ltd	31-Jan-03	Tata Steel Limited	2-Jul-01
HDFC Bank Ltd	29-Aug-03	Torrent Power Ltd	30-Dec-15
HDFC Ltd	2-Jul-01	Tvs Motor Company Ltd	29-Oct-10
Hero Motocorp Limited	31-Jan-03	United Breweries Ltd	28-Sep-13
Hexaware Technol. Ltd	28-May-10	United Spirits Limited	24-Oct-13
Hindalco Industries Ltd	2-Jul-01	Vedanta Limited	29-Dec-06
Hindustan Unilever Ltd.	2-Jul-01	Voltas Ltd	29-Dec-06
ICICI Bank Ltd.	31-Jan-03	Wipro Ltd	31-Jan-03
Indian Oil Corp Ltd	26-Sep-03	Yes Bank Limited	6-Sep-07
Indraprastha Gas Ltd	29-Oct-10	Zee Entertainment Ent Ltd	7-Oct-10

**Table 5: Summary of the Paired Sample T-test**

Stocks	Amihud Illiquidity Measure		Volume		Turnover	
	t-test	Percentage of total	t-test	Percentage of total	t-test	Percentage of total
Significant Increase	43	50%	29	34%	32	37%
Significant Decrease	21	24%	39	45%	25	29%
No Significant Change	22	26%	18	21%	29	34%
Total	86	100	86	100	86	100

Source: Authors' Compilation

# Tool to Assess Creative Personality

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## Abstract

*Creativity involves generating numerous associations and producing unique outcomes. Personality, encompassing mental, emotional, and physical characteristics, represents the integrated organization of an individual in their environment. Creative personality pertains to individuals whose personality traits include creative abilities. This study aimed to create and standardize a psychometric tool for evaluating an individual's creative personality. Employing a multi-staged randomized design, a concise creative personality scale was developed using the semantic differential technique. The study involved 152 respondents (72 Males and 80 Females). The paper presents the scale's reliability, validity, and norms.*

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**Keywords:** Divergent thinking, Mental-emotional traits, Incubation, Public persona, Unethical behaviour

## Introduction

Characterizing a creative personality poses challenges as not all individuals possessing such traits necessarily contribute something valuable. To grasp the notion of creative personality comprehensively, it is essential first to understand creativity and personality independently.

Ingenuity stands out as a prominent attribute, affording the capacity to transcend the present, revisit past epochs, and envision future possibilities. This capability allows individuals to conceive and shape themselves within a non-existent scenario (Gabora, 2013). The definitions of creativity articulated by various researchers are:

1. Creativity lies in producing more associations, and in producing more that is unique (Wallach & Kogan, 1965).
2. Creativity implies the production of a totally or partially novel identity (Stagner & Karwoski, 1973).

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3. Creativity is the ability to see things in a new and unusual light, to see problems that no one else may even realize exist and then to come up with new, unusual, and effective solutions (Paplia & Olds, 1986).
4. Creativity is a process which results in novel work that is accepted as tenable to useful or satisfying to a group of people at some point of time (Stein, 2014).

Similarly, the definitions of personality articulated by various researchers are:

1. Personality traits may be considered as many important dimensions in which people may be found to differ (Allport, 1924).
2. Personality is the dynamic organisation within the individual of those psychophysical systems that determine his unique adjustments to the environment (Allport, 1927).
3. Personality is that which makes one effective and influence others (May et al., 1928).
4. Personality refers to the more or less organized body of ideas, attitudes, traits, values and habits which an individual has built into roles and status for dealing with others and with himself (Young, 1930).

Rhodes (1961) offered a comprehensive examination of four distinct creative categories exploring unique facets. The initial category explores personality traits associated with heightened creativity, incorporating case studies of specific creative individuals. This may involve heterometric methods, which qualitatively gather information about well-known artists, such as the number of artworks produced, and then employ statistical analysis to identify overarching trends or associations extending beyond individuals, locations, or eras. The second category focuses on ideas and their generation process. This research area delves into cognitive processes facilitating creative idea generation at various stages, evaluates descriptive models of these stages, and observes creative individuals at work. Methodologies such as surveys, observation, and neuro-scientific approaches may be applied.

The third category examines tangible products of creativity, including ideas, theories, action plans, paintings, and dance. The historical attribution of Western creative traditions' superiority over Eastern ones has traditionally centred on the final product. The fourth category, place-based creativity, scrutinizes the environmental features fostering creative thinking. Factors such as education, training, mentorship, and childhood experiences, including trauma, have been linked to historical innovation.

While economic prosperity seems to stimulate creativity, counteracting forces may hinder it to exist. The overarching objective of this extensive analysis is to illuminate the intricate relationship between creativity and these four distinct attributes.

*Personality Perspective of Creativity:* Examining creativity through the lens of personality emphasizes distinct individual attributes associated with creativity (Feist & Gorman, 1998). Traits connected to creativity encompass self-assurance, an artistic viewpoint, a propensity for risk-taking, adaptability to new perspectives, willingness to embrace uncertainty, spontaneity, ethical flexibility, high motivation, adeptness in navigating challenges, awareness of complexities, openness to exploration, a readiness to evaluate, synthesize, scrutinize, and modify understanding, as well as the capacity for unconventional thought processes. Furthermore, empirical evidence suggests that creative individuals may exhibit a predisposition to anxiety and emotional affective issues. In their approach, these individuals often lean towards being inwardly focused rather than outwardly focused, emphasizing either individual or task-oriented methods. Frequently taking on the roles of discoverers or makers, they specialize in transforming vague or incomplete ideas into refined objects.

*Inherent Traits and Environmental Influences:* When considering the interplay of nature and nurture, it is evident that genetic factors significantly contribute to the likelihood of engaging in entrepreneurial endeavours, accounting for 82% of the variance. These genetic influences extend to shaping the perception of opportunities among individuals with creative tendencies, with a substantial genetic impact of 66%. These genetic factors manifest in both biological and psychological characteristics, leading to inherent variations in creativity and entrepreneurial inclination among individuals. This understanding can be practically employed in identifying individuals with optimal creative personality traits, thereby fostering an environment conducive to inspiring entrepreneurial initiatives (Shane & Nicolaou, 2014). Furthermore, the influence of creative supervisors is noteworthy, impacting the creativity of employees (Collins & Cooke, 2013).

*Shadowy Side of Creativity:* The values and beliefs of individuals play a pivotal role in shaping their darker creative inclinations. Beaussart et al. (2013) identified an inverse relationship between creativity and behavioural integrity. Similarly, Mai et al. (2015) merged trait activation theory and self-concept maintenance theory to explore the dark facets of creative personality, specifically delving into unethical behaviour to enhance our understanding of the triggers and circumstances involved. The underlying concept suggests that creative traits are acquired through external stimuli, and once

activated, individuals may be inclined to maintain a positive self-view, potentially leading to unethical behaviour. Galang et al. (2017) noted that neuropsychological traits associated with creativity, such as risk-taking behaviour and emotional disinhibition, are particularly pronounced in individuals with psychopathic tendencies. The research underscores a robust connection between creative success and dark personality traits, extending beyond domains traditionally linked with assertiveness and meanness, such as music and comedy.

*Personality Structure of Creative People:* In a comprehensive exploration of the links between creativity, personality factors, general knowledge, and IQ, Batey et al. (2010) emphasized the paramount role of personality, especially in the context of self-rated creative judgments and accomplishments. Delving further into the nuanced personality structure of aspiring creative writers, Maslej et al. (2014) conducted a comparative study contrasting writers with non-writers. Writers exhibited a preference for poetry and fiction, displaying heightened levels of flexibility, along with traits such as activity, openness, and melancholy, in comparison to their non-writing counterparts. The study also highlighted gender differences, with a greater inclination towards writing observed among women than men. Furthermore, the likelihood of becoming authors decreased with advancing age.

For the current study, an operational definition of creative personality was formulated based on existing definitions and viewpoints: Creative personality refers to people characterized by the ability to perceive the world in new ways, find hidden patterns and make connections between seemingly unrelated phenomena to generate solutions. In other words, it refers to people who possess originality, flexibility, and novelty in their approach to problem-solving.

## **Rationale**

Historically, the exploration of creative personality, especially within the Indian context, has been limited. There is a notable scarcity of research specifically focused on India, resulting in a significant gap in comprehensive studies examining the intersection of creativity and personality. Although various tools independently measure creativity and personality, only a few provide a holistic assessment of creative personality. In this study, the opinionnaire scale is employed as a psychometric instrument to analyze the creative personalities of ordinary individuals in society. Hence, research in this area is essential to grasp the creative inclinations of individuals in society, fostering an understanding that can contribute to creating an environment supportive of their creativity, ultimately promoting societal development.

## **Objectives**

1. To develop and standardize a psychometric tool to assess creative personality.
2. To identify the constituent factors of creative personality.

## **Method**

To develop a psychological tool for assessing creative personality in terms of various constituent factors, a multi-stage randomized design was used.

Stage 1: An operational definition was formulated based on comprehensive review of the existing literature.

Stage 2: Seventy-five (75) statements were generated on the basis of operational definition.

Stage 3: Rigorous scrutiny led to the removal of statements found repetitive or confusing.

Stage 4: Thirty (30) judges, each possessing a minimum of 10 years of professional experience after post-graduate degree, evaluated each statement against the operational definition.

Stage 5: Statements accepted by at least 75% of the judges, following their recommendations, were retained for further development.

Stage 6: Subsequently, 21 statements were finalized from the initially generated set of 75. The tool based on a 7-point semantic differential scale was thus established for further analysis.

**The Sample:** The tool was administered on 152 individuals. The data collection involved employing simple random sampling method across diverse population in India. The composition of the sample being Males: 72; Females: 80; Age Range: 17 to 60 years; Average Age: 38.5 years.

**Tools for Data Analysis:** The employed data analysis methods in this research encompassed Item-Total Correlation and Factor Analysis. The assessment of split-half reliability utilized the Spearman-Brown Coefficient, yielding a value of 0.732. To ascertain the validity of this tool (Garrett, 1981), the Index of Reliability was computed and determined to be 0.91, indicating a high level of validity. The entire computation process was facilitated by using SPSS Version 23.

## **Results**

The development of a psychometric tool necessitates the mandatory process of standardization. Therefore, reliability, validity, and norms were calculated to ensure the standardization of this scale. For a comprehensive examination of the relationship between each item and the overall scale, item-total correlation was computed for all 21 items. After this analysis, 8 items exhibited insignificant correlation and were excluded. Significant correlation at 0.05 level of significance was observed in the case of remaining *13 statements*. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy yielded a value of 0.740, affirming the adequacy of the sample size. This indicated that the data was suitable for further exploration through Factor Analysis.

*Factor Analysis:* The scores obtained on the final scale of *13 statements* were subjected to factor analysis. Four (4) factors obtained through factor analysis are as follows:

*Factor 1 Ideation:* This factor is constituted of five items: Ideation (0.737), new approach (0.696), thinking differently (0.642), special contribution (0.556) and working with people from different disciplines (0.524) with a total factor load of 3.155 and percentage of variance 17.432.

*Factor 2 Novel Solutions:* This factor is constituted of three items: Uncommon style (0.790), risk for discoveries (0.551) and meaningful patterns in different designs (0.550) with a total factor load of 1.891 and a percentage of variance 13.832.

*Factor 3 Likes Variety:* This factor is constituted of three items: Variety (0.631), passionate (0.615) and performing routine activities differently (0.612) with a total factor load of 1.858 and a percentage of variance 11.650.

*Factor 4 Creative to Give:* This factor is constituted of two items: Creation (0.773), and alternative solutions (0.553) with a total factor load of 1.326 and a percentage of variance 9.305.

Generating norms for the general population establishes a range that facilitates the identification of creative personality. Similarly, specific factor-wise ranges are computed to discern the creative personality within each factor. The details are available in the Manual of the Scale (Sharma & Dhar, 2024).

## **Discussion**

The findings of this research identify four distinct factors contributing to creative personality: *Ideation*, *Novel Solutions*, *Likes Variety*, and *Creative to Give*. *Ideation*,

synonymous with thinking outside conventional boundaries, is characterized by elements such as ambiguity, divergent thinking, evaluative thinking style, originality, and optimization. This creative process involves both generating and evaluating ideas and can also manifest as a personality attribute influencing moral behaviour. Wang et al. (2011) discovered that a moderate level of role ambiguity fosters creativity more effectively than situations with no ambiguity or excessive ambiguity. Runco & Acar (2012) assert that divergent thinking, a crucial component of ideation, offers numerous benefits. Extensively studied for its connections to ideation, problem-solving, and creative potential, divergent thinking remains a valuable focus of investigation, contributing to a deeper understanding of the nature of ideas and the underlying mechanisms at play.

Eysenck's (2003) research suggests that highly inventive individuals may not necessarily be creative. Comparative studies by Runco & Charles (1993) revealed that uniqueness is crucial for evaluating creativity, emphasizing that appropriateness without originality indicates low creativity. However, Runco et al. (2005) found that assessments could draw from experience and memory, suggesting that individuals may not always need creative thinking to generate new ideas. Participants in the study were tasked with generating novel, acceptable, or creative ideas for both reasonable and impractical goals. In contrast to prior studies, some research suggests that high levels of divergent thinking and cognitive flexibility might be linked to dishonest behaviour when individuals are prompted to think creatively. Gino & Arielys (2012) research demonstrate a correlation between a creative personality or creativity prime and higher levels of dishonesty, highlighting how encouraging creative thinking may lead to more morally questionable choices in problem-solving scenarios. The freedom to think creatively can enable individuals to solve problems in novel ways, even if it means challenging ethical conventions.

*Novel solutions* encompass a range of characteristics, including adaptability, originality, the use of tactics in innovative ways, novelty, innovations, discovering hidden solutions, and the application of insight. Jauk et al. (2012) conducted a study revealing that individuals with lower creative tendencies tend to engage more parietal regions when generating alternate responses, while highly creative individuals exhibit enhanced frontal flexibility. Martindale & Hines (1975) found a correlation between strong frontal cortex alpha power and superior performance on an alternate uses test. Furthermore, those who provided distinctive responses on an alternate uses test demonstrated larger alpha power increases in the right hemisphere's frontal and posterior brain regions (Benedek et al., 2012; Mednick, 1962; Merten & Fischer, 1999). The word association

task exemplifies fundamental ideational processes supporting creative thinking, while the alternate uses test serves as a typical creative ideation paradigm.

In terms of neural activity, individuals with lower creativity exhibited alpha synchronization or mild desynchronization in the centro-temporal to parieto-occipital regions during infrequent responses, while frequent responses led to significant alpha desynchronization. This disparity in inter-individual reactivity suggests that less creative and highly creative individuals may employ different strategies to elicit unexpected responses. For example, highly creative individuals may utilize prefrontal structures linked to internally directed attention, whereas less creative individuals may opt for a top-down strategy involving parietal areas associated with loosening semantic memory processing (Jung-Beeman, 2005). Measures of creative potential, such as ideational fluency, ideational originality based on the number of ideas generated, and average ideational originality, are common in research (Benedek et al., 2013).

Neubauer et al. (2014) evaluated participants' inventiveness by instructing them to utilize a can, a knife, and a hairdryer in as many unique and unusual ways as possible, addressing a variety of challenges. Everyday creativity, according to Gabora (2013), involves a creative and often nonconformist lifestyle, seizing opportunities, approaching ordinary tasks in novel ways, and generating solutions for emerging problems. Baas et al. (2013) identified three creative outcome variables: originality, fluency, and insight performance. Fluency, representing the quantity of original concepts and solutions, is assessed through ideation exercises, and open-ended evaluations of an individual's capacity to generate numerous viable solutions (Mumford, 2001).

*Variety*, characterized by flexibility and openness to new experiences across various aspects of life, is a trait highly valued by creative individuals. In the context of team performance, Bell et al. (2010) conducted a meta-analysis, revealing a positive link between demographic diversity, specifically in functional background factors such as work history and educational background, and heightened levels of team innovation. These findings align with existing research on the impact of cultural and religious diversity, as evidenced by the experiences of highly accomplished individuals who have studied abroad, been mentored by foreign influences, or encountered marginalization in their professional journeys. The connection between increasing one's experiences and fostering creativity is further supported by historical evidence, which indicates that highly creative individuals often possess extensive travel experiences, including living abroad and frequent relocations (Simonton, 2004).

Cultural diversity, as illustrated by varied religious affiliations, also plays a role in creative thinking. Feist et al. (2017) introduce the concept of multicultural experiences, defining them as environments with high contextual variability that facilitate creative expression. They argue that both dispositional plasticity and contextual diversity are crucial for creative development. Bicultural individuals, who exhibit receptivity to new experiences, have low levels of racial essentialism, or integrate their multicultural identities may find that their varied surroundings enhance their creative performance. It's emphasized that while multicultural interactions are significant, they alone are insufficient to foster innovation. The interactive perspective underscores the importance of dispositional flexibility and cross-cultural interactions in the creative development process. The correlation between openness to experience and creativity is particularly notable, as individuals with high openness scores may access a more diverse and unconventional knowledge base during the idea-generation process (Leung & Chiu, 2008; McCrae, 1987).

*Creative to Give* encompasses sharing information, producing artistic works, offering opportunities, extending help, embracing flexibility, and fostering inclusivity. Atkins et al. (1967) define creative leadership as a social and reciprocal exchange. This perspective encourages the utilization of networks to optimize fresh data, leading to the formation of social connections and engaged groups centred around innovative ideas. Creative leaders, manage multiple objectives, ensure organizational adaptability, cultivate networks with loose connections, and integrate systems that bridge distant industries and organizations, making widely dispersed ideas accessible. Establishing connections across disciplinary boundaries, adopting collaborative and transdisciplinary approaches, and harnessing collective intelligence are crucial for enhancing and realizing innovative ideas.

In the early stages of invention, the creative personality exhibits traits such as energy, openness to new experiences, a willingness to try new things, and adaptability. As the concept evolves, the leadership role becomes apparent, shifting towards a supportive attitude. The creative leader transforms into a social leader, embodying qualities such as integrity, cooperation, humility, determination, and a pursuit of perfection. According to Carson et al. (2003), creative individuals possess the ability to perceive and express what others may overlook, generating original ideas and envisioning multiple solutions to problems. In summary, *Creative to Give* underscores the multifaceted nature of creative personalities and leaders, emphasizing the importance of collaborative, transdisciplinary thinking and the generation of original ideas to drive innovation.

## **Conclusion**

Norms established for the general population elucidate that the creative personality scale spans from 50 to 83. As per these norms, scores falling below 50 suggest a *lower* level of creative personality, while scores surpassing 83 indicate a *higher* level of creative personality. This tool stands poised to contribute significantly to the understanding and assessment of creative traits in individuals across diverse contexts.

## **Implications**

1. The tool effectively identifies creative individuals by distinguishing them from less creative counterparts.
2. Research indicates that some creative individuals might engage in negative or unethical behaviors. This scale allows for early guidance to channel creative potential in a positive direction, supporting personal growth and societal contributions.
3. The tool includes four distinct elements, each with a range of values, offering a comprehensive assessment of creativity across different contexts.
4. This tool is ideal for educational and organizational settings as it enables counselors to assess creativity, design tailored curricula, and create supportive environments. It fosters creativity through customized activities, benefiting both educational and professional domains.
5. This tool is essential for creating balanced and innovative teams, especially important for virtual and global collaboration. By fostering a mix of creative thinkers, it enhances team adaptability and creativity, crucial for problem-solving in today's digital world.
6. The tool aids self-discovery, allowing individuals to identify their creative abilities in coaching or therapy. It fosters self-awareness, which can improve personal and professional decisions, leading to fulfillment and purpose.
7. Finally, the scale supports career decision-making by helping less creative individuals find suitable roles in repetitive tasks and guiding highly creative people toward dynamic roles. It objectively assesses creativity, aiding in career choices and personal growth.

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## APPENDIX

### CP - Scale

#### Instructions

There are 13 statements in this booklet, which are aimed at assessing the general knowledge of an individual. You are requested to respond to each statement by encircling your choice from 1 to 7. Please remember that there are no right or wrong answers. The information given by you will be kept confidential.

#### People who know me think of me as a person who:

S. No.	Statement	Choice	Statement
1.	enjoys working with people from varied disciplines	7 6 5 4 3 2 1	does not enjoy working with people from varied disciplines
2.	aims for variety	7 6 5 4 3 2 1	aims for stability
3.	thinks of alternative solutions	7 6 5 4 3 2 1	relies on preexisting solutions
4.	makes normal contribution to the world	1 2 3 4 5 6 7	likes to make special contribution to the world
5.	comes up with new ideas	7 6 5 4 3 2 1	sells established ideas
6.	takes risks for discoveries	7 6 5 4 3 2 1	resists taking risks for discoveries
7.	cannot make patterns in two different designs easily	1 2 3 4 5 6 7	can make meaningful patterns in two different designs easily
8.	solves problems in uncommon ways	7 6 5 4 3 2 1	solves problems in common ways
9.	prefers creating things to gift someone	7 6 5 4 3 2 1	prefers buying things to gift someone
10.	finds new approach to get things done	7 6 5 4 3 2 1	applies old approach to get things done
11.	thinks out of box	7 6 5 4 3 2 1	does not think out of box
12.	performs routine activities normally	1 2 3 4 5 6 7	performs routine activities differently
13.	prefers passion over plan	7 6 5 4 3 2 1	prefers plan over passion

# Why and How MSMEs Should Shoulder Business Social Responsibility

Wangchuk Chungyalpa\*

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## Abstract

*Our world today is plagued by several social and environmental issues one of the root causes of which is industrial activities concerned largely with the production of goods and services. Not surprisingly, there is a growing outcry for socially responsible behavior on the part of businesses. However, the focus has largely been on corporations and big businesses while ignoring the medium, small and micro businesses which is a prodigious error. This paper argues that MSMEs are equally responsible for corporate social responsibility. The paper consists of five sections. The first section explores the concept of corporate social responsibility. The second section justifies why MSMEs should be held equally accountable for corporate social responsibility. The third section highlights some of the major challenges faced by MSMEs regarding corporate social responsibility. The fourth section introduces social responsibility concept. The final section presents a summary overview of ISO 26000 Guidance on Social Responsibility.*

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**Keywords:** CSR barriers, Challenges concerning CSR, Environmental impact, Social impact, Social responsibility.

## Introduction

Today, a growing number of corporations and big businesses are adopting socially responsible behavior. There is a growing awareness and movement towards sustainable business practices. Movements such as B-Corporation, clean investments, Green Business Bureau, Global Impact Investment network, Green Purchasing etc. is a clear indication that business roles are changing. In 2019, CEOs of 180 top corporations (including the likes of Wal-Mart, Apple, JP Morgan Chase, Pepsi, Amazon, Abbot, Baxter, Bayer etc.) released a statement redefining the purpose of corporation which clearly mentions commitment towards social well being and environmental protection through sustainable business practices (Business Roundtable, n.d.). Social reporting is on the rise and as more and more companies are embracing and accepting their social responsibility (Threlfall, King, Shulman & Bartels, 2020). Likewise, social entrepreneurship is becoming more popular year by year. However, challenges remain,

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especially when it comes to small and micro businesses. Traditionally, the focus has been and continues to be on the corporations and big businesses to carry out their corporate social responsibility. Medium, small and micro enterprises (henceforth referred to as MSMEs) have generally avoided the radars of the governments and NGOs when it comes to shouldering their corporate social responsibility. This has enormous consequences in the quest for social inclusion and equality and sustainable development.

This paper addresses why MSMEs should be equally responsible for shouldering their corporate social responsibility as the big companies. More importantly the paper examines the concept of corporate social responsibility in the light of sustainable business practices and how this new evolved perspective of corporate social responsibility provides MSMEs with new opportunities and prospects concerning their social responsibility. The paper also examines how MSMEs have traditionally carried out their corporate social responsibility and the plethora of issues faced by MSMEs concerning corporate social responsibility. The objective of this paper is three fold. The first objective is to clarify the concept of corporate social responsibility. The second objective is to justify why MSMEs should be equally accountable for carrying out their social responsibilities same as the big companies. The final objective of this paper is to highlight how MSMEs can shoulder their social responsibility.

### **What is CSR?**

Corporate Social Responsibility (CSR) can be understood as businesses taking responsibility for the impact their decisions and activities have on the environment and society at large (European Commission, n.d.) (UNIDO, n.d.). The concept of corporate social responsibility has undergone considerable change over the years. Initially CSR activities were primarily philanthropic in nature however, today it includes concepts such as triple bottom line, corporate citizenship, strategic philanthropy, shared value, corporate sustainability and business responsibility (PwC, 2013). Initially CSR was practiced largely by big corporations and companies however, today many medium and small businesses are embracing corporate social responsibility (Bhalla, 2020) (Jenkins, 2004). As it stands today, CSR is closely tied with the concept of sustainable business practices and social responsibility of businesses. In this context, there are three dimensions to CSR which are the society, the environment, and the economy. This is illustrated in Fig 1 on the following page:



Figure 1: The three dimensions of business social responsibility (UNIDO, n.d.)

## Why MSME?

The World Bank categorizes MSMEs as follows:

- micro enterprises: 1–9 employees
- small enterprises: 10–49 employees and
- medium enterprises: 50–249 employees

According to them, MSMEs represent about 90% of businesses and account for more than 50% of employment worldwide (Sobir, 2020). The Ministry of Micro, Small, and Medium Enterprises, Government of India uses the following classification for categorizing businesses as either micro, small or medium enterprises.

**Table 1: Revised classification of MSME by Government of India  
(Ministry of Micro, Small & Medium Enterprises, 2020)**

Revised Classification Applicable w.e.f. 1st July 2020			
Composite Criteria: Investment in Plant & Machinery/equipment and Annual Turnover			
Classification	Micro	Small	Medium
<b>Manufacturing Enterprises and Enterprises rendering Services</b>	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover; not more than Rs. 5 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore and Annual Turnover; not more than Rs. 50 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 crore and Annual Turnover; not more than Rs. 250 crore

Under the new revision many enterprises previously categorized as small and medium enterprises will now fall under micro category. Hence, it is critical to enlist micro enterprises in social responsibility. The impact of MSMEs is considerable and merits careful examination. In any world economy the MSMEs play a major role but this has been a sector that has traditionally been ignored in terms of CSR. Globally, SMEs contribute significantly towards the economic progress of a nation. According to a study conducted by OECD, MSMEs account for 40% in terms of volume, 80% in terms of employment, 60% in terms of exports and 92% in terms of number of enterprises (OECD, n.d.). MSMEs represent about 90% of businesses and more than 50% of employment worldwide (The World Bank, n.d.).

According to Perera, SMEs account for as much as “97 % of global enterprises, 40-60 % of global GDP and up to 70% of employment in member countries of the Organisation for Economic Co-Operation and Development (OECD) – and even higher percentages in non-OECD countries.”(Perera, 2009). In case of India, MSMEs account for 45% of industrial production, 30.5% of services sector and employ close to 110 million people second only to the agricultural sector. Much of the MSMEs are located in rural areas(Arora, 2019) (Srinivasan, 2009).

MSME also contribute significantly to environmental pollution. According to Raj and Raja MSMEs in India account for as much as 70% of the industrial pollution in the country(Raj & Raja, 2017).Likewise, a study conducted by The World Bank in India found that despite the small scale of operations of MSMEs, their cumulative

environmental impact can be substantial due to the very large number of these units. This is specially true for following sectors such as metal finishing, leather tanning, dry cleaning, printing and dyeing, brewing, food processing, chemical production, etc. (The World Bank, n.d.). Since SMEs operate in clusters, it is strongly advised to assess cluster level environmental risks posed by these units (Edgell, 2018; Takalandze & Mohammad, 2019; Bikefe et al., 2020). Figure 2 depicts the results of the study undertaken by World Bank in 2011. The study involved 104 developing countries studied over a two-year time horizon.

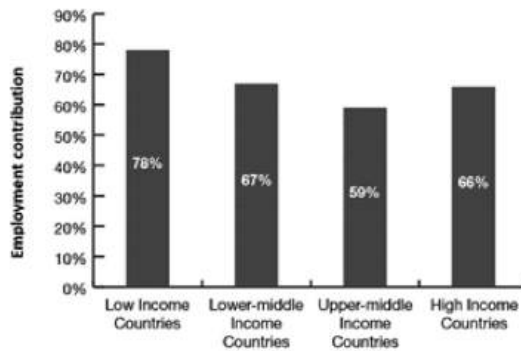


Figure 2: Employment contribution by MSMEs

The above figures are only for registered MSMEs and hence understates the impact of MSMEs as majority of the MSMEs in developing countries are unregistered. Possibly a more accurate depiction of the impact and significance of MSMEs is depicted in Fig. 3 compiled by the IFC. Both the data are from the same study(The World Bank, 2015 as cited in Zappia&Sherk, 2017).

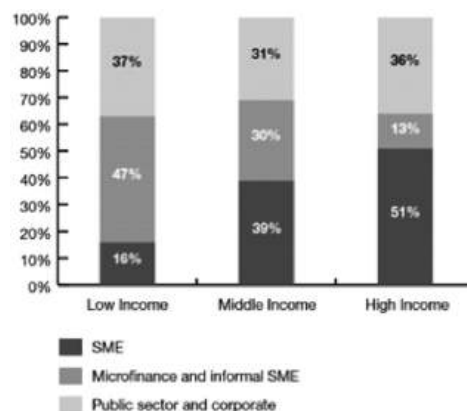


Figure 3: MSMEs contribution to GDP

The United Nations Department of Economic and Social Affairs published a paper under a project supported by 2030 Agenda for Sustainable Development Sub-Fund of the UN Peace and Development Fund (UNPDF). The paper is entitled “Micro, Small and Medium-sized Enterprises (MSMEs) and their role in achieving the Sustainable Development Goals.” The paper examines each one of the seventeen sustainable development goals and explores how MSMEs can contribute towards the achievement and advancement of these goals. For example, consider SDG 1: End poverty in all its forms everywhere. It states that the last 30 years, the private sector has played a major role in bringing people under the poverty line from 52 percent to 22 percent. 4 out of 5 new positions in the formal sector was created by MSMEs. That is 90% of the total jobs. In lower economy countries, majority of the MSMEs operate in the informal sector. The informal sector employs as much as 70% of the total workforce. Thus, MSMEs serve as a source of livelihood for base of the pyramid population earning less than USD3000/year. Likewise, the paper examines each of the other 17 SDGs and explains how MSMEs can play a vital role in realizing those goals (Sobir, 2020).

In summary, MSMEs play a crucial role in development of any national economy. In emerging economies formal MSMEs contribute up to 45% of total employment and 33% of GDP (OECD, n.d.). This figure increases exponentially if the informal MSMEs serving the base of the pyramid population is taken into consideration as well. MSMEs are a major source of employment. This is especially true in developing countries where majority of the MSMEs are labor intensive due to cheap source of labor. MSMEs account for 90% of total employment of the workforce. According to World Bank estimates 600 million jobs will be needed by 2030 to absorb the growing global workforce, which makes SME development a high priority for many governments around the world(The World Bank, n.d.).

Finally, MSMEs can play an instrumental role in poverty reduction in rural places and amongst women and other socially disadvantaged groups. According to a study conducted by International Finance Corporation (IFC)'s there are 9.34 million formal MSMEs owned by women which is 1/3<sup>rd</sup> of all formal MSMEs. Women account for 20.45% of the labor force in registered MSMEs and around 13.02% in unregistered MSMEs. However, women are employed in low paying, low skill jobs with poor working conditions and minimum social security (Sobir, 2020).

## **MSME and CSR**

How can MSMEs contribute towards corporate social responsibility? Because of their small size, financial and other resource constraints, lack of knowledge and know how concerning CSR activities etc. MSMEs face significant challenges when it comes to

CSR. Limited literature exists on how MSMEs specifically can carry out their corporate social responsibility given the challenges that they face (Panwar, Nybakk, Hansen & Pinkse, 2017) (Lucky, 2018). Table 2 lists issues faced by SMEs in terms of CSR implementation.

**Table 2: Challenges and barriers faced by MSMEs concerning CSR.**

	(Tewari&Taral, 2014)	(Zappia&Sherk, 2017)	(Zafar & Farooq, 2014)	(Bikefe et al., 2020)	(Perera, 2008)	(OECD, n.d.)	(Nair &Sodhi, 2012)	(Jenkins, 2004)	(The World Bank, n.d.)	(Zou et. al., 2021)
Very limited resources	X	X	X	X	X			X	X	
Lack of clear CSR vision		X	X		X	X				
Economic and financial priorities over environmental and social issues					X		X			X
Lack of top management commitment							X			
Lack of CSR knowledge and know how		X	X	X	X	X	X			
Complexity of CSR issues			X		X		X			
Lack of regulations and support structure concerning CSR financing, projects and activities		X					X			
High cost of CSR initiatives							X			
Lack of stakeholder participation i.e. top down approach by SMEs concerning csr focus areas, projects, budgets and outcomes					X	X	X			
Lack of recognition, rewards and incentives of CSR efforts undertaken by SMEs at the international, national and state levels.				X	X		X			

## **A Framework for Engaging in Corporate Social Responsibility**

Tewari and Taral introduces the concept of Collective Corporate Social Responsibility (CCSR) for SMEs. The basic premise is that SMEs in the same sector can collaborate and address common issues that will benefit them as a whole. Costs and risks are shared amongst the collective(Tewari&Taral, 2014). Nair and Sodhi make a similar point. According to themSME's are uniquely tied to local resources and are much more involved at grass root level than large companies. Hence, their CSR activities should focus within the local region. They also advocate SMEs working together to realize competitive gains. A cluster-based approach to the promotion of CSR increases the opportunities for turning CSR into a competitive advantage(Nair, &Sodhi, 2012).

They state that together, SMEs can realize economies of scale and hence lower cost, share CSR accessibility instruments and share best practices. Based on their study of SMEs in India, they state that the role of SME intermediaries and other government and non-government business support organizations are pivotal in ensuring success of CSR undertakings at the MSME levels. By MSME intermediaries they are referring to the chambers of commerce; SME associations and federations; trade and sector associations; trade unions; support and advice centers for SMEs and start-ups; business advisors (public and private); relevant training and education institutions for SMEs; banks, accountants and legal firms.

Their role is to actively engage SMEs and guide them i.e. provide advice and support concerning CSR practices, projects and priority areas. Indeed, based on their study survey they found that majority of the SME CEOs complained about lack of meaningful CSR projects that the company can undertake or contribute towards. It highlights the communication gap between SMEs and state authorities concerning viable CSR projects (Nair&Sodhi, 2012). Similarly, Zafar and Farooq recommend SMEs working in clusters to overcome limited resources and share know how, knowledge and skills (Zafar & Farooq, 2014).One of the most comprehensive research projects conducted on MSMEs and CSR was carried by Bikefe, Grace et al.They reviewed 62 peer reviewed journal articles on CSR in SME context. What follows is a summary of key findings from their study relevant to the present topic.

- More than half of the articles reviewed (54.8%) addressed CSR implementation. The research revealed that majority of SMEs do not implement CSR.
- Resource constraint and lack of knowledge and awareness of CSR were the primary hurdles to SR implementation.

- Few of the SMEs that were implementing CSR mostly utilized external oriented informal approaches, in other words, their CSR strategy were independent and not aligned with their overall business strategy.
- Research also indicated that implementing CSR is beneficial to SMEs, as it can lead to efficient utilization of resources and serve as a marketing tool. This was highlighted by some SMEs that successfully implemented CSR and reaped tangible financial benefits and intangible benefits (Brand building).
- Work force and community related CSR were suggested as some ideal CSR activities for SMEs.
- Among the factors motivating SMEs to participate in CSR were 'legislation, values of business owners and managers, relevance of stakeholder engagement and pursuit for profitability.'
- Improved legislation can go a long way in motivating SMEs to participate in CSR. What is required is CSR focused policies and laws and supervisory organization in all countries. The authors even called for mandatory CSR laws for SMEs.
- The study revealed that SMEs can themselves be a force for change by encouraging and providing incentives for other SMEs to participate in CSR.
- CSR reporting and communication, even when it is undertaken by SMEs, are very low. Some of the reasons behind this were fear of criticism and lack of proper management skills and resources.
- Verifiability of what is being reported also poses a challenge.
- Finally, CSR activities undertaken by SMEs tend to ignore internal stakeholders i.e. employees of the firm. Employee focused CSR hardly exists amongst SMEs. Employees are not consulted concerning external CSR implementation projects and ideas. (Bikefe et. al., 2020).
- Another landmark research on SMEs and CSR was conducted by the International Institute for Sustainable Development (IISD) in 2008. Commissioned by the Swiss State Secretariat for Economic Affairs (SECO), the project involved a global survey of 59 SMEs, 37 social responsibility consultations and 16 National Cleaner Production Centres across the world. The following are some of the key findings from the study:
  - In SMEs, social responsibility is largely driven by the values of the owner-manager.
  - 'SMEs often miss the big picture.' Majority of the SMEs when they addressed social issues did so on a piece meal basis. They lacked a deeper holistic

understanding of how environmental and social responsibility can bring significant improvements across the triple bottom line.

- Majority of the SMEs (over 75% of the SMEs) stated that social responsibility strategies can benefit the company in the immediate and medium term. However, positive results were critical to sustain social responsibility activities.
- SMEs tend to specialize in particular social responsibility issues. Some of the most favored areas were safety and healthcare, energy and waste management, community contributions, and working hours and overtime.
- ‘Networked businesses are better social responsibility incubators.’ This relates with absorptive capacity of an organization – “the ability to recognize and exploit opportunities from outside the organization’s immediate sphere of influence.” The study indicated that the more networked an SME, the greater its absorptive capacity. This was especially true of SMEs linked to the international value chains.
- Lack of expertise relating to social responsibility practices and body of knowledge was a greater hurdle than lack of time.
- Financial resource constraints were a major hurdle inhibiting investments in systematic improvements and new technologies vital to social responsibility programs.
- ‘SMEs lack negotiating power across the value chain.’ They lack the capacity to advocate for rewards for ‘responsible entrepreneurship.’
- Generally larger SMEs are more active when it comes to socially responsible behavior.
- B2B SMEs are more likely to champion social responsibility. Because these SMEs tend to be suppliers to their larger business clients, they are more integrated with the larger supply chains where environmental and social performance are increasingly becoming more and more important.
- SMEs require specialized support services and improved access to credit. Three areas the study highlighted that were especially important for SMEs were (i) strengthening the overall fiscal and economic infrastructure supporting SME development and rewarding SMEs that are socially responsible (ii) building capacity and capability of SMEs to address social responsibility issues and opportunities and (iii) improving access to finance.
- Many SMEs did not want to expose themselves to additional risk by embracing socially responsible practices where they had little knowledge, expertise and skills.

- Many of the SMEs operate in the informal sector and want to continue to do so due to 'costly regulations, heavy bureaucracies, poor credit and heavy tax burdens.' However, SMEs operating in the informal sector are not eligible for developmental assistance and pose significant barriers to achieving sustainable development goals (Perera, 2008).

Perhaps what is most striking about both the studies are the clear implication that in order for businesses and society to benefit from socially responsible practices, it must be in line with the company's overall business strategy. So is there a way for businesses to incorporate CSR into their overall business vision, mission and strategy? In other words into the very fabric of their day to day business operations and decision making process. As it turns out there is and it concerns social responsibility of a business. The following section examines the concept of social responsibility and how businesses can embrace social responsibility.

## **CSR and Social Responsibility**

Traditionally CSR practices has been primarily philanthropic in nature i.e., donations, charity, relief work (PwC, 2013; Maas & Boons, 2017; Jamali & Karam, 2018; Melissen et al., 2018; Maldonado-Erazo et al., 2020). However, today the concept of business social responsibility extends beyond philanthropy. Indeed, the World Council of Sustainable Development defines CSR as continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as the local community and society at large (World Business Council for Sustainable Development, 2000). Rather than CSR, experts now use the term business social responsibility to address CSR. ISO 26000 guidance on business social responsibility defines social responsibility as willingness of an organization to incorporate social and environmental considerations in its decision making and be accountable for the impacts of its decisions and activities on society and the environment (ISO, 2010).

### **What is Social Responsibility?**

ISO 26000 Standard defines social responsibility as

organizational responsibility for the impact of its decision and activities on the society and the environment through transparent and ethical behavior that

- contributes to sustainable development, including health and the welfare of society;

- takes into account the expectations of stakeholders;
- is in compliance with applicable law and consistent with international norms of behavior; and
- is integrated throughout the organization and practiced in its relationships.

The following are key concepts related to social responsibility:

- **Focus on societal and environmental impact:** Other than economics, socially responsible behavior requires organizations to focus upon the impact of their decisions and actions concerning society and the environment.
- **Engagement of stakeholders:** Socially responsible behavior requires the adoption of an inclusive attitude and engagement of stakeholders. Stakeholders refers to any party who has one or more interests that can be affected by the decisions and activities of an organization.
- **Varying societal expectations:** The notion of what is socially and environmentally acceptable behavior varies from society to society and from culture to culture. Hence, it is important for socially responsible organizations to abide and comply by international rules, laws and regulations.
- **Going beyond mere legal compliance:** Socially responsible behavior requires abiding and respecting all the laws and regulations as well as complying with all legal obligations. However, organizational actions should not be limited to legal compliance alone. It should extend to ethical actions that go beyond legal requirements.
- **Extending influence beyond organizational boundaries:** Socially responsible organizations have an obligation to use their 'sphere of influence' to positively influence and direct decisions and activities of entities that fall beyond their organizational boundaries i.e. suppliers, partners etc. Sphere of influence is defined as 'range/extent of political, contractual, economic or other relationships through which an organization has the ability to affect the decisions or activities of individuals or organizations.

### **'Principles of Social Responsibility**

There are seven principles of social responsibility.

1. **Accountability:** This principle states that an organization must be accountable for the impact of its decisions and actions on the society, environment and economy. This is particularly so in the case of negative consequences.

Organizations must take action to prevent repetition of unintended and unforeseen negative consequences. Organizations are responsible to the various stakeholders.

2. **Transparency:** This principle states that an organization should be transparent in its decisions and activities that impact on society and the environment. This requires organizations to disclose information concerning their activities and decisions that may have economic, social, and environmental impact on various stakeholders. They should also disclose information concerning management hierarchy and structure concerning these decisions. Information should be presented in an easy to understand, factual and timely manner and should be fully accessible to relevant stakeholders.
3. **Ethical Behavior:** This principle states that organizations must engage in ethical behavior. They must champion the values of values of honesty, equity and integrity. Such behavior translates into concern for the people and environment and commitment to address the impact of its decisions and actions on stakeholder interests.
4. **Respect for stakeholder interests:** This principle states that an organization should respect, consider and respond to the interests of its stakeholders. This includes identifying relevant stakeholders, recognizing their interests and legal rights and involving and engaging them actively on decisions and actions that will impact them.
5. **Respect for the rule of law:** This principle states that an organization should respect the rule of law and abide by it and comply with all the necessary regulations.
6. **Respect for international norms of behavior:** This principle states that an organization should respect international norms of behavior, while adhering to the principle of respect for the rule of law.
7. **Respect for human rights:** This principle states that an organization should respect human rights and recognize both their importance and their universality.(ISO, 2010).

Another evidence concerning the changing nature of CSR is the schedule VII of the Companies Act 2013 issued by the Government of India. It identifies following activities as falling under the ambit of CSR.

Activities relating to:

- (i) eradicating extreme hunger and poverty;
- (ii) promotion of education;
- (iii) promoting gender equality and empowering women;
- (iv) reducing child mortality and improving maternal health;
- (v) combating human immunodeficiency virus, acquired immune deficiency syndrome, malaria and other diseases;
- (vi) ensuring environmental sustainability;
- (vii) employment enhancing vocational skills;
- (viii) social business projects;
- (ix) contribution to the Prime Minister's National Relief Fund or any other fund set up by the Central Government or the State Governments for socio-economic development and relief and funds for the welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities and women; and
- (x) such other matters as may be prescribed (Ministry of Corporate Affairs, n.d.).

Clearly, the focus has shifted beyond philanthropic activities to include social and environmental concerns and not a moment too soon. Today, the global society faces a dearth of social and environmental issues. The seventeen sustainable development goals are a recognition that economic development must go hand in hand with social development and environmental protection. Aimed at all countries – developed, developing and less developed nations- the 17 sustainable goals aim at achieving economic prosperity, social inclusion and environmental protection. Fundamental to the realization of the goals is the active participation and engagement of the business community. As highlighted in the DESA report(Sobir, 2020), MSMEs can contribute significantly towards achievement and realization of the 17 sustainable goals.

This new more evolved and far broader view of CSR provides many opportunities that businesses can pursue to meet their social responsibility. The focus shifts from what is done with profits to how profits are made. It is all about factoring the social and environmental impacts of conducting business (PwC, 2013; The Institute of Company Secretaries of India, 2021).Rather than relegate business action to philanthropic activities, the broader concept of social responsibility enables businesses

of all sizes to adopt incremental changes that directly benefit the competitiveness of their businesses while having favourable social and environmental impact. Businesses start by making positive sustainable changes in their current mode of operation and adopt sustainable business models. It involves examining and assessing the current corporate cultures, behaviors, habits, products and production methods of the firm.

Consider the case of Hyderabad based S. Kumar's Agri Business Corporation that offers employment during off seasons and provides training in advance farming techniques for the local labour especially women labour. In this way, the business directly contributes towards livelihoods of the rural landless poor while building capacity and maintaining their bottom line (Nair & Sodhi, 2012). This concept of corporate social responsibility is particularly well suited for MSMEs who have limited profit and financial capital to engage in philanthropy or provide financial support to sustainable projects either as individual organizations or in collaboration with other businesses. For these businesses, gradually adopting sustainable values, principles and practices enables and empowers them to initiate and have profound positive social and environmental impact within the communities in which they operate. It will provide them with a far greater incentive and motivation to engage in responsible entrepreneurship the outcomes of which can be phenomenally superior to outcomes achieved through philanthropic donations to external causes, csr projects and such.

### **ISO 26000: Guidance on Social Responsibility**

While there exists a plethora of publications on social responsibility, this section focuses on ISO 26000 standard which has fast emerged as one of the most dominant standards concerning business social responsibility. ISO 26000 -guidance on social responsibility is a standard issued by the International Standards Organization (ISO), a worldwide federation of national standards bodies, in Nov 2010. Aimed at all types of organizations – private, public and non-profit organizations – the standard provides guidance on the underlying principles of social responsibility, how to identify and engage with relevant stakeholders and how to integrate the standard within the organization, albeit not in detail. The standard highlights seven core social responsibility areas and issues therein. Following each issue are expected actions for organizations to address concerning each issue i.e. what organizations can do to address the issue. Fig. 4 presents schematic overview of ISO 26000. Clause 6 depicts the seven core areas of ISO 26000.

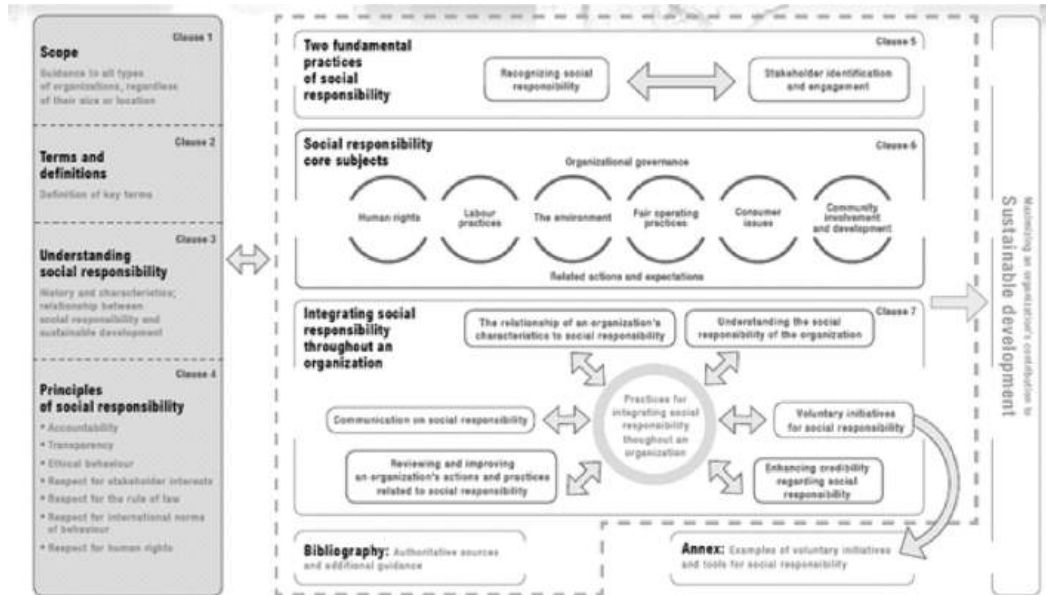


Figure 4: Schematic overview of ISO 26000 (ISO, 2010)

The fundamental aim of the standard is to encourage social responsibility amongst organizations of all types. It is a path towards sustainable development. It encourages organizations to move beyond legal compliance and commit to broader social responsible principles, values and practices and adhering to international norms of behavior. It is a gradual long term commitment and process with no clear beginning or an end. For micro and small organizations, it is strongly recommended to proceed in incremental phases and gradually build up their commitment and project scope as the organization becomes more experienced and knowledgeable on social responsibility.

## Conclusion

This paper is an analysis of the concept of corporate social responsibility and what it means for MSMEs. It starts by exploring what is corporate social responsibility and how the concept has evolved over time to its current definition of sustainable business practices with three key areas - economics, environment and society. The paper also justifies why MSMEs must partake in social responsibility. It examines the impact of MSMEs across the world and how they are fundamental to achieving sustainable development goals. Without the active participation of the MSMEs the 17 sustainable goals will never be realized. The following section of the paper explores the issues

and problems faced by MSMEs when it comes to corporate social responsibility. The final two sections introduce the concept of social responsibility and ISO 26000 guidance on social responsibility standard.

The primary aim of the paper is to stress the need for businesses, regardless of size and turnover, to shoulder their social responsibility. Business cannot continue as usual. Today we are at a point where we have endangered the entire planet. The so called Anthropocene Epoch is having a devastating effect on the planet i.e. global warming, loss of biodiversity, loss of species, deforestation, resource depletion, waste creation etc. Businesses are key constituents in the socio economic sphere. Hence, it is the ethical and moral duty of all businesses to embrace socially responsible behavior and act in ethical and transparent manner. Under social responsibility concept even small and micro businesses have incentive to adopt sustainable business values, principles and practices. By committing to social responsibility, organizations are directly working and contributing towards the achievement of the sustainable development goals at their own level. The ramifications are profound when we scale this to include the millions of MSMEs across the world.

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# Zara Vs. Uniqlo: How to Make Fast-Fashion Sustainable?\*

Rohit Kumar\*

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## Abstract

*As 2024 dawns, the fast fashion industry stands at a critical crossroads. For decades, the sector's breakneck pace of production and consumption has fueled a global craze for cheap, trendy clothing. But the industry's relentless pursuit of speed and low costs has come at a devastating environmental and social cost - one that can no longer be ignored. While the path to true sustainability remains fraught with challenges, the industry is beginning to take tentative steps towards a more ecologically responsible, ethically conscious future. Companies like H&M, Zara, and Uniqlo have rolled out dedicated "conscious" clothing lines, featuring organic cotton, Tencel, and other environmentally-friendly textiles. By 2024 and beyond, the fast fashion industry's sustainability reckoning will only intensify. Pioneering brands that have invested early in circular, low-impact business models are likely to gain a competitive edge. Meanwhile, laggards that cling to outdated, extractive practices may find themselves rapidly losing market share to more ethically-minded competitors.*

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**Keywords:** Value chain, Green consumerism, Labour abuse, Growth and decay, Purchasing habits.

## Introduction

The future of fast fashion, then, hangs in the balance. Will the industry embrace a wholesale transformation, aligning its operations with the principles of environmental stewardship and social justice? Or will it remain beholden to the sort of short-term, profit-driven thinking that has defined its past? Some of the key strategic questions surrounding the top two fast-fashion brands (Zara & Uniqlo) include the following. How should the two companies showcase its commitment to sustainable practices to the world? What should be their strategy for sustainability? What needs to change in their value chain and business model to embrace sustainability? How should they

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compete and collaborate to make fast-fashion sustainable? Can sustainability be a key differentiator in the field of fast fashion business? Can it be a source of competitive advantage in the near future?

In the Fashion Industry Globalization has made it possible to produce clothing at increasingly lower prices, prices so low that many consumers consider this clothing to be disposable (Fast-Fashion). Fast fashion comes with a price leaving a pollution footprint, with each step of the clothing life cycle. Fierce global competition in the garment industry translates into poor working conditions and exploitation. In order to bring a balance to the entire supply chain the phenomenon that is evident in the global retail industry is that of 'sustainable fashion'. Sustainable fashion concerns more than addressing fashion textiles or products. It comprises addressing the whole system of fashion. This means dealing with interdependent social, cultural, ecological and financial systems. The goal of sustainable fashion is to create flourishing ecosystems and communities through its activity (Black, 2013).

### **Global Fast Fashion Industry**

The global fast fashion industry is highly competitive, as major brands and retailers constantly strive to offer the latest styles and trends at affordable prices. Fast fashion companies have become masters at rapidly replicating runway looks and celebrity styles, and getting them into stores quickly to capitalize on current fashions. This competitive dynamic has created a relentless cycle of newness and disposability in the apparel market. The key competitors in the fast fashion space include industry giants like Zara, H&M, Uniqlo, Forever 21, and Gap. These brands have built global empires by churning out endless collections of clothing, accessories, and home goods at breakneck speeds and rock-bottom prices.

As the global fast fashion landscape continues to evolve, the companies that can most effectively balance speed, cost, and sustainability will likely emerge as the long-term winners. According to the forecast; the industry is expected to generate revenue upwards of \$142 billion in 2024, a compound annual growth(CAGR) of 21.9% over 2020 despite the covid-19 pandemic, which disrupted the supply chain and shifted customer behaviours. The projected growth rate is CAGR of 8.5% from 2024 to 2033.

The fashion industry, the world's third-biggest manufacturing industry after automotive and electronics manufacturing, generates a significant environmental and social footprint at various stages of its operations, including the value chain. An interesting phenomenon that is evident in the global garment retail industry is that

of 'sustainable fast-fashion'. Sustainable fast-fashion is a movement and process of fostering change to fashion products and the fashion system towards greater ecological integrity and social justice. Sustainable fashion concerns more than addressing fashion extiles or products. It comprises addressing the whole system of fashion. This means dealing with interdependent social, cultural, ecological and financial systems (Fletcher,2008). In parallel with the industry agenda, a research agenda around sustainable fashion has been in development since the early 1990s, with the field now having its own history, dynamics, politics, practices, sub-movements and evolution of analytical and critical language (Walker, 2013)

### **The Sustainability Dilemma in Fast Fashion**

The fast fashion business model has transformed the global apparel industry over the past few decades. By prioritizing speed, flexibility, and low costs, brands like Zara, H&M, and Uniqlo have made fashion more accessible and affordable for consumers around the world. However, this breakneck pace of production and consumption has come at a significant environmental cost. The fast fashion industry is a major contributor to the climate crisis, responsible for around 10% of global greenhouse gas emissions. The sector's reliance on cheap, petroleum-based synthetic fabrics, water-intensive dyeing processes, and energy-guzzling manufacturing facilities has created a sustainability crisis that can no longer be ignored. Beyond its carbon footprint, fast fashion is also a major driver of waste and pollution. Globally, an estimated 92 million tons of textile waste is created every year, much of it ending up in landfills or incinerated.

As brands race to deliver new trends to stores every few weeks, the pressure to churn out ever-greater volumes of clothing has led to a culture of overconsumption and "disposable" fashion. Consumers, in turn, are conditioned to view clothing as a short-term commodity rather than a durable good. The social costs of fast fashion's relentless pursuit of speed and low costs are also substantial. Garment workers in supplier factories, many of them women, often face exploitative working conditions, low wages, and workplace safety hazards. Child labor and human trafficking remain persistent problems within the industry's global supply networks. The short-term pressure to protect profit margins often gets in the way of long-term environmental commitments. As a result, progress in the fast fashion sector has been slow and uneven. While many brands pay lip service to sustainability, tangible, measurable reductions in their environmental footprint remain elusive. Greenwashing and selective disclosure of data continue to undermine transparency and accountability.

The sustainability reckoning facing fast fashion is not merely a passing trend. As the climate crisis intensifies and consumers become more ecologically conscious, the industry's unsustainable practices will face increasing scrutiny and pressure for change. Those brands that fail to adapt may find themselves left behind by a new generation of consumers demanding a more responsible, sustainable future for fashion.

## **Sustainability Concerns and Challenges**

The goal of sustainable fast-fashion is to create flourishing ecosystems and communities through its activity (Black, 2013). This may include: increasing the value of local production and products; prolonging the lifecycle of materials; increasing the value of timeless garments; reducing the amount of waste; and to reducing the harm to the environment created as a result of production and consumption. Another of its aims can sometimes be seen to educate people to practice environmentally friendly consumption by promoting the "green consumer" (Brown, 2010). There is a growing concern that "green consumerism" that takes profit and economic growth as objectives can deliver the sustainable agenda, for example – the discussions following the Burberry report of the brand burning unsold goods worth around £28.6m (about \$37.8 million) in 2018, exposing not only overproduction and subsequent destruction of unsold stock as a normal business practice, but the behaviors amongst brands that actively undermine a sustainable fast fashion agenda (Prant, 2019).

The challenge for making fast-fashion more sustainable requires rethinking the whole system and to have a strategic road-map both at a country and firm level. The Union of Concerned Researchers in Fashion has argued that the industry is still discussing the same ideas as were originally mooted in the late 1980s and early 1990s. As the Union observes, *"So far, the mission of sustainable fashion has been an utter failure and all small and incremental changes have been drowned by an explosive economy of extraction, consumption, waste and continuous labour abuse."*

Based on current sustainability issues in garment production, sustainable garment production needs to be more flexible, less costly, and more efficient for future supply chains (Ma, Wang & Chen, 2017). To meet demand for flexibility, low-cost, and high-efficiency, an innovative resource sharing mechanism had been proposed to form a new sustainable type of garment production. As a part of their study, Ma et.al., (2017) developed a resource sharing mechanism for sustainable production in the garment industry by defining four sustainable production KPIs (lead time, average unit cost, customer satisfaction rate and resource waste index) and an overall sustainable performance index based on an Analytical Network Process (ANP) approach. Also,

the scarcity of natural resources and the problem of pollution have initiated the need for extending the life and use of existing products. The concept of the reverse supply chain provides an opportunity to recover value from discarded products (Paras, et.al, 2018).

### **Zara's Fast Fashion Dominance**

Zara has established itself as the king of fast fashion through its relentless focus on speed, flexibility, and supply chain efficiency. The Spanish retail giant's business model is predicated on rapidly identifying emerging trends, designing new products to match, and getting those items into stores in a matter of weeks. This breakneck pace allows Zara to offer customers a constant flow of fresh looks, unlike its competitors who may take months to develop and deliver new collections. By the time other brands unveil their latest styles, Zara has already moved on to the next big thing. Zara achieves this remarkable speed through a highly integrated and responsive supply chain. The company has manufacturing facilities located near its headquarters in Spain, allowing it to produce small batches of new items and replenish stores multiple times per week. This "just-in-time" production model minimizes the need for large inventories and reduces waste.

Zara also relies heavily on real-time sales data and consumer feedback to inform its design and production decisions. Store managers constantly communicate information about customer preferences and best-selling items back to headquarters, enabling Zara to quickly adapt its offerings. Furthermore, Zara's design teams are structured to be highly agile, with the ability to quickly translate runway trends and celebrity styles into affordable mass-market products. This allows the company to capitalize on hot fashion moments before competitors can react. By excelling at speed, flexibility, and data-driven decision making, Zara has become the envy of the fast fashion industry. The company's formula has enabled it to grow into a global behemoth with over 2,200 stores in 96 countries, generating annual revenues of over \$30 billion. However, Zara's breakneck business model is not without its critics. The company's focus on constant newness and low prices has contributed to a culture of excess consumption and textile waste. Fast fashion in general has faced increasing scrutiny for its negative environmental and social impacts.

### **Zara's Value Chain**

Innovation and technology play a very important role in the fast fashion industry, and it was found that many big fast-fashion retailers, apparel manufacturers, mill

owners and other key stakeholders are carrying out innovation in the different value chain activities and coming up with innovative processes and products that are helping in making fast fashion sustainable. Technology was key driver in shaping the value chain activities and making it more feasible (both from a technical and financial standpoint) to adopt sustainable practices. Zara's parent company, Inditex, has started a repair and reuse program called 'Closing the Loop' with two key focus areas i.e., sustainable materials and Collect, Reuse and Recycle. The tagline for this initiative is "We want to close the loop and develop a complete and efficient cycle of life for our products". Waste is a uniquely human problem. In nature, the cycle of growth and decay is in balance – nothing is wasted.

### **Uniqlo's Pursuit of a Circular Fashion Future**

As one of the world's largest and fastest-growing apparel retailers, Uniqlo has an outsized impact on the fashion industry. With over 2,200 stores in 25 countries, the Japanese brand is known for its affordable, high-quality basics that appeal to a global customer base. However, Uniqlo's true ambition goes beyond just selling clothes - it seeks to pioneer a new, more sustainable model for the future of fashion. The core of Uniqlo's strategy is a commitment to the principles of the circular economy. Rather than the traditional linear "take-make-waste" approach, the company is working to keep its products and materials in use for as long as possible through innovative reuse and recycling initiatives. At the heart of this effort is Uniqlo's garment recycling program, known as "All-Product Recycling."

Launched in 2006, the initiative encourages customers to bring in any used Uniqlo clothing, regardless of brand or condition. These items are then sorted, repaired if needed, and either resold in Uniqlo's second-hand stores or broken down and recycled into new materials. This closed-loop system allows Uniqlo to extract maximum value from the resources that go into its products. To further bolster its circular ambitions, Uniqlo has also made significant investments in innovative textile recycling technologies. Transitioning an operation of its scale to a truly closed-loop model requires significant investment, innovation, and collaboration across the industry. There are also logistical hurdles around collecting, sorting, and processing used garments at a global level. As Uniqlo continues to grow its global footprint, its ability to embed circular practices and mindsets into its core business will be crucial. If it can effectively scale its recycling programs, sustainable product design, and other innovative initiatives, the company has the potential to become a true trailblazer in the shift towards a more sustainable future for fashion.

## Uniqlo's Circular Business Model

Some of the key aspects of Uniqlo's business model are depicted in **Exhibit 1** and Uniqlo's Focus Areas and Sustainability Principles are listed in **Exhibit 2**. Uniqlo's 'circular business model' imitates the 'circular economy' concept. The circular business model is centered around the customer and is connected with three strategic pillars associated with design, production and sales. The common threads across the circular business model were technological innovation, minimizing cost, adherence to high quality and strategic partnerships. All this make them unique and help them be more competitive in the world of fast-fashion.

## Making Fast Fashion Sustainable

As concerns about sustainability grow, Zara and other major fast fashion brands will need to re-evaluate their practices to become more environmentally and socially responsible. Fortunately, there are several strategies they can pursue to make their lightning-fast business models more sustainable. First, *adopt circular economy principles* - instead of the traditional linear "take-make-waste" model, fast fashion companies should transition to a circular model that keeps products and materials in use for as long as possible. This could involve offering clothing rental, resale, or repair services. Second, *use sustainable materials* - Brands should gradually shift towards utilizing recycled, organic, or otherwise eco-friendly fabrics in their collections. This reduces the environmental impact of raw material extraction and processing.

Third, *improve factory conditions* - Fast fashion relies on a global network of supplier factories, many of which have been criticized for poor working conditions and labor abuses. Brands must take greater responsibility for ensuring safe, ethical, and humane manufacturing practices. Fourth, *extend product lifespans* - rather than designing clothes with planned obsolescence, fast fashion companies should focus on creating higher-quality, longer-lasting garments. This could involve offering warranties, providing repair services, or encouraging customers to keep and re-wear items. Fifth, *promote mindful consumption* - through education and marketing, brands can work to shift consumer mindsets away from the current "buy, wear once, discard" fast fashion mentality. Emphasis should be placed on quality, longevity, and responsible purchasing habits.

Implementing these sustainable strategies will require a fundamental rethinking of the fast fashion business model. It won't be easy, but leading brands like Zara have the scale and resources to drive meaningful change in the industry. By balancing speed,

cost, and sustainability, they can chart a new path forward that is better for both people and the planet.

## Will it work?

Sustainable fast fashion concerns more than addressing fashion textiles or products. It comprises addressing the whole system of fashion, the value chain activities and the circular business model. It is evident that there are multiple best practices that the top fast-fashion retailers are undertaking towards sustainable fast fashion. Firms in the fast fashion industry are adopting different business models to create value for their end consumers. However, it is unclear who is going to lead the fast-fashion business and whether or not sustainability will be one of its key strategic priorities?

### **Q1. What is the future of fast fashion business? What will be the role of following sustainable practices?**

The future of the fast fashion business is likely to be shaped by shifting consumer attitudes towards sustainability, ethical practices, and environmental responsibility. As consumers become more educated about the environmental and social impacts of fast fashion, there is a growing demand for transparent, ethical, and sustainable fashion practices. In this context, incorporating sustainable practices will play a crucial role in the future of the fast fashion business for several reasons:

1. *Consumer Demand:* Consumers are increasingly seeking environmentally friendly, ethically produced, and sustainable clothing options. Brands that prioritize sustainability and transparency are likely to attract a larger customer base and build brand loyalty among socially conscious consumers.
2. *Regulatory Pressures:* Governments and regulatory bodies are implementing stricter regulations on environmental protection, labor rights, and supply chain transparency in the fashion industry. Companies that prioritize sustainability will be better positioned to comply with regulations and mitigate risks associated with non-compliance.
3. *Supply Chain Resilience:* Sustainable practices can improve supply chain resilience by reducing dependence on finite resources, minimizing waste, and fostering stronger relationships with suppliers and partners. This can lead to more efficient operations, cost savings, and increased competitiveness in the marketplace.

4. *Brand Reputation:* Adopting sustainable practices can enhance brand reputation and credibility, demonstrating a commitment to environmental stewardship and social responsibility. Brands that are perceived as environmentally conscious and ethical are more likely to attract positive attention from consumers, investors, and stakeholders.
5. *Innovation and Differentiation:* Embracing sustainability can drive innovation in product design, materials, production processes, and business models. Companies that invest in sustainable innovation can differentiate themselves in the market, create unique value propositions, and stay ahead of changing consumer preferences.

**Q2. What is the competitive strategy of Zara and Uniqlo? How are they different?**

Zara and Uniqlo are two prominent fast fashion retailers known for their competitive strategies in the fashion industry. While both companies operate in the fast fashion market, they have distinct strategies that differentiate them from each other. Zara's competitive strategy revolves around its agile supply chain and fast fashion model. Zara is known for its ability to quickly respond to changing trends and customer preferences. The company has a vertically integrated supply chain that allows it to design, produce, and distribute new clothing collections in a matter of weeks. This strategy enables Zara to constantly refresh its product offerings and create a sense of urgency among consumers to purchase the latest styles.

On the other hand, Uniqlo's competitive strategy focuses on offering high-quality basics and timeless wardrobe staples at affordable prices. Uniqlo emphasizes functionality, simplicity, and durability in its designs, catering to consumers looking for versatile and long-lasting clothing options. The company's innovative fabric technologies and commitment to quality have helped build a loyal customer base that values comfort and style. In summary, Zara differentiates itself through its fast fashion approach and trend-driven collections, while Uniqlo distinguishes itself with its focus on quality basics and timeless designs. Both companies have been successful in their respective strategies and have carved out a strong presence in the competitive global fashion market.

**Q3. Who is going to be a market leader in the fast fashion business? Will it be Zara or Uniqlo? Why? Give reasons**

Predicting the future market leader in the fast fashion business between Zara and Uniqlo is challenging, as both brands have their unique strengths and

strategies that have contributed to their success. However, we can provide some insights on the potential factors that could impact their competitiveness:

3a. **Zara:**

*Agile and Responsive Supply Chain:* Zara is known for its fast and responsive supply chain, which allows the brand to quickly adapt to changing fashion trends and consumer preferences. This agility enables Zara to bring new styles to market faster than many of its competitors; *Innovative Design and Marketing:* Zara has a reputation for innovative design and marketing strategies that resonate with their target audience. The brand's ability to create on-trend and fashionable collections at affordable prices has helped it maintain a strong market position; *Global Presence:* Zara has a significant global presence with a strong retail network in key markets around the world. This widespread presence provides the brand with a broad customer base and the opportunity for continued growth.

3b. **Uniqlo:**

*Focus on Quality and Basics:* Uniqlo is known for its focus on high-quality basics and essential wardrobe staples that offer value for money. The brand's commitment to delivering well-made, functional clothing items has appealed to a broad customer base seeking durable and timeless pieces; *Innovative Fabric Technology:* Uniqlo has invested in innovative fabric technology, such as Heattech and AIRism, which provide customers with functional and comfortable clothing options for various seasons and activities. This focus on product innovation sets Uniqlo apart in the market; *Brand Philosophy:* Uniqlo's brand philosophy of "Life Wear" emphasizes clothing that enhances people's lives by providing comfort, style, and functionality. This customer-centric approach has resonated with consumers looking for practical and versatile clothing options.

**Q4. What will be your strategic recommendations to Uniqlo for following sustainable practices?**

Implementing sustainable practices in the fashion industry is crucial for reducing environmental impact and promoting social responsibility. Here are some strategic recommendations for Uniqlo to enhance its sustainability initiatives:

First, *sustainable materials:* to increase the use of sustainable and eco-friendly materials in textile production. Invest in research and development to explore

alternative fibers such as organic cotton, recycled polyester, and innovative sustainable fabrics to reduce the environmental footprint of clothing.

Second, *supply chain transparency*: to enhance transparency in the supply chain by disclosing information on sourcing, manufacturing, and labor practices. Implement traceability measures, conduct supplier audits, and collaborate with partners to ensure ethical standards and responsible sourcing practices are followed.

Third, *circular economy initiatives*: Uniqlo can further benefit by embracing circular economy principles by promoting garment recycling, repair, and resale programs. Encourage customers to return used clothing for recycling, offer repair services to extend product lifespan, and explore innovative recycling technologies to minimize waste and promote resource efficiency.

Fourth, *energy efficiency*: to improve energy efficiency in manufacturing facilities and retail operations. Implement energy-saving measures, invest in renewable energy sources, and optimize logistics to reduce carbon emissions and minimize environmental impact throughout the supply chain.

Fifth, *ethical labor practices*: to commit to fair labor practices and safe working conditions for workers in factories and supplier facilities. Conduct regular audits, provide training on labor rights, and engage with stakeholders to ensure compliance with ethical standards and promote social responsibility. By incorporating these strategic recommendations into its sustainability strategy, Uniqlo can lead the way in promoting sustainable practices within the fashion industry.

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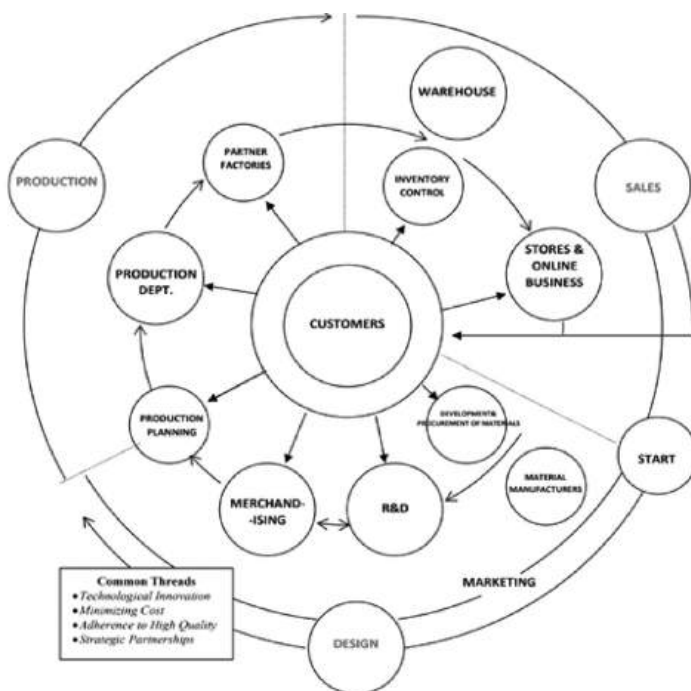
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## Annexures

Exhibit 1: Uniqlo's Circular Business Model (Design, Production & Sales)



Source: Adopted from Company's website

Exhibit 2: Uniqlo's Focus Areas and Sustainability Principles

Four Key Areas of focus	Six Principles around Sustainability
<ul style="list-style-type: none"> <li>Responsible Supply Chain Management</li> </ul>	<ul style="list-style-type: none"> <li>Create New Value through Products and Services</li> </ul>
<ul style="list-style-type: none"> <li>Responsible Products, Responsible Stores</li> </ul>	<ul style="list-style-type: none"> <li>Respect Human Rights in Supply Chain</li> </ul>
<ul style="list-style-type: none"> <li>Stronger Communities</li> </ul>	<ul style="list-style-type: none"> <li>Respect the Environment</li> </ul>
<ul style="list-style-type: none"> <li>Responsibility towards our Employees</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen Communities</li> <li>Employee's Fulfilment Support</li> <li>Corporate Governance</li> </ul>

Source: Company's records

## Case Study 01

# A Journey of Resilience and Adaptability: Navigating Career Transitions and Challenges\*

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### Introduction

The case depicts Dr. Debaprasad Chattopadhyay's career journey span of nearly five decades, marked by transitions, resilience, and transformative experiences. Beginning as a Medical Detail Representative and progressing through various roles in renowned pharmaceutical companies, his adaptability and determination became evident. Overcoming personal and professional challenges, he navigated organizational issues and cultural differences, leading to significant career shifts. His journey unfolded as he transitioned from the corporate sector to academia, where he pursued teaching and academic leadership. He did Ph.D, on "Spirituality in Management." He has over 50 years of experience, 25 years each in academics and industry, making invaluable contributions to human resource development and organizational development while embodying adaptability, lifelong learning, and unwavering dedication to his chosen path. This case study delves into the career journey of Dr. Chattopadhyay, highlighting the key milestones, challenges, and transitions that define his career trajectory.

### Background

In the realm of career trajectories, the story of Dr. Debaprasad Chattopadhyay stands as a testament to the human spirit's and ability to overcome challenges, adapt, and achieve fulfilment. His journey, which spans nearly five decades, seamlessly weaves together experiences in academia and industry, offering valuable lessons in resilience and professional growth. Below major milestones that define his exceptional trajectory are highlighted.

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\* This case was developed by Jyoti Shekhar Jakhete (Department of Management, GH Raison Institute of Engineering and Business Management, Jalgaon, Maharashtra), Preethi. K.A (Center for Management Studies, Jain deemed to be University, Bangalore), and Bhagyalekshmi PC (SCMS Cochin School of Business) during the 10<sup>th</sup> Online Case Writing Workshop organized by the Association of Indian Management Schools (AIMS), Hyderabad from November 1- 3, 2023.

## **I. Early Career and Ambitions (1973-1979): A Surprising Shift in Trajectory**

In 1973, he joined Merck Sharp & Dohme (MSD), a renowned American pharmaceutical company. MSD, known for its commitment to innovation and patient well-being, aligned with his dedication to delivering quality healthcare solutions. MSD's vision centred on advancing medical science and improving lives, while its mission was to provide effective and accessible healthcare for all. The culture at MSD was one of collaboration, Humanitarian and caring culture, yet masculine American culture, driving its continuous pursuit of excellence.

His career began on an unconventional note. Despite holding a degree in Chemistry, he entered the professional world as a Medical Detail Representative, joining Merck Sharp & Dohme (MSD), a prominent player in the global pharmaceutical industry. In this role, he was responsible for sales promotion and ensuring the availability of pharmaceutical products—an occupation far different from his academic background. These early experiences and personal challenges contributed significantly to shaping his unique career path, demonstrating the qualities of adaptability and tenacity that would later define his intrapreneurial and academic success. His initial territory in New Delhi posed unique challenges due to personal circumstances. As the only child, commuting within the city by his own vehicle was a necessity and it was not possible for him to address his mother's safety concerns. To achieve this, he requested a transfer to Varanasi, a location that provided economic feasibility and a better work-life balance. Soon after, he transitioned to Themis Chemicals Limited, an Indo-Hungarian partnership with its corporate base in Mumbai.

## **II. Journey to Corporate Manager and Overseas Experiences**

Transition from MSD to Themis Chemicals Limited (1979-1986): He transitioned to Themis Chemicals Limited, an Indo-Hungarian collaboration with its corporate office headquartered in Mumbai. Themis Chemicals' vision and mission encompassed establishing a strong presence in the pharmaceutical industry, leveraging the best practices from both nations. The organizational culture has been a fusion of Indian and Hungarian values, emphasizing innovation, quality, and cross-cultural cooperation. It was also Family-oriented and feminine culture. Earlier, while in MSD, the journey took a significant turn with his posting in Siliguri, North Bengal. Driven by his desire to climb the corporate ladder swiftly, he expressed his ambition to the Management—to become an Area Sales Manager.

The organizational landscape in MSD proved challenging. When he inquired about the possibility with his boss, he learned that other senior employees in MSD had held their positions for 15-20 years. Undeterred, he not only met but exceeded his sales targets, underscoring his resilience and determination. He joined as Area Field Manager in Themis Chemicals, based at Calcutta in the beginning. Later he was promoted as Zonal Field Manager followed by Divisional Sales Manager. Gradually his working territory expanded to besides West Bengal, to Assam, Orissa, Bihar and Nepal as well. He got opportunities to work in various capacities in other parts of the world such as Hungary, Germany, Holland, France, England, Switzerland, Malaysia, Thailand, Singapore.

During 1975 when a national emergency was declared, the government of India proclaimed that MNCs are not allowed to import raw materials from abroad. All products were floated through state trading corporations and the lowest bidder could get the order. Due to this policy MSD, which was also an MNC incurred a loss of around 4 crores. To overcome the crisis, it converted weekly 6 working days into 5 days to reduce the payment to field sales staff. Later, when in The mis Chemicals, he wanted to come to Bombay along with family as he was then aspiring for a National Sales Manager position, but as it was quite expensive to provide accommodation facilities in city like Bombay, he didn't get a positive response from the company which made him switch to another company, Infar (India) Limited, the-then Dutch MNC, Organon.

### **III. Balancing Personal and Professional Aspirations**

A. Infar(India) Limited[Organon],etc.: (1986-1992): In the subsequent phase of his career, he became part of Infar(India) Limited, a subsidiary of AKZO Nobel, Netherlands. The organization's vision revolved around advancing healthcare solutions, while the mission focused on serving patients and healthcare professionals with integrity and quality. A typical Dutch, dynamic culture prioritizing scientific excellence and a commitment to public health.

#### **B. Cultural Challenges and Personal Obligations**

His career journey took turn when he joined a renowned pharmaceutical company, Organon, as a Product Sales Manager. This decision, however, led to a situation where personal and corporate cultures clashed, highlighting the challenges individuals can face when navigating their professional paths.

His upbringing in an orthodox family had instilled certain values and beliefs, one of which was a strong aversion to alcohol. However, the corporate culture at Organon had a different expectation it favoured a lifestyle that leaned more towards embracing flamboyance. This marked a significant cultural difference that he had to grapple with.

As he devoted long hours to his work, often returning home late at night, it became increasingly unacceptable to his family members, especially his mother. The strain of this conflict came to a head when his mother threatened to stop taking her required medications if this lifestyle continued. This emotional and familial obligation weighed heavily on him.

Ultimately, the clash between the corporate culture's expectations of a different lifestyle and his orthodox upbringing forced him to reevaluate his career choice. It was a difficult decision, as he had already served at Organon successfully at work. However, the pull of his family's values and his desire to maintain a harmonious family life pushed him to consider alternative career opportunities.

This part of career journey underscores the challenges individuals can face when their personal values and corporate expectations collide. It also highlights the importance of aligning one's personal and professional life to maintain a sense of fulfilment and harmony. It made him choose another company, SOL Pharmaceuticals and eventually, Dr..Reddy's Laboratories Ltd. So, the cultural differences and family obligations made him leave his job and metamorphose into new environment(s).

- C. SOL Pharmaceuticals Limited (1992-1995): During his tenure at SOL Pharmaceuticals Limited, initially a joint company with Dr. Reddy's Laboratories, he was immersed in an environment dedicated to innovation and pharmaceutical excellence. Here he wanted to consolidate in the Training and Development space under HR domain, as this organisation had advertised for such a specific vacancy. The organization's vision aimed at pioneering innovative healthcare solutions, while the mission was centred on enhancing the well-being of patients. The culture at SOL Pharmaceuticals culture was implicit control culture rather than explicit Control culture.

#### **IV. A Shift in Focus (1995-1997):**

Dr. Reddy's Laboratories Limited (1995-1997): A Journey into Human Resource Development. He joined Dr. Reddy's Laboratories Limited. While Dr. Reddy's Laboratories is renowned for its commitment to delivering affordable and innovative medicines, its vision and mission have emphasized making quality healthcare accessible to all.

He was appointed as Manager- Training and Development at Dr..Reddy's lab, initially at Kolkata, subsequently at Hyderabad. Thus, got switched over to an HR professional from Marketing. The company asked him to shift to Hyderabad by offering him the position of Divisional Manager. In his official capacity as Divisional Manager-Training & Development in Dr. Reddy's Laboratories Limited, training managers and members of field sales personnel, he was able to oversee larger teams, working on the overall learning and development strategy for an organisation and contributing to the company's long-term growth and success.

#### **V. Venturing into Academia (1997-Present): A Commitment to Learning and Teaching**

He earned his M. Phil and obtained his Doctorate in HRD & OD from the Academy of Human Resource Development, Ahmedabad, with a focus on Spirituality in Management. His academic journey also included a Post Graduate Diploma in Management with a specialization in Marketing, Sales, and Advertising Management from Institute of Modern Management Kolkata.

##### **A. Academic Pursuits (1997-Present): Embracing Research and Scholarship**

He actively conducted Management Development Programs and undertook consultancy projects across organizations. His dedication to research is evident through numerous publications in various journals and presentations of technical papers at national and international conferences. His focus on spirituality in management aligns well with Globsyn Business School's commitment to holistic education.

##### **B. Continued Commitment (1997-Present): Evaluating Career Aspirations**

His career aspirations in academia are reflected in his role as a PhD guide for doctoral research scholars, contributions to the Research Advisory Committee of The Neotia University, and his prestigious Dr. Udai Parekh Memorial Distinguished Alumnus Award from the Academy of Human

Resource Development, Ahmedabad. His commitment to teaching and lifelong learning remains unwavering.

- C. **Bharatiya Vidya Bhavan (1997-2006):** Bharatiya Vidya Bhavan is an esteemed educational institution with a rich heritage. Its vision encompasses promoting Indian culture and values through education, while the mission involves fostering holistic development in students. He played a role in imparting organizational behavior and human resource management knowledge. He worked there for nine years from August, 1997 to May 2006 in Bhowanipore Kendra where he served as a Visiting Faculty.
- D. **AIMA-Kolkata Centres and Other Institutes:** Disseminating Knowledge From 1998 to May 2006, he engaged with AIMA-Kolkata Centres and various other institutes as a Visiting Faculty. The All India Management Association (AIMA) is a prominent management body in India. He served other educational institutes such as Deshbandhu College for Girls, Asutosh College, Carreograph, Campus Technocrats-CSM School of Graduate Studies, Wigan & Leigh .

## **VI. Harmonious Blend (2006-Present): Analysis of Dr. Debaprasad Chattopadhyay's Career and Globsyn's "Beyond Education"**

Analysing Dr. Chattopadhyay's journey reveals a remarkable alignment with Globsyn Business School's "Beyond Education" philosophy. His transition from industry to academia, his societal engagement with KYLF, his commitment to holistic education, and his active participation in initiatives such as Embryon, Globsyn Management Conference, and Globsyn Management Journal all reflect the institution's dedication to going beyond traditional education. Globsyn Business School (Since 2006): His association with Globsyn Business School began in June 2006. Here, he assumed the role of Senior Professor and HOD of Human Resource. Globsyn, known as "India's first Corporate Business School," emphasises an academic-industry blend. The institution's vision centres on preparing students for the dynamic business world, and its mission involves nurturing future leaders with a strong industry focus. The culture at Globsyn encourages the integration of real-world insights into academic learning, taking people to the next level and subscribing to the ethos that ordinary people can do extra-ordinary things.

## **VII. Discussion Questions**

- A. How did Dr. Debaprasad Chattopadhyay manage his career trajectory effectively, considering the personal and professional challenges he encountered?
- B. What are the key lessons that can be drawn from his career journey in terms of adaptability, lifelong learning, and aligning personal and professional aspirations?
- C. How can organizations foster a culture that allows individuals to pursue diverse career trajectories, as demonstrated by Dr. Chattopadhyay's experience?

### *Teaching Note*

## **A Journey of Resilience and Adaptability: Navigating Career Transitions and Challenges**

### **1. A synopsis of the case**

This case study revolves around the career journey of Dr. Debaprasad Chattopadhyay, a seasoned professional who successfully navigated the boundaryless realms of academia and industry. The case contextualises his transition from a young Chemistry Honors graduate to a Sales Promotion role in the early 1970s, highlighting his early career ambitions and the challenges he encountered. It explores his upward trajectory in the corporate world, moving to become a Zonal Manager in the pharmaceutical industry, which involved overseas experiences and their associated challenges.

Additionally, the case delves into how he balanced personal and professional aspirations while overcoming cultural challenges and personal obligations. It details his transition from Sales and Marketing to a profound career in Human Resource Development (HRD) within the corporate sector.

The narrative then shifts to his entry into academia, where he imparted knowledge at Bharatiya Vidya Bhavan and aspired to become an eminent professor at Globsyn Business School. The case study provides insights into Dr. Chattopadhyay's career

reflections and academic aspirations. It emphasizes the valuable lessons learned from his career journey and encourages further discussion on the challenges and opportunities encountered.

## **2. The target learning group**

The target learning group for this case study includes:

- i) Management and Business Students
- ii) Early Career Professionals
- iii) HR and Training Professionals
- iv) Faculty and Academics
- v) Career Counsellors and Advisors.

## **3. The learning/teaching objectives and key issues**

### **Learning/Teaching Objectives:**

1. Understand the various phases of an Individual's career journey, from early aspirations in corporate sector to transition into academia, and how to manage significant career shifts.
2. Explore the challenges and choices individual faces in balancing cultural expectations, personal obligations, and career ambitions while pursuing higher education and professional growth.
3. Analyze how adaptability skills enables an individual to excel in different roles, such as sales, marketing, HRD, and academia.
4. Discuss the importance of continuous learning and setting long-term career goals.

### **Key Issues:**

- a) Career Ambitions
- b) Cultural and Personal Challenges
- c) Cross-Industry Transition
- d) Career trajectory and Adaptability

#### **4. The teaching strategy**

The teaching strategy for the case study involves a comprehensive and interactive approach to engage the target learning group effectively. Here's a step-by-step breakdown:

##### **Pre-Reading Material**

**Biographical Background:** Before delving into the case, learners should have access to Dr. Chattopadhyay's biographical information, including his educational background, career history, and significant milestones. This will provide context for the case.

**Relevant Theoretical Concepts:** Share pre-reading material on relevant theoretical concepts, such as career development models, intrapreneurship, cultural influences on career choices, and the boundaryless career concept and models like ADKAR model of change

##### **Delivery:**

Introduction and Context Setting (15 minutes)

Case Presentation (30 minutes)

Group Discussion (20 minutes)

Plenary Discussion (15 minutes)

Reflection and Application (20 minutes)

Q&A and Conclusion (10 minutes)

**Post-Case Assessment (Optional):** Assign a post-case assessment, such as a reflection paper or presentation, where participants relate the case to their personal career development goals.

#### **5. Questions for discussion**

- 1) What were Dr. Chattopadhyay's early career aspirations, and how did they evolve over time?
- 2) Analyse the major challenges the protagonist might have faced during his transition from a chemistry graduate to a career in sales promotion?

- 3) Assess Protagonist's journey from Medical Detail Representative to a National Head in the pharmaceutical industry. Analyse the factors contributed to his success in this transition?
  - 4) Analyse the challenges the protagonist has faced while working overseas, and how did he navigate these challenges?
  - 5) Evaluate How did the protagonist balance his personal obligations and cultural expectations with his professional ambitions?
  - 6) Explore the reasons behind the protagonist's transition from sales and marketing to Human Resource Development (HRD). What were the motivations for this shift?
  - 7) What specific awareness and desire factors prompted the protagonist's transition from the corporate sector to academia, and how did these factors drive the change process?". Discuss with the help of ADKAR's model.
  - 8) Relate Dr. Chattopadhyay's experiences to broader career management themes, such as boundaryless careers and intrapreneurship?
6. **Analysis of data:** This section highlights the Key milestones from Dr. Chattopadhyay's Career Journey
- Adaptability and Resilience
  - Balancing Personal and Professional Aspirations
  - Diverse Industry Experiences
  - Transition to Academia
  - Holistic Education
  - ADKAR Model of Change
7. **Background reading**
- a. ADKAR Model of Change(Jeff Hiatt,Prosci,1998,vide Google Search) where the acronym stands for Awareness, Desire, Knowledge, Ability, Reinforcement.
  - b. Boundaryless career model: A concept that challenges the traditional, linear, and hierarchical career paths within organizations. It emphasizes a more dynamic and flexible approach to career development. In a boundaryless

*A Journey of Resilience and Adaptability: Navigating Career Transitions and Challenges*

career, the focus is on breaking down the boundaries or limitations that may restrict an individual's career growth

- c. "The Impact of Spirituality on Managerial Practices: A Study on Indian Corporates". Author: Dr. Debaprasad Chattopadhyay, Year: 2012.

Link to Dissertation: [Chattopadhyay's Dissertation](#)

[Debaprasad\\_Chattopadhyay\\_Dissertation\\_2012.pdf \(uark.edu\)](#)

## 8. Experience of using the case

Engagement and Interest: One of the remarkable aspects of this case is its ability to engage and captivate the participants. Dr. Chattopadhyay's journey is relatable, as it reflects the challenges and choices individuals face in their own career paths. Students have shown a keen interest in the case, and it has generated vibrant discussions in our class

## Case Study 02

# HR Practices for Effective Change Management at Zheohm IT Infotech Ltd.\*

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### Introduction

This case highlights the acquisition of Zeha IT Infotech Ltd by Ohm IT Infotech Ltd, two Indian IT giants into a new company Zheohm IT Infotech Ltd. Pre- and post-acquisition background of the companies are mentioned in detail. After the deal, Zheohm IT Infotech Ltd came into existence. This case addresses the HR aspects and related issues for effective change management. Numerous research studies emphasize the essential nature of addressing a wide range of human resource concerns, practices, and cultural shifts when engaging in merger and acquisition endeavours. In the context of Zheohm IT Infotech Ltd, this case outlines a comprehensive seven-stage change model tailored to acquisitions, systematically identifying methods to manage change, specifically focusing on the integration of HR policies from both merging companies, the challenges encountered in takeovers, and the successful execution of the change management model.

Mergers and acquisitions serve as mechanisms to generate synergies in various forms, be it for innovation, technology, or expansion. Nevertheless, acquisitions present their unique set of challenges, sometimes falling short of their intended objectives. This often results in social costs, including job losses, income reduction for families, and a decrease in employee morale and motivation. While financial and market factors are frequently considered in such decisions, human resource issues and activities tend to be overlooked.

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*\* This case was developed by Ranpreet Kaur (Bharati Vidyapeeth Institute of Management & Entrepreneurship Development, Pune), Smita Jape, Pankaj Nandurkar (Dr. V.N. Bedekar Institute of Management Studies, Thane), Tej Prakash (Academy of Human Resources Development, Ahmedabad, Gujarat) and Saroj Patil (G.H Raisonni Institute of Engineering and Business Management, Jalgaon, Maharashtra) during the 10<sup>th</sup> Online Case Writing Workshop organized by the Association of Indian Management Schools (AIMS), Hyderabad from November 1-3, 2023.*

## **Background of Zeha IT Infotech Ltd**

Zeha IT Infotech Ltd, founded in 1985 by Mr. Nair, was a prominent Indian IT firm recognized for its global presence and diverse service offerings in software development, engineering, business process outsourcing, and infrastructure management. With a workforce of over 45,000 and clientele extending to 100 Fortune 500 companies across 50 countries, the company's 1993 debut on the Bombay Stock Exchange was oversubscribed 13 times. By 2010, Zeha IT Infotech Ltd held the fifth-largest position in Indian IT services based on revenue and became the first Indian internet-based business listed on NASDAQ in 2001. Acknowledged for its strong corporate governance, the company faced a setback when, in September 2010, the International Bank imposed a ban on its operations.

Subsequently, in early 2011, Mr. Nair admitted to inflating the company's financial records, leading to a decline in the promoters' ownership stake. Following his confession and resignation, the government intervened, appointing a board to manage the company's sale. Ohm IT Infotech Ltd expressed interest in acquiring a majority stake, leading to the rebranding of the company as Zheohm IT Infotech Ltd in July 2011. Despite receiving approvals from various regulatory bodies, the merger encountered delays due to jurisdictional disputes. The new company, under a revised management structure with Mr. Surya as Chairman, finally completed the merger on October 25, 2012.

## **Background of Ohm IT Infotech**

Ohm IT Infotech Limited, a division of the Zeohm Group conglomerate, is a significant Indian multinational offering IT, networking technology solutions, and BPO services specifically to the telecommunications industry. Based in Mumbai, India, the company held the 7th rank among India's software service firms and secured the 109th position in the Fortune India 500 list for 2011. With a broad international presence encompassing more than 30 countries, it operated through 16 sales offices and 15 delivery centers.

Its diverse scope of operations includes Business Support Systems (BSS), Operations Support Systems (OSS), Network Design & Engineering, Next Generation Networks, Mobility Solutions, Security consulting, and Testing. The company's comprehensive "solutions portfolio" ranges from Consulting, Application Development & Management, Network Services, Solution Integration, Product Engineering, Infrastructure Managed Services, Remote Infrastructure Management to BSG (comprising BPO, Services, and Consulting). Ohm IT Infotech Ltd has successfully

implemented over 17 Greenfield Operations worldwide. Following the episode involving Zeha IT Infotech Ltd in 2011, Ohm IT Infotech Limited made a bid for Zeha IT Infotech Ltd, emerging as the top bidder by offering Rs 65 per share for a 33 percent stake in the company. This bid outperformed strong competition from other notable players in the IT industry.

### **HR Practices of Zeha IT Infotech Ltd**

In the information technology industry, human resources are pivotal, given the need for high skills and expertise. This sector is highly competitive, dynamic, and reliant on technological advancements, where human resources significantly drive growth and progress. The quality of services and products is directly linked to the competence and ongoing development of the workforce. Zeha IT Infotech Ltd prioritized the development and nurturing of its human resources through several HR practices:

- **Structured HR Systems and Policies:** The company implemented well-designed systems, practices, and policies within its HR framework to effectively manage its workforce.
- **Performance-Linked Bonuses:** Employees received quarterly bonuses based on a performance appraisal system. This incentivized and rewarded high performance.
- **Business Performance Management System (RTLC):** Zeha IT Infotech Ltd established the Real-Time Leader Centre (RTLC) approach, which was designed on the concept of “Six-Five hours.” This system was utilized across various functions and departments to measure performance using quantitative matrices.
- **Framework:** The company employed a model for measuring business performance based on an input-process-output approach. The “5 hours” matrix (faster, better, larger, steady, and smarter) covered elements such as product, process, place, price, performance, and people.
- **Leadership Training Policy:** Zeha IT Infotech Ltd had a dedicated policy for leadership training, conducting programs at a Leadership Training Center to develop and enhance leadership skills among its employees.

These practices shown the company’s commitment to fostering a high-performing and skilled workforce by emphasizing structured HR policies, performance-based rewards, and continuous training and development initiatives, contributing to the overall success and growth of the organization in the competitive IT industry.

## **HR policies at Ohm IT Infotech Ltd**

The HR practices policies systems which existed in the Ohm IT Infotech Ltd includes

- Employee recognition through awards/ for motivation
- Facilities and benefits in terms of PF/ salaries
- Transparent and open policy with respect to benefits for nurturing talent
- Quarterly goals and quarterly bonus for talent retention
- Management included time to time internal communication regarding performance and awards
- Balance Scorecard measures and awards matrix

## **Integration of HR practices**

Human resource management and HR Practises play a major role because of the importance of the human resources themselves and the intricacies of their management. A survey among business process outsourcing firms (BPO) in India revealed that human resources and organization related challenges are the most critical issues (Mehta et al., 2006: 323). HRM strategies policies and practices that stem from functionally logical strategic initiatives in response to a hyper competitive, complex, but opportunity-rich environment that had opened up due to economic liberalization in India (Ashok Som, Thunderbird International Business Review, 2006).

The worry is similarly expressed by a manager of Ohm IT Infotech and mentioned that HRM is a big concern in India" (Pinto, 2007). In particular, three major challenges in the area of HRM are named: HR recruitment, HR development and HR retention (Vaishampayan, 2006). The challenge is not only to get the people in but to keep them in" (Joshi, 2007). "Firms operating in India have attrition rates of 15-20%, because Indian workers are aspirational and individualistic", says Divani Vaishampayan, Regional Human Resources Director for Asia Pacific and the Middle East at BG Group (Brockett, 2006). Retention below the senior level is seen as a key success factor for business in India. Steven Helmholtz, director of executive talent acquisition at Dell, says: "At the lower and mid level, you've got higher attrition rates. The company that has the better retention strategy will win" (Frauenheim, 2006: 6).

These issues become more critical during the mergers and acquisitions specifically more in case of takeover when the morale and attitude of employees are not very healthy. Indian IT company Zheohm IT infotech have integrated various HR policies

by adopting some of the good practises followed by Zeha IT infotech Ltd which included Performance appraisal system , competency mapping, job rotations, excellent team work strategies and games, training-online and offline, entertainment programmes, open management policies, team work, compensation system with incentives-bonus-awards-fairs-gratuity, appreciation awards-certificates , internal visual display in form of model “ **6 P’s, and 5 R** , recruitment internal-external and promotion schemes had been undertaken to lead to employee satisfaction in both the companies

In the face of challenges posed by merging company cultures during acquisitions, the company took a proactive approach. Recognizing the potential for issues in combining two distinct cultures, they anticipated these problems and worked on developing solutions to unite the cultures of both organizations. This proactive stance aimed to minimize HR-related issues by addressing them in a structured manner. By strategically planning and executing the integration of cultures, the company aimed to emerge from the process as a more unified, robust, and cohesive entity

## **Challenges**

Each and every organization has unique characteristics, policies which form the work culture of that particular organization. Whenever employees settle in the culture, they feel a sense of belongingness to the company. Many times it does happen that when culture undergoes some kind of changes, due to some reason or other, it might lead to demoralizing, sometimes even devastating situations. During a merger or acquisition also culture can change and employees from the acquired company might face too much problem and can resist in accepting the new culture. It might lead to demotivation, frustration, lower productivity etc., which can affect a company to a great extent. Only 20,429 employees were associated with Ohm IT Infotech. as compared to Zeha IT Infotech was larger in size with more employees.

After the acquisition total staff strength became 47429. To handle such a huge workforce was a great challenge. At the same time Ohm IT Infotech group had to gain the customers faith in Zheohm IT infotech Ltd and make it run profitably again. Organizational culture plays a significant role in shaping the work environment and employee experiences within a company. When a company undergoes changes in its culture, such as during a merger or acquisition, it can deeply impact the employees. This transition can lead to demoralization, resistance, and challenges in adapting to the new culture, potentially resulting in decreased motivation, frustration, and lowered productivity among the workforce.

In the case of the acquisition where Ohm IT Infotech acquired Zeha IT Infotech, there was a notable difference in the employee count. Zeha IT Infotech had a larger workforce with many more employees compared to Ohm IT Infotech. The sudden amalgamation of these two diverse workforces to create a combined staff strength of 47,429 presented a significant challenge in managing such a considerable number of employees. The challenge extended beyond managing the workforce; it also involved ensuring a smooth transition in the company culture. Employees from the acquired company might have faced difficulties in adapting to the new work culture, potentially leading to resistance and lowered morale. The task for Ohm IT Infotech was not just about managing the increased headcount but also about integrating the differing work cultures to create a cohesive and harmonious environment.

Maintaining and rebuilding customer trust was another crucial aspect. Ohm IT Infotech had to reassure and regain the confidence of the existing customer base in the newly formed Zheohm IT Infotech Ltd. Restoring profitability and operational efficiency became essential goals in this scenario.

### **Strategies adopted from HR perspective**

To ensure the smooth sailing, the Ohm IT Infotech management handled the merger very cautiously. To reduce the level of resistance to change, they tried to remove the fears like losing the job. They informed stakeholders that the company's condition is good and they are not going to take drastic action for the existing workforce. Like any company in the IT sector the attrition rate was high. Also as the company merged with Zeha IT Infotech, an attrition rate was about **25 per cent** in the crisis years of 2011-12. Number of employees declined from 45,000 in 2011 to 27,000 in 2012.

Regarding the high rate of attrition, Hitesh, CEO, Zheohm IT infotech Ltd commented that the company had the right size to get back to track and that the attrition that took place was both voluntary and involuntary. However, the attrition rate became 13 per cent by the end of the second quarter of **2013** as it is mentioned in an article Zheohm IT infotech Ltd to hire 1,500 engineering freshers in Business online. The company was under too much pressure to retain its employees across all levels.

To reduce the attrition rate, the company had initiated a few recruiting programmes. Major thrust was given on campus hiring. Also a buddy-referral programme they initiated so that prospective employees would be aware of the company, its culture which would help to reduce the attrition rate. Some specialist positions and career tracks were created which would boost the morale of the employees. Emphasis was

given on career planning. They initiated various programmes such as shadow board and global leadership cadre (GLC), the company had also proposed career and succession plans for its employees. This was launched by combining the previous practices followed at Zeha IT infotech Ltd leader training school. They identified nine people through the shadow board.

The idea was to create a workforce that can lead the company in the future. The organization believed that they already have employees with leadership potential. So instead of hiring from outside, 95% of leadership roles were filled from within the organization. Based on their dreams and aspirations, employees started planning their own careers. Thus, the integration of Leadership programmes at Zeha gained importance that boosted the confidence level of employees of Zeha IT Infotech Limited after the acquisition.

An Employee having an experience of two years was eligible for specialist roles e.g., whether to become a team leader or an expert in a particular field in a period of two years. Anyone who has worked on a particular project or location for about two years could now demand a change in his role, position and geography. As Executive Vice-Chairman, Ohm IT Infotech, said on June 25, 2013 "Over the past two years, while we worked through the statutory and legal issues, our teams worked closely on the ground to integrate processes, eliminate overlaps, leverage best practices and deliver enhanced value to all our stakeholders." Thus the company Zheohm IT Infotech Ltd has successfully managed the overall change in the takeover.

**Change management:** During a merger or takeover is a complex and critical process that demands a strategic, well-thought-out approach. It involves harmonizing two separate entities with distinct cultures, processes, and structures into a unified and cohesive organization. Effective change management in such scenarios requires a delicate balance between preserving the best elements of each company and integrating them into a new, stronger entity. Communication is pivotal, as it helps in aligning employees' expectations, addressing concerns, and fostering a sense of unity. Managing resistance to change, which can stem from uncertainty about job security or changes in roles and responsibilities, is essential.

Providing support, clarity, and involving key stakeholders throughout the process helps in navigating this challenging period. Additionally, a comprehensive plan for the integration of systems, processes, and people is crucial to ensure a smooth transition and maintain operational efficiency. Sustaining morale, fostering a unified culture,

and creating a shared vision are vital for the long-term success of the merged or acquired organization.

### **The model conceptualizing the management of change**

1. Recognizing the need for change and starting the change process
2. Diagnosing what needs to be changed and formulating a vision of a preferred future state
3. Planning how to intervene in order to achieve the desired change
4. Implementing plans and reviewing progress
5. Sustaining the change
6. Leading and managing the people issues
7. Learning.

The company Zheohm IT Infotech Ltd adopted the model which was on similar lines of thought developed by John Hayes' in his book (2014) which suggested a model for change management with a host of practical tools and techniques. It had provided skills required for managers to diagnose the need for change and to ensure its successful implementation. The framework views change as a purposeful and constructed sequence of events, rather than something chaotic and unmanageable.

### **Recognizing the need for change and starting the Change Process**

After a takeover by Zheohm IT Infotech Ltd, recognizing the need for change and initiating the change process within the HR department is crucial for the successful integration and evolution of the organization. Change is an inevitable and necessary aspect following a takeover, and HR plays a vital role in facilitating this transformation. HR needs to assess the existing workforce, culture, policies, and practices of both the acquiring and acquired companies. Understanding the strengths, weaknesses, and differences is crucial. Based on this assessment, HR, Zheohm IT Infotech Ltd, developed a strategic plan for integrating and aligning the HR practices and policies of both entities. Providing transparency about the merger, its goals, and the strategy for merging cultures helped in reducing uncertainty and resistance.

A year following the merger, the workforce was reduced from 50,000 to 28,000, with 10,000 laid off and 12,000 resigned. The HR manager outlined the company's staffing difficulties and new methods to address them. He argued that the company's human

operations had to adapt changes in HR practices, or it would have failed. Zeohm Infotech Ltd adopted new techniques to encourage openness, confidence, and connection, which has also paid well. These strategies significantly decreased the attrition rate existing employees started returning, and at the same time, new ones also joined. Approximately 32% of hiring was done through employee referrals, to gain staff confidence in the organization.

### **Diagnosing what needs to be changed and formulating a vision of a preferred future state.**

Regaining faith that the company's past mistakes wouldn't happen again was the top priority. They implemented strict governance, controls, and transparency in the organization. The company formed an organization that disclosed business, revenue, and plans. They revised the entire code of ethical business conduct and required every employee to take a test and get certified.

Second, they formed an internal taskforce for tough decisions. Moving from rented properties across the city to one place would hinder travel. This internal task force would include executives and other staff in decision-making. It became an organization where people felt that they, their friends, or coworkers made decisions.

Third, they built a sophisticated communication infrastructure to keep people informed about the organization. The CEO and senior leaders would update employees every 15 days on what was occurring, what events were held, what consumers were saying, and whose orders won and lost. The CEO would respond to comments on his blog. This connected the company's leadership to everyone.

Finally, they established location councils. In every region or city where they operate, they developed location councils comprising 15 to 20 employees, from entry-level to leaders. The council can implement any investment, brand building, corporate social responsibility, or training for that location. They decentralized power to empower the grassroots.

### **Planning how to intervene in order to achieve the desired change**

Develop a Change Management Plan: Create a comprehensive plan that outlines the strategies, activities, and timelines for the change process. This plan should address communication strategies, training programs, cultural integration initiatives, and specific interventions designed to bring about the desired change.

## **Implementing plans and reviewing progress**

Humans are strongly affected by M&A. The findings of a paper of MA Daoe(2021) showed, most M&A research draws implicit assumptions about humans and their behavior in acquisitions. And confirm the need for firms to systematically address and review a variety of human resource issues and activities in their merger and acquisition activities. Establishing mechanisms to gather feedback from employees throughout the change process is essential. This feedback can be used to adapt and refine the change strategies as needed. Continuously monitoring the progress of the change initiatives. Regularly assess the outcomes against the defined objectives and make adjustments as necessary

## **Sustaining the Change**

Company faced lots of challenges initially and many times in the first year itself after acquisition they experienced an incredible amount of emotions daily. One of former clients would go in the morning, another would stay, and one of previous company key executives would quit by evening. The CEO, Zheohm IT Infotech Ltd often wondered, "Am I doing right?" Are we doing this right?" They felt that 20–30% of their approach towards uncertainty, dread, and apprehension helped. They weren't overwhelmed by it which helped them to prepare for departure. There were definitely high emotions in the first year. But later they all forget the past after the second year. "Looking back, it seems like years ago. We're too busy looking forward to remember those days" Said CEO of the Zheohm IT Infotech Ltd

## **Leading and managing the people issues.**

New decision-making levels have been added to the organization. They have brought in a sustainable, scalable organization, an important development. The company HR manager and CEO discussed that company leaders are now in their mid-30s instead of mid-40s. Only 10% of the top 150 corporate leaders are "buy" —hired from outside— while 90% are "build" —from inside. This means the leadership layer is deep. They found young people to take on key jobs and become corporate leaders. They had previously hired externally, so this is a huge move for them to promote from within the company.

Today, they handle it internally so that their employees can progress to their desired positions. They made another adjustment. They right-sized or optimized the organization in anticipation of the merger and our final merger. The top management implemented various HR practises and activities not only by integrating the both

companies but also used some of the innovative practises followed at global IT company like training for next level position for all employees, Awarding in form of coupon, vouchers, special holidays, Movie tickets on anniversary and Birthday, Linkages of Bonus scheme as per initiatives and performance ,and many more

## **Learnings**

In integrating the HR departments of the two merging companies, leveraging the learning from both organizations can be highly beneficial. Here's how previous learnings from Zeha IT Infotech Ltd and Ohm IT Infotech Ltd could be used to shape the new HR strategy of the merged entity, Zheohm IT Infotech Ltd:

**Best Practices Identification:** Assess and identify the best HR practices from each company. For instance, if Zeha IT Infotech had a robust employee training program, and Ohm IT Infotech had effective performance appraisal systems, these practices can be amalgamated to form a comprehensive HR strategy.

**Cultural Integration:** Learning from the differing cultures, understand what worked well in terms of employee engagement, leadership development, and communication methods. Create a plan to combine these cultural strengths to build a more inclusive and supportive culture for the new organization.

*Performance Management:* Evaluate the performance management systems used in both companies. Identify the strengths of each system and integrate them to create a more effective performance management framework for Zheohm IT Infotech Ltd.

*Employee Feedback Mechanisms:* Consider the employee feedback mechanisms used in both organizations. Determine which methods were most effective in soliciting and acting upon employee feedback, and integrate these into a new, improved feedback system for the merged entity.

*Leadership Training:* Review the leadership training programs and methods from both companies. Combine the strengths of these programs to develop a more comprehensive leadership development strategy for the new company.

*Change Management and Communication:* Study the change management strategies and communication styles employed by each organization during past transitions or change initiatives. Apply the successful elements of these strategies to effectively manage future changes and communications within the new organization.

*Employee Welfare Programs:* Identify the employee welfare and benefits programs from both companies. Integrate the most successful and appreciated elements of these programs to create a holistic and attractive benefits package for the merged entity.

*Talent Retention and Development:* Analyse talent retention strategies and methods for career development from both companies. Incorporate the most effective methods to retain and develop talent within the new organization.

By leveraging the best practices and successful strategies from both Zeha IT Infotech Ltd and Ohm IT Infotech Ltd, Zheohm IT Infotech Ltd can create a more comprehensive, effective, and adaptive HR strategy. This approach allows for the preservation of successful methods and the adoption of innovative practices, thereby shaping a stronger, more agile HR department within the newly merged entity.

## **Conclusion**

In successfully navigating a takeover and emerging as a prosperous entity Zhecom IT Infotech Ltd, implemented several strategic HR practices and policies few gleaned from the global IT industry. Leveraging practices from renowned companies, the newly formed Zhecom IT Infotech Ltd, prioritized employee integration, recognizing that a successful merger hinges on the human factor. They emphasized transparent communication, assuring employees of job security, and fostering a culture of transparency. Awards leadership development succession planning, Talent retention and integration of practices of previous company Zhea IT Infotech Ltd. Drawing inspiration from a few global practices, they implemented comprehensive change management programs that facilitated the transition, including tailored training and development initiatives, skill assessments, and career progression plans. Moreover, the company adopted flexible work policies and benefits, mirroring successful models from acclaimed firms.

By integrating these refined HR strategies, they managed to cultivate a cohesive workforce, aligning visions, and capitalizing on the strengths of both the companies. This approach not only retained top talent but also fuelled innovation, enabling the newly merged company to thrive and establish itself as a successful entity of the merged or acquired organization. This case presented. The case concludes with a description of the integration of the role and HR practices policies in Acquiring company and for leading the change management in various ways by suggesting the a Seven stage model of change management during mergers and acquisitions in Infotech companies

**Questions:**

1. What are the challenges faced by Zheohm IT Infotech and how can it overcome those challenges?
2. How does effective change management contribute to employee satisfaction and retention?
3. Elaborate the ways by which HR practices incorporate learning and development in change management strategies?
4. Discuss the means and ways for the HR department to frame practices that ensure continuous improvement during and after the change management process?
5. What are the ethical considerations in implementing change management through HR practices?

*Teaching Note*

**HR Practices for Effective Change Management  
at Zheohm IT Infotech Ltd.**

**A. Synopsis of the case**

Numerous studies confirm the need for companies to systematically address a variety of human resource issues, practices, and cultural change in merger and acquisition activities. This case of Zheohm IT infotech Ltd proposes a seven - stage change model for acquisitions that systematically identifies ways of managing change in regard to several human resource issues and activities. The case tries to focus on the study of integration of HR policies of both the companies, challenges faced during takeover and successful implementation of change management model .

Mergers and acquisitions are used for creating synergies in different formats. for innovations, technologies and expansion but hostile takeover has its own challenges and sometimes fall short of their stated goals and objectives. As a consequence, there are numerous social costs, including lost jobs, lost income to families, loss of energy and motivation Many times factors related to finance and market are considered during such decisions but human resource issues and activities are neglected. Humans are strongly affected by M&A. The findings of a paper of MA Daoe,(2021) showed, most M&A research draws implicit assumptions

about humans and their behavior in acquisitions. And confirm the need for firms to systematically address a variety of human resource issues and activities in their merger and acquisition activities.

This case presented a Seven stage model of change management during mergers and acquisitions in Infotech companies.

**B. Target learning Group:**

This case study can be taught in Universities through their MBA curriculum, B-Schools offering Post Graduate Diploma in Management. It can be used as Training Material for Executives undergoing training in IT industry and Training & Placement Agencies. This case is equally useful for Tech startups or any healthcare startups implementing new age Technologies where talented human resource retention is crucial.

**C. Learning/Teaching objectives and key issues:**

The following are the teaching objectives of this case:

- To understand the concept of Mergers, takeover, integration, Talent Acquisition, Attrition and change management
- To study the concept of employee performance appraisal and stakeholder satisfaction.
- To evaluate multiple strategies while implementing change management in the company after takeover.
- To study the key performance drivers in enhancing growth of global companies using Global HR Practices in the IT industry.
- To evaluate the global HR policies visa viz local HR policies

**D. The Teaching Strategy**

The case should be given to the learners at least 2-3 days in advance and they should make the prior reading and analysis of the case before coming to the class. The class may be distributed to a small group of students. Each group may consist of 4-6 students. Each group must analyze the case and write down the points of consensus. Every group will present the case analysis for discussion. Each individual/ group may be put forth its interpretation and suggestions concerning the issues and challenges involved. The case can be used by teachers

for various courses such as Perspective management, Merger & Acquisitions, HR management and other subjects of HR specialization

#### **E. Group Assessment**

Students may be asked to adopt a role-play e.g., as CEO, Chief Financial Officer, Heads of Marketing, Operations and Human Resource of Zhecom IT Infotech Ltd to discuss the strategies to address the problems given in the case in front of the board members. Also, a PowerPoint presentation can be presented by the CEO, CFO, and HR Head Manager in front of Board Members

#### **F. Teaching plan**

Allocation of the time

- Introduction to the case: 10 minutes
- Explain critical and vital incidents of the case: 15 minutes
- Questions and answers: 40 minutes
- Key decisions for each question: 15 minutes
- Conclusion with key learning: 10 minutes

#### **G. Teaching Note: Questions for discussion**

- **What are the key principles of effective change management in HR practices?**
- A. Clear Communication:** Communication is key in any change management process. Employees need to understand why changes are being made and how they will impact their roles. This requires ongoing, clear, and transparent communication from leadership.
- B. Leadership Engagement:** The role of leadership is crucial in change management. Leaders need to be fully committed and visibly support the change. They serve as role models and influence how the rest of the staff perceives the change.
- C. Employee Involvement:** Including employees in the change process can increase their commitment and reduce resistance. They need to feel valued and heard, and their feedback and concerns should be taken into account.

- D. **Training and Support:** Employees may need training to understand and adapt to the new changes. Providing resources, support, and time for employees to learn new skills or systems is important.
- E. **Plan and Prepare:** Change should be planned and prepared for, not just sprung on employees. This includes detailing the steps of the change, the expected outcomes, and any potential obstacles.
- F. **Monitor Progress:** Regularly checking the progress of the change implementation is important. This helps identify any issues early on and make necessary adjustments.
- G. **Flexibility:** While having a plan is important, so is being flexible. Unexpected issues may arise, and the organization needs to be able to adapt the change process as necessary.
- H. **Celebrate Success:** Recognizing and celebrating milestones can help keep morale high and encourage continued effort towards the change.
- I. **Sustainability:** The changes made should be sustainable in the long-term. This requires the ongoing commitment of resources and effort, even after the initial change process is complete.
- J. **Continuous Improvement:** Change management should be seen as a continuous process of improvement, not a one-time event. This means regularly reviewing and improving practices.

- **How does effective change management impact the overall performance of an organization?**

Effective change management impacts the overall performance of an organization in several ways:

- **Improves Adaptability:** It allows organizations to adapt to changes more quickly and efficiently, whether those changes are internal, such as a restructuring or a new software implementation, or external, like market trends or regulatory changes.

- **Reduces Resistance:** By involving employees in the change process and communicating the reasons behind the change, organizations can reduce resistance and increase buy-in from employees.
- **Minimizes Business Disruption:** Effective change management can minimize disruptions to the business by ensuring that changes are implemented smoothly and effectively.
- **Increases Employee Morale and Productivity:** If change is managed well, employees will understand the reason for the change and what is expected of them, which can boost morale and productivity.
- **Ensures Alignment:** It ensures that all parts of the organization are aligned and moving in the same direction, which can lead to improved organizational performance.
- **Enhances Customer Satisfaction:** If change is managed effectively, the organization can continue to meet customer needs and expectations even during periods of change, leading to increased customer satisfaction.
- **Reduces Costs:** Effective change management can help to identify potential problems before they occur, reducing the costs associated with making changes after implementation.
- **Encourages Innovation:** A culture that embraces change is more likely to foster innovation, as employees are more willing to take risks and explore new ideas.

In short, effective change management can significantly contribute to the ongoing success and performance of an organization.

### **What role does HR play in implementing change management strategies?**

Human Resources (HR) plays a crucial role in implementing change management strategies within an organization.

- **Planning and Communication:** HR is typically involved in planning and communicating about the change. They help to identify the impact of the change on different levels of the organization, create a communication plan, and provide necessary training and development programs to employees.
- **Change Advocacy:** HR often acts as a change advocate, helping to encourage and facilitate the acceptance of new initiatives or strategies. They help

employees understand the reasons behind the change and the benefits that the change can bring to the organization and to them individually.

- **Training and Development:** HR is responsible for arranging necessary training and development sessions for employees to equip them with the skills and knowledge needed to adapt to the change.
- **Providing Support:** HR provides support to employees during the transition period. This can include addressing concerns, providing resources, and offering counseling or coaching services.
- **Performance Management:** HR manages performance during the change process, making sure that employees are meeting expectations, and addressing any performance issues that arise as a result of the change.
- **Employee Engagement:** HR ensures that employees feel involved in the change process, encouraging their input and feedback, and making sure they feel valued and understood.
- **Policy and Procedure Development:** HR may need to revise or develop new policies and procedures to reflect changes in organizational structure, job roles, or processes.

### **Can you explain some HR practices that can lead to effective change management?**

Here are some HR practices that can contribute to effective change management:

- **Communication:** One of the most vital practices in managing change is clear and consistent communication. HR should share the reasons for the change, how it will benefit the organization, and the steps involved in implementing the change. Transparency can help reduce resistance and confusion.
- **Employee Involvement:** Involving employees in the change process can make them feel valued and more likely to support the change. This could involve seeking their input on proposed changes or involving them in planning and implementation.
- **Training and Development:** HR should provide training and development opportunities to help employees adapt to the change. This could involve new skills training, workshops, or team-building activities.
- **Leadership Engagement:** HR should work with leaders to ensure they are fully engaged in the change process. Leaders play a crucial role in setting the tone for change and can help motivate and guide their teams through the transition.

- **Change Agents:** Identifying and utilizing change agents, or individuals within the organization who can influence their peers, can help spread positive attitudes towards the change.
- **Reward and Recognition:** HR should establish a reward and recognition system to acknowledge the efforts of employees who are supporting the change. This can encourage others to do the same.
- **Monitoring and Evaluation:** Regular monitoring and evaluation can help HR identify any issues or resistance and take steps to address them. It can also provide valuable feedback on the effectiveness of the change management strategy.
- **Employee Support:** Change can be stressful for employees, so HR should provide support to help them cope. This could involve counseling services, stress management workshops, or simply providing a platform for employees to voice their concerns.
  1. **Clear Strategy:** Having a well-defined, strategic approach to implementing change can help ensure that everyone is on the same page and understands the steps they need to take.
  2. **Continuous Improvement:** Finally, HR should view change management as a continuous process of improvement, rather than a one-time event. This involves regularly reviewing and refining the change management strategy to ensure it remains effective.

**H. Background Reading Material:** Following reading material can be of use for students before discussing the case

Ashwathapa K. (2005) 'Human Resource Management' Tata Mc Graw Hills, Fifth edition

John Hayes, The theory and practise of change management by Bloomsbury Publishing

Pinto, A., & Pinto, P. (2011). Leveraging the power of differences: Workforce diversity. SCMS Journal of Indian Management, 8(2), 27.

**I. Experience in using the case**

This case provides the learner an opportunity to understand and develop change management strategies for the business and IT industry. They will understand

change management and also how to develop the HR Practices and activities for retaining talent and enhancing the performance. They will understand how to deal with human resources while implementing change management. They will also learn Change management, merger acquisition strategies, and Market leadership practices, enhancing business resilience & performance and values creation for a firm.

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## Case Study 03

# Crafting Financial Freedom: A Diverse Entrepreneurial Odyssey\*

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### Introduction

This case study delves into the entrepreneurial journey of Dr. Datey, a seasoned professional with 24 years of experience in various prominent banks, including IDBI, Axis Bank, and HDFC Bank. His path to financial freedom is a compelling narrative of diversification, calculated risk-taking, and a commitment to excellence. This journey showcases how a background in banking can serve as a strong foundation for entering various business domains. He is an entrepreneur who has built a diverse portfolio of businesses, from wealth management and real estate to the restaurant and golf industries. His journey showcases the challenges and successes that can come with venturing into various sectors.

His journey began in the wealth management sector, where he excelled in selling mutual funds and insurance. Recognized as the top sales staff at Axis Bank, he embarked on a journey of entrepreneurship, founded Moneywise, and subsequently diversified into real estate, restaurants, and golf courses. His principles of safeguarding capital, risk-sharing, and the pursuit of financial freedom have been pivotal throughout his career. He excelled at selling mutual funds and insurance and was recognized as the top sales staff at Axis Bank. His journey towards entrepreneurship began when he excelled in his role at Axis Bank, earning a substantial bonus. Realizing the potential of wealth management, he launched Moneywise Wealth Management, initially attracting 150 clients. Simultaneously, he nurtured his passion for teaching as a certified financial planner at six management institutes.

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*\* This case was developed by Sarita Abhay Dhawale (Ashoka Business School, Nashik, Maharashtra), Vishal Vedak (Dr VN BRIMS, Thane West, Maharashtra), Jayant Brahmane (SGPC's Guru Nanak Institute of Management, Matunga, Mumbai, Maharashtra), Jitendrasinh Jamadar (G H Rasoni Institute of Engineering and Business Management, Jalgaon, Maharashtra) and Shaunak Mainkar (Institute of Management Development & Research, Pune, Maharashtra) during the 10<sup>th</sup> Online Case Writing Workshop organized by the Association of Indian Management Schools (AIMS), Hyderabad from November 1-3, 2023.*

Determined to achieve financial freedom, he has devised a prudent savings strategy by setting aside 25% of his income into various mutual funds, drawing inspiration from renowned financial planners like Warren Buffet. His quest for financial independence led him to explore diversified income sources and methods to mitigate business risks. Venture into Entrepreneurship, inspired by his success in the banking sector and decided to start his own venture. He founded Moneywise, a wealth management company, which achieved significant success in a short period. The Foundation of “Moneywise” in wealth management with a staff of only 4 and has all financial products with the company, very soon it was on the rise of the business and then the business has expanded day by day.

Diversification into Real Estate, in 2016, he expanded into the real estate sector by establishing Worldwide Properties, which became highly successful in Pattaya, Thailand. The case study explores the factors that led to his success in this international venture. He then ventured into property business, catering to Indian investors seeking overseas real estate opportunities in countries like Malaysia, Georgia and Greece, which offered superior returns. His commitment to customer satisfaction spurred more than 300 happy clients who became enthusiastic brand promoters, contributing to the company’s growth. The diversification into real estate with Worldwide Properties.

Dr. Datey places a strong emphasis on protecting and preserving your initial investment (capital). This principle underscores the importance of risk management and ensuring that your capital is not at undue risk in any business venture. He prioritizes ROI after safeguarding capital. This means that before pursuing profit, one should ensure that the investment generates a reasonable return. This principle aligns with the financial aspect of business decisions and emphasizes the need for a positive return on the capital deployed. While exploring various opportunities, he ventured into the restaurant business by starting 3 Musketeers in Pune. The restaurant business beckoned, and he took the plunge by establishing his first restaurant. “3 Musketeers” in Pune (Viman Nagar, Baner, Hinjewadi). His enterprise gradually expanded to seven restaurants across Pune with Club Elrow, Unicorn House, Helium, and Escada all four in Pune and also Elrow Oceanfront in Calangute, Goa.

This venture presented its unique set of challenges, including land ownership, location selection, regulatory compliance, and liquor licensing. He discovered that while only 3 out of 10 restaurants thrived, a knack for risk-taking and unwavering patience was essential for success. Furthermore, meticulous financial planning over a three-year horizon proved to be a key factor in achieving a solid start. He recognizes that the

restaurant business can be exceptionally challenging due to its sensitivity to location. The success of a restaurant often hinges on its physical location, and profitability can be greatly affected by this factor.

Emotional decisions can often lead to poor outcomes, while logical decisions are more likely to be in the best interest of the business. There were multiple challenges faced by him in the Restaurant Business including the sensitivity to location. As the company faced the challenges they learned a lot of lessons too in this industry. His advocacy for logical decision-making over emotional choices was the most impactful incident in his business. The lesson learned from his single business failure due to an emotional decision was life learning.

Golf Courses and Expansion Considerations was a totally new venture into the sports and leisure industry and he entered it focusing on ownership of golf courses. Hence it gets critical to analyse the opportunities and limitations of expanding in this particular sector. Identifying golf courses as an underexplored niche segment overall, prompted him to venture into this business. He also recognized the vulnerability of this business as it is dependent on land availability, here, the landowner could abruptly terminate the arrangement or even compete by getting into the same business. His leadership style, characterized by giving employees the autonomy to excel, prioritizes qualities like loyalty, street-smartness, and a go-getter attitude. Nevertheless, he also acknowledges the need to strike a balance between logical thinking and emotional decision-making, learning from an ill-fated emotional choice

Leadership Style and Recruitment Criteria were; Decentralization of authority and Emphasis on trustworthiness, long-term commitment, independent thinking, loyalty, and street smartness in employees. Principles in Business was the Capital safeguarding. Profit-sharing and risk-sharing as essential elements, he was always looking towards the Pursuit of financial freedom and the concept of making money work for you. These principles encapsulate a range of fundamental aspects of successful business management. They underscore the need for careful financial management, prudent decision-making, understanding the unique challenges of different industries, and fostering a supportive and capable team.

The impact of the COVID-19 pandemic on the restaurant business was profound, with dwindling credit availability, increased cash transactions, reduced customer turnout, and modified supplier payment terms, it became a significant challenge even to sustain. Through it all, his entrepreneurial spirit endured, emphasizing the significance of adaptability and the constant pursuit of fresh opportunities, even in

the face of adversity. During his entrepreneurial journey, he encountered a crucial moment when he allowed his emotions to guide a significant business decision. This incident involved opening a restaurant in a location he had a deep personal connection to, as it held memories from his childhood.

This emotional decision proved to be a costly one, resulting in financial losses for his venture. His experience from this event serves as a valuable lesson for entrepreneurs. It highlights the importance of prioritizing logical thinking over emotional attachment in making business decisions. While emotional connections and personal sentiments can be compelling, they should not override the practical and strategic considerations necessary for the success of a business. This lesson underscores the need for entrepreneurs to maintain a balance between their passion and rational decision-making to achieve long-term business objectives and financial stability.

His single business failure, stemming from an emotional decision, results in valuable lessons that can be drawn. Although he knew some of the repercussions the failure would bring, he still took his decision to start the business because of his emotional connection to that location, to eliminate that possibility subsequently, he started focusing on long-term planning for his business.

His unique business philosophy is explored in the case study. This includes his emphasis on financial freedom, learning from failures, and having multiple sources of income. His leadership style, characterized by giving freedom to business managers and valuing attributes such as loyalty, go-getter attitude, and street smartness in employees, is also discussed. His strategic insight led him to explore the award segment as another promising avenue. His astute strategic acumen prompted him to delve into the award segment, recognizing it as a potentially lucrative avenue for his entrepreneurial endeavours. This decision demonstrated his ability to identify niche opportunities and leverage his business acumen to explore and excel in new and promising domains.

The case study mentions his plan to enter the Corporate Awards business, highlighting his consistent appetite for new ventures and diversification. His principles in business highlight essential concepts for aspiring entrepreneurs and business leaders. His belief in democratic leadership & emphasis on trustworthiness, long-term commitment, and shared responsibility in his businesses underscores a collaborative and principled approach to entrepreneurship. These elements contribute to a holistic business philosophy that aligns with his goal of achieving financial freedom through risk management and diversification. He also emphasizes that when he hires a person for

his company. he searches for the attributes like Risk Taking Ability, Go-getter Attitude, Street smartness, Hard work, Belongingness towards the organization and accountability towards the role in the organization.

“Building Trust, Sharing Risks, and Pursuing Financial Freedom are keywords for the Entrepreneurial Odyssey of Dr. Datey “

## **Conclusion**

The present case study on entrepreneurial journey offers multiple insights into the world of entrepreneurship, diversification, leadership, and the importance of calculated risk-taking. It serves as a source of inspiration and a valuable learning tool for future business leaders. His principles of safeguarding capital, sharing risks, and pursuing financial freedom underscore the importance of sound financial management, risk management, and a diversified approach to business. Furthermore, his commitment to building trust and encouraging independent thinking in employees emphasizes the human element of entrepreneurship. The case study illustrates how these principles and values can lead to success and financial independence in a variety of industries.

His entrepreneurial journey is a testament to the power of diversification, risk management, and a dynamic approach to business. His background in banking laid a solid foundation, while his ventures into wealth management, property, and the restaurant industry highlight the importance of calculated risk-taking, patience, and meticulous financial planning. His experience underscores the significance of logical decision-making, the empowerment of employees, and the continuous search for new opportunities, even during challenging times. His odyssey serves as an inspirational narrative for aspiring entrepreneurs seeking financial independence through innovation and adaptability.

## **Questions**

1. What are the key factors contributing to Dr. Datey’s success in wealth management and diversification into various industries?
2. What challenges did he face in the restaurant business, and how did he approach them?
3. What are the pros and cons of diversifying into multiple industries, as seen in present case?

4. How can his business philosophy and leadership style be applied in different business contexts?
5. What can we learn from his single business failure and emotional decision?

### *Teaching Note*

## **Crafting Financial Freedom: A Diverse Entrepreneurial Odyssey**

### **Synopsis of the case**

Dr. Datey, is a successful entrepreneur with diverse business interests. He started his career in wealth management, excelling in sales and ultimately deciding to start his own ventures. His businesses span real estate, restaurants, golf courses, and more. The case highlights his principles of safeguarding capital, building trust with employees, and pursuing financial freedom through diversified ventures. It also explores the challenges faced in the restaurant business, his leadership style, recruitment criteria, and the importance of logical decision-making.

### **Objectives:**

1. To understand the principles of entrepreneurship, risk management, and leadership in diverse business ventures.
2. To evaluate the importance of safeguarding capital in business decisions and the role of trust in team building.
3. To analyse the challenges and opportunities in diversifying across different industries.
4. To discuss the concept of financial freedom and its applicability in entrepreneurship.
5. To explore the significance of logical decision-making and emotional resilience in business.
6. To evaluate the challenges and opportunities of diversification in business.

## **Teaching Plan:**

### **Introduction (15 minutes):**

- Begin with a brief overview of Dr. Datey and his entrepreneurial journey.
- Explain the objectives of the case study and the key principles it aims to address.

### **Case Discussion (60 minutes):**

1. Career in Wealth Management (Early Background) (10 minutes):
  - Explore Dr. Datey's early career in wealth management.
  - Discuss his accomplishments and recognition at Axis Bank.
2. Entrepreneurial Journey (Moneywise and Diverse Ventures) (15 minutes):
  - Analyse the founding of Moneywise and its rapid success.
  - Discuss the diversification into real estate through Worldwide Properties.
3. Challenges in the Restaurant Business (10 minutes):
  - Investigate the restaurant business's sensitivity to location.
  - Explore the challenges faced and lessons learned.
4. Leadership Style and Recruitment Criteria (10 minutes):
  - Discuss Dr. Datey's leadership style and preference for decentralization.
  - Examine his recruitment criteria, emphasizing trustworthiness and other qualities.
5. Principles in Business (10 minutes):
  - Explore the principles of capital safeguarding, profit-sharing, risk-sharing, and financial freedom.
  - Discuss the practical applications and implications of these principles.
6. Logical Decision-Making and Emotional Resilience (5 minutes):
  - Analyse the importance of logical decision-making and the lesson learned from a business failure due to an emotional decision.

**Conclusion and Discussion (15 minutes):**

- Summarize the key takeaways from the case study.
- Engage the class in a discussion on how these principles and lessons can be applied to their own entrepreneurial or business management aspirations.

**Assignment (15 minutes):**

- Assign students to write a brief reflection or analysis on one aspect of Dr. Datey's journey (e.g., the importance of trust in leadership, the challenges of diversification, or the concept of financial freedom).
- Assign students to write a reflective essay on one aspect of his journey, its relevance to their own business aspirations, or the significance of logical decision-making in entrepreneurship.

**Assessment:**

- Evaluate student reflections and analyses to gauge their understanding of the case's key principles.
- Encourage & evaluate student participation and their ability to apply the case's concepts to real-world scenarios with the help of SWOT & PESTLE analysis.
- Assess written assignments, such as reflective essays, for depth of understanding and practical application.

**Additional Resources**

- Provide students with supplementary readings and case studies related to entrepreneurship, leadership, and risk management to deepen their understanding of the topics discussed in the case.
- Encourage students to research their businesses and their current status, providing updates and real-world context.

**Notes**

- Encourage students to conduct research on Dr. Datey's businesses to provide updates and real-world context in the discussion.
- Facilitate discussions in smaller groups or use role-playing exercises to encourage active participation and deeper analysis of specific aspects of the case.

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## Questions:

1. **What are the key factors contributing to Dr. Datey's success in wealth management and diversification into various industries?**

From this case, several key factors contributing to his success in wealth management and diversification into various industries are evident:

1. **Strong Financial Acumen:** His foundation in wealth management equipped him with a deep understanding of financial principles. This knowledge allowed him to make sound financial decisions and effectively manage resources in his diverse ventures.
2. **Principled Approach:** Adherence to principles such as capital safeguarding, profit-sharing, and risk-sharing provided a structured and principled framework for his business decisions. These principles ensured that he approached business with a clear set of values and guidelines.
3. **Entrepreneurial Drive:** His entrepreneurial spirit and willingness to take calculated risks were fundamental in his transition from a successful career

in wealth management to entrepreneurship. This adventurous spirit motivated him to explore new opportunities and create multiple income streams.

4. **Diversification Strategy:** He recognized the importance of diversifying into various industries. Diversification spread his risk and provided multiple sources of income, reducing his reliance on a single market or sector.
5. **Decentralized Leadership:** His leadership style, which involved decentralization of authority, empowered his team members to take ownership of their responsibilities. This approach fostered innovation, encouraged independent thinking, and allowed his businesses to operate effectively.

In summary, Dr. Datey's success in wealth management and diversification into various industries can be attributed to his strong financial acumen, principled approach, entrepreneurial drive, diversification strategy, decentralized leadership, location sensitivity, recruitment criteria, logical decision-making, and his quest for financial freedom. These factors collectively contributed to his remarkable entrepreneurial success.

## 2. **What challenges did he face in the restaurant business, and how did he approach them?**

Dr. Datey faced several challenges in the restaurant business, and he approached them with a practical and adaptive mind-set. Here are the challenges and his approaches:

The restaurant business is highly sensitive to location. He recognized that the success of a restaurant greatly depends on its location. He addressed this challenge by conducting thorough market research and choosing restaurant locations strategically. However, he also learned from the challenges faced due to location issues.

The restaurant industry is competitive, with many players vying for customers. He approached this challenge by focusing on unique selling propositions (USPs) and creating a differentiated dining experience. He aimed to stand out from the competition by offering something distinct, whether it was the cuisine, ambiance, or service.

**Operational Challenges:** Running a restaurant involves managing a complex set of operations, including inventory management, quality control, and staff coordination. He implemented stringent quality control measures, invested in staff training, and ensured efficient operational processes to mitigate these challenges.

**Customer Preferences:** Customer preferences and trends in the restaurant industry can change rapidly. He kept a close eye on customer feedback and industry trends. He was open to adapting the menu and services to align with evolving customer preferences and market dynamics.

**Marketing and Promotion:** Effectively marketing and promoting a restaurant can be a challenge. He recognized the importance of marketing and promotion to attract customers. He used both traditional and digital marketing channels to create awareness and attract patrons.

**Economic Factors:** Economic factors, such as inflation and fluctuations in food prices, can impact a restaurant's profitability. He managed economic challenges by maintaining cost controls, exploring sourcing options, and periodically reviewing the menu and pricing structure.

**Licensing and Regulatory Compliance:** The restaurant industry is subject to various licensing and regulatory requirements. He ensured that his restaurants complied with all legal and regulatory standards, including licenses, health and safety regulations, and tax obligations.

**Staff Management:** Recruiting, training, and retaining qualified staff can be a significant challenge in the restaurant business. He emphasized the recruitment of trustworthy, loyal, and dedicated employees. He invested in staff training to ensure high-quality service and sought to create a positive work environment to retain talent.

**Resilience and Adaptation:** Perhaps the most critical approach to challenges was his resilience and adaptability. He learned from his experiences, especially when he faced challenges related to restaurant location. He did not let failures deter him but instead used them as valuable lessons for future ventures.

In summary, he approached the challenges of the restaurant business with a combination of strategic planning, quality control, adaptability, customer-centric approaches, and a commitment to maintaining the highest standards in his establishments. His ability to learn from challenges and adapt his strategies was a key aspect of his approach to addressing these hurdles in the restaurant industry.

**3. What are the pros and cons of diversifying into multiple industries, as seen in present case?**

Diversifying into multiple industries, as seen in present case, offers several pros and cons:

**Pros:**

1. **Risk Mitigation:** Diversification can help mitigate risk. When one industry faces economic challenges or market downturns, other industries may continue to perform well. This risk spread can help safeguard the overall financial stability of the business.
2. **Income Streams:** Diversification creates multiple income streams. A business can generate revenue from various sources, reducing reliance on a single market or sector. This provides financial stability and allows for more resilient cash flows.
3. **Exploiting Opportunities:** Diversification allows a business to explore opportunities in different industries. It enables the company to capitalize on growth sectors or new trends, potentially leading to increased profits.
4. **Learning and Adaptation:** Diversifying exposes the business to a variety of challenges and opportunities. This diversity can lead to valuable learning experiences, fostering adaptability and innovative thinking.
5. **Competitive Advantage:** A diverse portfolio of businesses can create a competitive advantage by leveraging synergies and cross-promotion between different ventures. This can increase brand visibility and customer loyalty.

**Cons:**

1. **Management Complexity:** Managing a diverse portfolio of businesses can be complex. Each industry may have unique requirements and challenges, demanding significant time and attention from the owner or management team.
2. **Resource Allocation:** Diversification requires substantial resources, including capital, staff, and expertise, to manage effectively. Allocating resources across various industries can be a logistical and financial challenge.
3. **Expertise and Knowledge:** Success in multiple industries may require specific expertise and knowledge. Diversifying without the necessary understanding of an industry can lead to poor decision-making and costly mistakes.

4. **Economic Factors:** Economic conditions can impact industries differently. A downturn in one sector may offset gains in another, leading to financial volatility.
5. **Competition:** Different industries may face varying levels of competition. Some industries may be oversaturated, making it difficult to establish a competitive edge.
6. **Brand Identity:** A diversified portfolio can dilute the brand identity, making it challenging to maintain a clear and consistent brand image across all ventures.
7. **Exit Strategy:** Exiting a business becomes more complicated with diversification. The sale of one venture may affect the overall balance of the portfolio, and finding suitable buyers can be more challenging.

In the present case, diversifying into multiple industries allowed him to enjoy the benefits of risk mitigation, multiple income streams, and the opportunity to capitalize on diverse markets. However, he also faced management complexity and the need for substantial resources to manage his ventures effectively. The key to successful diversification lies in careful planning, resource allocation, industry-specific knowledge, and adaptability to navigate the challenges and seize the opportunities that come with a diverse portfolio of businesses.

#### 4. **How can his business philosophy and leadership style be applied in different business contexts?**

Dr. Datey's business philosophy and leadership style offer valuable insights that can be applied in various business contexts. Here's how they can be relevant and adapted to different industries and settings:

1. **Principles in Business:** His emphasis on principles like capital safeguarding, profit-sharing, risk-sharing, and the pursuit of financial freedom can be applied across industries. These principles provide a structured framework for ethical and strategic decision-making, ensuring the long-term sustainability of a business.

2. **Decentralized Leadership:** His decentralized leadership style, characterized by giving employees the freedom to make decisions, can be implemented in various business contexts. Empowering employees fosters innovation, enhances accountability, and encourages independent thinking. It can work well in creative industries, technology companies, and startups.
3. **Recruitment Criteria:** The recruitment criteria focusing on trustworthiness, loyalty, independent thinking, and street smarts can be adopted by companies in different sectors. Building a team of dedicated and adaptable individuals can lead to a motivated and cohesive workforce. These criteria are particularly relevant in customer service, sales, and high-stress environments.
4. **Logical Decision-Making:** The emphasis on logical decision-making over emotional choices is universally applicable. In times of uncertainty or high-pressure situations, rational decision-making can lead to more sound and effective outcomes. It can be valuable in industries such as finance, healthcare, and manufacturing.
5. **Risk Management and Diversification:** His approach to risk management and diversification can be adapted in various sectors. Businesses can benefit from risk assessment, mitigation strategies, and exploring opportunities in different markets. This approach is relevant in finance, real estate, and retail.
6. **Branding and Customer Experience:** Leveraging his focus on creating a unique dining experience in the restaurant business, companies in hospitality, entertainment, and tourism can prioritize branding and customer experience. Providing exceptional service, ambiance, and distinct offerings can set a business apart from competitors.
7. **Learning from Failures:** His resilience and ability to learn from failures are universally applicable. Businesses should encourage a culture of learning from setbacks and using them as opportunities for growth. This mind-set is relevant in tech start-ups, research and development, and any industry facing innovation challenges.
8. **Financial Independence and Wealth Management:** His pursuit of financial freedom, where money earned works for him, is a concept that can be applied to personal finance and investment in various contexts. Individuals and businesses alike can adopt strategies to achieve financial independence, whether through investments, savings, or entrepreneurship.

9. **Competitive Advantage through Innovation:** His approach of creating a competitive advantage by leveraging synergies between different businesses can be applied in any industry. Identifying opportunities for cross-promotion, cost-sharing, and innovation can lead to a sustainable competitive edge.

In summary, Dr. Datey's business philosophy and leadership style offer versatile principles and approaches that can be adapted to different business contexts. Their application can lead to improved decision-making, effective team management, risk mitigation, and competitive advantage across various industries.

5. **What can we learn from his single business failure and emotional decision?**

His single business failure and emotional decision provide valuable lessons for entrepreneurs and business professionals:

1. **Avoid Emotional Decision-Making:** One of the most critical takeaways is the importance of avoiding emotional decision-making in business. His decision to invest in a restaurant location based on emotional attachment rather than logic led to a significant loss. It serves as a stark reminder that emotions should not drive major business decisions.
2. **Rational Decision-Making:** The failure underscores the significance of rational, data-driven decision-making. Entrepreneurs and business leaders should rely on thorough market research, financial analysis, and objective criteria when evaluating opportunities and risks.
3. **Separate Personal and Business Interests:** His experience highlights the need to separate personal emotions and business interests. While it's natural to have personal attachments to certain decisions or locations, it's essential to evaluate them impartially in a business context.
4. **Learn from Failures:** The failure serves as a learning opportunity. His resilience and ability to recover from the setback demonstrate the importance of learning from failures and using them as stepping stones to future success. Entrepreneurs should view failures as opportunities for growth and improvement.
5. **Diversification and Risk Management:** The failure underscores the value of diversification and risk management. Diversifying investments across different sectors or locations can help mitigate the impact of a single failure. Risk management strategies should be in place to limit potential losses.

6. **Due Diligence:** Conducting thorough due diligence is crucial. It's essential to thoroughly assess the viability of a business opportunity, taking into account factors like location, market demand, competition, and financial projections. This diligence can help prevent costly missteps.
7. **Adaptability and Resilience:** His ability to bounce back and continue with his entrepreneurial journey highlights the importance of adaptability and resilience. Business setbacks are a natural part of entrepreneurship, and the ability to adapt and persevere is crucial for long-term success.
8. **Seek Expert Advice:** Entrepreneurs and business owners should not hesitate to seek expert advice when making significant decisions. Whether it's consulting with industry experts, financial advisors, or mentors, outside perspectives can provide valuable insights and objectivity.

In summary, Dr. Datey's single business failure resulting from an emotional decision emphasizes the need for rational, data-driven decision-making, resilience in the face of setbacks, and the importance of learning from failures. Entrepreneurs can use this experience to strengthen their decision-making processes and improve their overall business acumen.

6. **How does the concept of risk-sharing and profit-sharing contribute to the sustainability of his diverse business ventures?**

The concepts of risk-sharing and profit-sharing play significant roles in contributing to the sustainability of his diverse business ventures:

**Risk-Sharing:**

1. **Risk Mitigation:** By sharing risks with partners in each business venture, he reduces the individual risk burden. In the event of challenges or losses, the impact on his personal finances and overall business portfolio is less severe.
2. **Diversification Benefits:** Diversification across multiple industries is an inherent risk-sharing strategy. When one industry faces economic or market challenges, other industries may continue to perform well, balancing the overall risk.
3. **Incentive for Careful Decision-Making:** Partners who share in the risk are often more motivated to make careful and informed decisions. They have a vested interest in the success of the venture, which can lead to prudent risk management practices.

4. **Operational Expertise:** Partners with expertise in specific industries contribute to risk mitigation. Their industry knowledge and experience can help navigate challenges more effectively.

### **Profit-Sharing:**

1. **Alignment of Interests:** Profit-sharing aligns the interests of all stakeholders, ensuring that everyone benefits from the venture's success. This alignment fosters teamwork and commitment to achieving common goals.
2. **Motivation and Performance:** Profit-sharing motivates employees, partners, and team members to perform at their best. The potential for financial rewards encourages dedication and diligence in their roles.
3. **Long-Term Commitment:** Profit-sharing often encourages long-term commitment to the venture. Participants are likely to stay invested in the business, which contributes to its sustainability and growth.
4. **Team Building:** Profit-sharing promotes a sense of camaraderie and collaboration. Team members work together to maximize profits, which can improve overall teamwork and cohesion.
5. **Financial Stability:** Profit-sharing can provide a more stable and predictable income stream for individuals involved in the venture. This financial stability can reduce the risk of employee turnover and disruptions in business operations.

In summary, the concepts of risk-sharing and profit-sharing contribute to the sustainability of Dr. Datey's diverse business ventures by reducing individual risk, aligning interests, motivating stakeholders, and fostering a collaborative and committed business environment. These practices help in building resilient and profitable businesses that can weather challenges and thrive in diverse industries.

7. **How can the lessons learned from his challenges in the restaurant business be applied to other industries?**

The lessons learned from Dr. Datey's challenges in the restaurant business can be applied to other industries in various ways:

1. **Location Sensitivity:**

- **Real Estate and Retail:** Just like restaurants, the success of real estate and retail businesses often depends on location. Lessons about the

importance of choosing the right location, considering factors like foot traffic, accessibility, and demographics, can be applied in these sectors.

**2. Customer-Centric Approach:**

- **Hospitality and Service Industries:** The restaurant industry places a strong emphasis on providing excellent customer service and creating a positive dining experience. These principles are transferable to hospitality, hotels, and various service-oriented businesses where customer satisfaction is paramount.

**3. Branding and Differentiation:**

- **Marketing and E-commerce:** Lessons about the need to differentiate a restaurant business through branding, unique offerings, and customer experience can be applied to marketing and e-commerce. Creating a unique brand identity and customer experience can set a business apart from competitors.

**4. Adaptability to Changing Trends:**

- **Technology and Fashion:** Businesses operating in the technology and fashion industries are highly sensitive to changing trends and customer preferences. The ability to stay adaptive, innovate, and quickly adjust product or service offerings is essential in these industries.

**5. Quality Control and Operational Efficiency:**

- **Manufacturing and Healthcare:** Maintaining quality control and operational efficiency is crucial in manufacturing and healthcare sectors. The principles of quality control, staff training, and efficient processes apply in industries where product or service quality is paramount.

**6. Economic Factors:**

- **Finance and Investments:** Economic factors can significantly impact financial businesses and investment decisions. Understanding economic trends and adapting investment strategies accordingly is vital in the finance and investment sectors.

**7. Recruitment and Employee Loyalty:**

- **Human Resources and Management:** The emphasis on recruiting trustworthy, loyal, and dedicated employees can be applied in various industries. Building a committed and capable workforce is essential for business success.

**8. Resilience and Learning from Failures:**

- **Start-ups and Research and Development:** The ability to bounce back from setbacks and learn from failures is valuable in the start up world and research and development. Entrepreneurs and innovators often face numerous obstacles and must persevere through setbacks.

**9. Financial Independence and Investment:**

- **Personal Finance and Investment:** The concept of financial independence and making money work for you can be applied to personal finance and investment strategies. Achieving financial freedom by managing and investing wealth is a common goal for individuals.

In summary, the lessons learned from Dr. Datey's restaurant business challenges can be widely applicable to various industries. They encompass principles of location sensitivity, customer-centric approaches, branding, adaptability, quality control, economic awareness, employee management, resilience, and financial independence, which can enhance business practices and decision-making across diverse sectors.

**8. What are the implications of pursuing financial freedom as a core business philosophy?**

Pursuing financial freedom as a core business philosophy can have significant implications for an individual or organization:

**Positive Implications:**

1. **Wealth Accumulation:** The pursuit of financial freedom often involves strategic wealth accumulation. This can lead to increased personal or corporate wealth over time.

2. **Financial Security:** Achieving financial freedom can provide a sense of financial security. It allows for a comfortable lifestyle, financial stability, and a safety net in case of unexpected events.
3. **Independence:** Financial freedom enables greater independence and autonomy. It reduces dependence on external factors, such as employers or investors, and allows for more control over financial decisions.
4. **Risk-Taking:** With a foundation of financial freedom, individuals or businesses may feel more confident in taking calculated risks and exploring new opportunities.
5. **Entrepreneurial Ventures:** Financial freedom can provide the resources and time to pursue entrepreneurial ventures, invest in startups, or support innovative projects.
6. **Retirement Planning:** Achieving financial freedom is often aligned with sound retirement planning, ensuring a comfortable and stress-free retirement.
7. **Legacy Building:** Financial freedom can facilitate wealth transfer to future generations, contributing to legacy building and philanthropic efforts.

#### **Challenges and Considerations:**

1. **Financial Management:** Pursuing financial freedom requires effective financial management and investment strategies. Inadequate financial planning can lead to financial setbacks.
2. **Risk and Reward:** Some level of risk-taking is often involved in the pursuit of financial freedom. It's essential to balance risk with potential rewards and consider risk mitigation strategies.
3. **Long-Term Commitment:** Achieving financial freedom is a long-term endeavour. It may require discipline, patience, and consistent effort over many years.
4. **Market Fluctuations:** Financial markets can be unpredictable. Economic downturns, market volatility, or unforeseen events can impact the journey to financial freedom.
5. **Lifestyle Adjustments:** Pursuing financial freedom may involve making lifestyle adjustments, such as budgeting and saving, to achieve long-term financial goals.

6. **Health and Work-Life Balance:** Overemphasis on financial freedom can sometimes lead to neglecting health and work-life balance. Striking a balance between financial success and personal well-being is crucial.

In summary, pursuing financial freedom can lead to various positive outcomes, including wealth accumulation, independence, and opportunities for innovation and entrepreneurship. However, it also involves challenges related to financial management, risk, long-term commitment, and lifestyle adjustments. Ultimately, the pursuit of financial freedom should be aligned with one's values and goals to ensure a well-balanced and fulfilling life.

### **Class Discussion & Assessment:**

**Encourage & evaluate student participation and their ability to apply the case's concepts to real-world scenarios with the help of SWOT & PESTLE analysis.**

SWOT analysis or PESTLE analysis can be helpful to provide a comprehensive framework for analysing the case and facilitating classroom discussions. Here's how faculty can incorporate these elements:

#### **SWOT Analysis:**

- **Strengths:** Identify Dr. Datey's strengths, both as an entrepreneur and in his business ventures. This could include his financial acumen, principles in business, and ability to adapt and diversify.
- **Weaknesses:** Discuss any weaknesses or challenges he has faced, such as the failure in the restaurant business due to an emotional decision, and how he learned from them.
- **Opportunities:** Explore the opportunities he has seized in different industries and the strategies he used to capitalize on them. For example, the growth of Moneywise and the expansion of Worldwide Properties.
- **Threats:** Analyse the threats or risks that Dr. Datey has encountered, such as location sensitivity in the restaurant business, and how he managed these threats.

#### **PESTLE Analysis:**

- **Political:** Discuss any political factors that may have influenced his businesses, such as regulatory changes or government policies affecting wealth management, real estate, or the restaurant industry.

- **Economic:** Analyze economic factors, including economic cycles, inflation, and economic conditions, and how they impacted his business decisions and strategies.
- **Social:** Explore social factors like changing consumer preferences, demographics, and lifestyle trends, which could have influenced his business choices and customer service approaches.
- **Technological:** Investigate technological trends and innovations that have played a role in his businesses, especially in the restaurant industry and wealth management.
- **Environmental:** Consider environmental factors that may have been relevant, particularly in the real estate and restaurant businesses, where location and environmental sustainability can be significant.
- **Legal:** Examine legal factors such as licensing and regulatory compliance in the restaurant and real estate sectors, and any legal considerations in the wealth management industry.

Including these analyses in the teaching note can provide a structured framework for discussing the case and help students gain a holistic understanding of his entrepreneurial journey and decision-making processes in different business contexts.

**Table1: SWOT Analysis in Entrepreneurial Competency**

<b>Strengths</b>	<b>Weakness</b>
Commitment and focus in pursuit of vision	Greative and sustainable thinking
Hard work and perseverance	Learning through literature
Self-awareness	Not well prepared on planning and management
Networking	
<b>Opportunites</b>	<b>Threats</b>
Learning through experience	Dealing and coping with uncertainty
Establish a good relationship (business and non-business relation)	Taking risks without calculation
Communication / negotiation	Not well on team work

**Encourage & evaluate student participation and their ability to apply the case's concepts to real-world scenarios with entrepreneur competency**

The competence of entrepreneurship is one of the supports for the growth and success of a business, where their entrepreneurial competency plays an important role. This study uses a case study approach, with qualitative and quantitative methods for its data collection process, through in-depth interviews to SMEs with the support of literature study. The aim of this discussion is to analyse the strength, weakness, opportunity and threat that small organisations have on their entrepreneurial competency. There are multiple strategies that can be applied for the entrepreneur's success, and they are Rational, Offensive, Defensive and diversified strategies which he has applied for diversified business expansion.

## Case Study 04

# Bridging the Skills Gap: A Spotlight on RAMA Skill Development Centre in Rural India\*

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### Introduction

Skill development is a crucial factor in fostering the progress of any nation. India, with its vast population, possesses the potential to contribute a significant workforce to the job market. However, bridging the gap between industry demands and the available talent pool remains a pressing challenge. Addressing this issue requires a collaborative effort from the government, businesses, educational institutions, training programs, job seekers, students, and trainees.

The RAMA Skill Development Centre is a part of the RAMA Group, an Indian multinational conglomerate headquartered in Tirupati, India. RAMA Group is a market leader in the manufacturing of lead-acid batteries in India. The Group has a turnover of several thousand crores with subsidiary companies and involvement in many CSR activities. As it caters to a niche manufacturing segment, the Group has a requirement for skilled labour at workforce and operator levels. To cater to this requirement, the group established the RAMA Skill Development Centre. The centre is in a rural area so that gainful employment opportunities can be provided to the local population and the skilled labour requirement can be met by the Group.

The RAMA Skill Development Centre was initiated in response to the apparent skill gap and the need to cultivate the necessary skills among the youth. This institution has a fundamental objective: to provide comprehensive technical and non-technical training to individuals from rural backgrounds, equipping them with life and job

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\* This case was developed by Shriya Dad (G.H Raisonni Institute of Engineering and Business Management, Jalgaon), Mona Sinha (Bharati Vidyapeeth, Navi Mumbai), Christina Shiju (SIES College of Management Studies, Navi Mumbai), M Thamizhselvi (The Oxford College of Business Management, Bangalore) and Vishal Sunil Rana (G. H Raisonni Institute of engineering and business management, Jalgaon) during the 10<sup>th</sup> Online Case Writing Workshop organized by the Association of Indian Management Schools (AIMS), Hyderabad from November 1-3, 2023.

skills. The goal is to narrow the talent gap by imparting training that aligns with the dynamic requirements of the industrial and related sectors.

The Mission of the RAMA Skill Development Centre is succinctly encapsulated in its motto: "Skilling Rural India to 'Make in India'." This institution offers an 18-month fully residential course in Skill Development, encompassing technical and life skills that enhance employability and nurture responsible citizenship. The program targets deserving students from modest backgrounds and provides free education, including food and accommodation, to all selected candidates. Moreover, students receive stipends during the 'On the Job Training' phase. The Centre is a fully integrated residential facility for rural youth, welcoming both boys and girls and providing state-of-the-art infrastructure, laboratories, and classrooms staffed by highly qualified personnel.

### **Challenges of Skill Development Centre**

The RAMA Skill Development Centre's primary goal is to combat unemployment in rural India through its "RUN" Scheme, which stands for Reskilling, Upskilling, and New Skilling. The primary focus is on 10th-grade students, whom the Centre aims to train and groom from a young age to make them employable. Despite substantial investments from the Indian government, amounting to around 30 crores, the RAMA Skill Development Centre faces challenges in attracting a sufficient number of students. The centre has the capacity to admit approximately 700 students for various skill development courses but manages to enrol only around 100 students, with many dropping out before course completion.

The institution has identified a waning aspiration among students to advance in their lives. The concern is the acute shortage of skilled operators in the niche sector which is expected to widen if the corrective interventions are not carried out. Despite offering a compelling training program with a 70% emphasis on practical learning and 30% on theory, stipends from the first month, modern infrastructure including well-equipped classrooms, labs, workshops, free food, accommodations, safety gear, uniforms, study materials, and hostel facilities, students remain hesitant to enrol or dropout. This issue has prompted the centre to investigate the reasons behind low enrolment and high dropout rates.

## **Key Concerns for the Parent Company**

The parent company, RAMA Group, has three crucial concerns regarding its investment in the Skill Development Centre: changing aspirations among the rural population, return on investment and sustainability.

### ***Changing aspirations***

The Skill Development Centre provides training for “workforce level” and operator-level jobs. Shifting aspirations have led to a high dropout percentage in the training programs. As a social status symbol, higher education is more appealing to students than pursuing the skill as a career. These days, students are discouraged from choosing an occupation that requires a lot of hard effort due to the abundance of endless earning alternatives. For example, cab drivers and delivery boys.

Another factor contributing to the dropout may be parental pressure. In order to care for their agricultural land, the parents forbid their children from traveling too far from their hometowns. Because there are so many job prospects in the service industry these days, younger generations are reluctant to work in industrial companies that require a large workforce. Freebies from the government are another important factor that discourages students from pursuing challenging careers. Many quit during the course or during on-the-job training as they are not comfortable with the long hours and occupational issues like standing for eight hours a day for a shift. Trainees prefer service sector jobs that are not physically labour intensive.

Many in the strata are first-generation individuals who have had access to education. The awareness of “possibilities’ for career and personal growth through employment in the skill sector is low. Those with agricultural land or other part-time employment also do not prefer to continue in these skill-intensive jobs as a career. Despite this, the company provides employment to all the trainees post-completion of their diploma. Many such trainees have also been sent abroad for further skill development. The newer generation is not keen on skill-based jobs despite many initiatives from the Government of India promoting the same.

### ***Return on investment***

More than 1000 crores have been invested by the government and by the parent RAMA group in skill development in the region. Investment is done by the parent company without any financial help taken from the government. Stipend reimbursement was initially appearing as a return on investment but later became nil. The operating

expenditure of the training centres averages five crores with an average expenditure of 1.8 lakh per student. Despite quantifiable investment, the returns cannot be measured in only tangible terms.

It is important to note that there is no quantifiable measure available to calculate ROI for learning and development companies. Impact assessment reports by a third party are considered to measure ROI. It is also mandatory as per CSR Law. Organizations like PWC generally conduct this in the form of surveys by interviewing and interacting with the sample population and using statistical analysis to find the impact on students, parents, stakeholders, etc.

The dropout percentage is 30%. By this measure, there is a wastage of investment when assessing the return on investment. Audits conducted internally assess the pitfalls of this unproductive investment. Dropouts have been interviewed in these audits to assess the steps to reduce loss on the return of investment. The financial viability for multinational corporations like RAMA Group to invest in skill development centres depends on the return on investment and the tangible impact of these initiatives on the ground in the long run.

### *Sustainability -*

Sustainability has been assessed by two parameters that are critical to the industry and to the group - Program sustainability and Technological sustainability.

*Program sustainability-* A critical aspect for the company is to assess the sustainability of the programs imparted by the centre. Programme sustainability is the assessment of how many students get hired by the same company following their training which is extremely low because of dropout rates and an absence of desire to pursue skill as a career. The company provides training for multi-skilled technician courses. The centre desires to provide 'lifetime skills' over 'present skills' so that the training provided is sustainable in the long term for both the trainee and the company.

*Technological sustainability-* Another significant factor contributing to the lack of sustainability is technological advancements. Human labour is easily replaced by machines. The manufacturing sector is on the verge of significant technological change. Robots are replacing skilled labour in many areas. It is estimated that in the next five years, significant automation will result in the loss of half of the existing operator-level jobs. Those working currently will have to be re-skilled.

The industry world over and in India is shifting towards electric vehicle manufacturing, impacting the requirement of lead batteries which is the flagship product and major revenue earner of the group. The company is already establishing a factory to cater to the EV segment. However, the skilled labour required is less than half of the current requirement in the case of this future shift. The parent company intends to redeploy and retrain many in its existing workforce in the next five years. The Skill Development Centre and the parent company are prepared to adapt to changing skill requirements and upskilling demands in the future. Sustainable economic growth can be possible only if the gap between industry requirements of skilled labour can be addressed.

### **Skill gap paradox in rural areas**

The paradox in the workforce-operator level labour market is that despite the government and training centres investing in training and reskilling in rural areas, there exists “underemployment” and “unemployment.” Unemployment in rural areas persists with many youths migrating to cities in search of better opportunities. Underemployment is also an issue with rural populations involved in agriculture not being gainfully employed for specific months in a year. Considering this, workforce and operator level jobs should be a viable and sustainable option. The training centres are in rural areas so that youth do not have to migrate to urban areas. Despite this, there is lack of participants in the training programmes.

On one hand, there are jobs and training facilities available, there are issues with employment and limited economic prospects for youth in rural areas. The paradoxical situation has led to a dearth of technical skills required for economic growth and a complex situation for the government and manufacturing sector.

### **Interventions**

Significant government investments have been made in skill development in the region, there by the central and state governments. The centre conducts government-approved training programs under the National Apprenticeship Promotion Scheme, offering various courses for skilled technicians and soft skills training in addition to on-the-job training. The skill development centre has done several interventions to improve the enrolment percentage in the centres. Many of these are continuous interventions like awareness drives by going to local schools to make rural students aware of career opportunities through skill development. There are tie-ups with local NGOs who are associated with the local rural populace for various initiatives. Outreach programs of the centre try to bridge the gap between the skill development centre initiatives and the targeted rural students.

The training centre and the parent company have to be geared up to face the shift in skill requirements and up-skill and reskill required in the future. The Atma Nirbhar Bharat initiative places a strong emphasis on skill development in rural areas, including the region where the RAMA Skill Development Centre is located. The centre participates in various National Skill Development programs aimed at providing gainful employment in rural areas. The state government also supports these skill development programs, aiming to prevent rural-to-urban migration in search of employment opportunities.

### **National Skill Development Corporation (NSDC) and Ministry of Skill Development and Entrepreneurship (MSDE)**

The National Skill Development Corporation (NSDC) plays a crucial role in facilitating private sector involvement in skill development in India. It acts as a bridge between the government, private sector, and other stakeholders to drive skill development initiatives. NSDC collaborates closely with the Ministry of Skill Development and Entrepreneurship (MSDE) to implement government grant-based vocational training programs.

One of the key functions of NSDC is to provide long-term development funding to organizations, enabling them to establish for-profit vocational training programs. These programs are designed to meet the evolving skill requirements of various industries. NSDC's collaboration with MSDE involves the government subsidizing training expenses while private providers set up the necessary infrastructure. This partnership between the public and private sectors is instrumental in scaling up skill development efforts in India.

By working hand in hand with NSDC, the RAMA Skill Development Centre, as part of the RAMA Group, aligns with the broader national skill development agenda. This collaborative approach helps address the skills gap and provides the necessary support to empower rural youth with the skills they need to become employable and contribute to India's economic growth.

### **Questions:**

1. What are the main challenges faced by the RAMA Skill Development Centre in terms of student enrolment and retention, and what strategies have they employed to address these challenges?

2. What is the significance of the “RUN” Scheme (Reskilling, Upskilling, and New Skilling) in the context of rural skill development in India, and what challenges has the RAMA Skill Development Centre encountered in attracting students to its programs?
3. Discuss the interventions the skill development centre has undertaken to increase student enrolment and what role do local schools, NGOs, and outreach programs play in bridging the gap between the centre’s initiatives and rural students?
4. Analyse the reasons of skills mismatch in the manufacturing sector and how the training centre and the parent company are preparing to address the shift in skill requirements, particularly with the transition to EV (Electric Vehicle) manufacturing?
5. Suggest any two measures which can be taken by RAMA Skill development centre to address the problem of skill gap, and what are the key factors affecting the financial viability of such initiatives for MNCs like RAMA?

### *Teaching Note*

## **Bridging the Skills Gap: A Spotlight on RAMA Skill Development Centre in Rural India**

### **1. A synopsis of the case**

The RAMA Skill Development Centre, an initiative of the RAMA Group, aims to address the skill gap in rural India by providing comprehensive technical and non-technical training to individuals from rural backgrounds. The institution’s mission, “Skilling Rural India to ‘Make in India’,” underscores its goal of narrowing the talent gap by imparting practical skills aligned with industrial requirements. The Centre offers an 18-month fully residential course, targeting deserving students from modest backgrounds, providing free education, accommodation, and stipends during on-the-job training. Despite substantial investments, the Centre faces challenges in attracting and retaining students, with only a fraction of its capacity utilized. To combat this, the Centre conducts awareness campaigns in local schools, partners with NGOs, and runs outreach programs to connect with rural students.

The parent company, RAMA Group, is concerned with return on investment, sustainability, and changing aspirations among the rural population. They ensure employment for all trainees upon completion of their diploma and support further skill development. Despite government and company investments, there remains a persistent shortage of skilled labor in the region. Through collaboration with NSDC, the RAMA Skill Development Centre aligns with the national skill development agenda, addressing the skills gap and empowering rural youth with the skills they need to become employable. This collaborative approach is pivotal in building a skilled workforce for the future and driving India's economic growth.

The case highlights the challenges and initiatives of the RAMA Skill Development Centre, a part of the Indian multinational conglomerate, RAMA Group, headquartered in Tirupati, India. The case sheds light on the center's mission, approach, challenges, and the broader implications of skill development in India.

### **Key Points in the Case:**

1. **Importance of Skill Development:** Skill development is vital for India's progress, given its large population and potential workforce. Bridging the gap between industry demands and available talent is a pressing challenge.
2. **Establishment of RAMA Skill Development Centre:** The RAMA Skill Development Centre was initiated in response to the skill gap and the need to cultivate skills among rural youth. Its mission is to equip individuals from rural backgrounds with both technical and life skills, aligning with industrial requirements.
3. **Mission and Programs:** The center's motto, "Skilling Rural India to 'Make in India,'" encapsulates its mission. It offers an 18-month residential course that emphasizes both technical and life skills. The program targets deserving students from modest backgrounds, providing free education, food, accommodation, and stipends during on-the-job training.
4. **Challenges faced by the company:** Despite substantial government investments, the center faces challenges in attracting a sufficient number of students. Enrollment rates remain low, and there are high dropout rates, primarily due to waning aspirations among rural students.
5. **Interventions to Improve Enrollment:** The center has implemented various interventions to improve enrollment rates. These include awareness campaigns in local schools, partnerships with local NGOs, and outreach programs targeting rural students.

6. **Concerns of the Parent Company:** The RAMA Group, the parent company, has three critical concerns: return on investment, sustainability, and changing aspirations among the rural population. The group ensures employment for trainees and addresses skill mismatches in the sector.
7. **Role of National Skill Development Corporation (NSDC):** The NSDC facilitates private sector involvement in skill development, collaborating with the Ministry of Skill Development and Entrepreneurship (MSDE). It provides long-term development funding for organizations to establish vocational training programs aligned with industry needs.
8. **Collaboration with NSDC:** The RAMA Skill Development Centre collaborates with NSDC to align with the national skill development agenda and address the skills gap. This partnership enables the center to empower rural youth with the skills required for employability.

### **Key Takeaways:**

The case highlights the importance of skill development in India and the challenges faced by skill development centers in attracting and retaining students. It also talks about the collaborative approach between private institutions, government initiatives, and organizations like NSDC in addressing the skills gap and promoting economic growth through skill development.

#### **2. The target learning group**

Students of UG and PG level in the domain of management.

#### **3. The learning/teaching objectives and key issues**

- To analyze the problems/challenges of skill development center in South India
- To understand the existing skill gap in the manufacturing sector
- To identify and suggest the interventions required to bridge the gap between present industry demands and available skill-sets.
- To understand the initiatives taken for upskilling by government and private manufacturers

#### **4. The teaching strategy**

The case study should be given to students before the class so that students come prepared for discussion. First the students should be asked to analyze the case individually -individual analysis (10 minutes). Then they can be divided into different groups of 5 to 6 students and asked to discuss among themselves the scenario and issues in the case –group analysis (25 minutes). The faculty member can give a brief summary of the case – (10 minutes).

Students can be asked to come up with their interventions and finally after discussing with all the groups, final strategy and interventions can be shared in the class – (35 minutes). During the last 35 minutes' session, the faculty member should focus the discussions on the problems faced and opinion about resolving the problems.

#### **5. Questions for discussion**

**Question 1 : What are the main challenges faced by the RAMA Skill Development Centre in terms of student enrollment and retention, and what strategies have they employed to address these challenges?**

The main challenges faced by the RAMA Skill Development Centre in terms of student enrollment and retention are as follows:

#### **Challenges:**

1. **Low Enrollment Rates:** The center struggles to attract a sufficient number of students, with only around 100 students enrolling despite having the capacity for approximately 700 students.
2. **High Dropout Rates:** Many students who do enroll at the center drop out before completing their courses.
3. **Waning Aspirations:** There is a noticeable decrease in the aspirations of rural students to advance in their lives through skill-based employment and training.

#### **Strategies Employed to Address These Challenges:**

1. **Awareness Campaigns:** The center conducts ongoing awareness campaigns in local schools to inform rural students about career opportunities through skill development. This helps raise awareness and interest in skill-based employment.

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2. **Partnerships with Local NGOs:** The center collaborates with local non-governmental organizations (NGOs) that have established connections within the rural community. These partnerships help bridge the gap between the center's initiatives and its target rural students, making it more accessible to them.
3. **Comprehensive Training Program:** The RAMA Skill Development Centre offers a compelling training program that places a strong emphasis on practical learning. This program includes a range of benefits such as stipends from the first month, modern infrastructure, well-equipped classrooms and labs, workshops, free food, accommodations, safety gear, uniforms, study materials, and hostel facilities.
4. **Government Support:** The state government supports skill development programs, aiming to prevent rural-to-urban migration by providing gainful employment opportunities in rural areas.
5. **Emphasis on Practical Learning:** The training program has a 70% emphasis on practical learning, making it more engaging and relevant for the students.
6. **Involvement in National Skill Development Programs:** The center actively participates in various National Skill Development programs aimed at providing gainful employment in rural areas. This involvement aligns with national skill development initiatives.
7. **Tapping into First-Generation Learners:** The center acknowledges that many students in the rural areas it serves are first-generation learners. To address this, the parent company ensures employment for all trainees upon completion of their diploma, thereby demonstrating the tangible benefits of skill-based employment.
8. **Adapting to Changing Industry Requirements:** The center and the parent company are prepared to adapt to changing skill requirements, particularly in light of the shift from traditional lead-acid batteries to the electric vehicle (EV) sector in the manufacturing industry.

The strategies employed by the RAMA Skill Development Centre aim to address the challenges of low enrollment and high dropout rates by increasing awareness, providing comprehensive training, and ensuring that students see the value and benefits of skill-based employment. Collaborations with local NGOs and government support further enhance the center's ability to reach and retain students in rural areas.

**Question 2:**

**What is the significance of the “RUN” Scheme (Reskilling, Upskilling, and New Skilling) in the context of rural skill development in India, and what challenges has the RAMA Skill Development Centre encountered in attracting students to its programs?**

The “RUN” Scheme (Reskilling, Upskilling, and New Skilling) is a significant initiative in the context of rural skill development in India. It represents a comprehensive approach to addressing skill development in rural areas, particularly among 10th-grade students, and aims to combat unemployment by equipping them with the necessary skills to make them employable. The significance of the “RUN” Scheme lies in its multi-faceted approach to skill development, targeting individuals from rural backgrounds and providing them with the skills required to meet the dynamic demands of the industrial and related sectors. It aligns with the broader “Make in India” initiative, which encourages domestic manufacturing and job creation.

Challenges Faced by the RAMA Skill Development Centre in Attracting Students to Its Programs:

1. **Low Aspirations:** The center has encountered a challenge in the form of waning aspirations among rural students. Many individuals in the rural areas served by the center are first-generation learners and are largely unaware of career opportunities and personal growth prospects through skill-based employment. This lack of awareness and motivation can deter students from enrolling in skill development programs.
2. **Low Enrollment:** Despite offering a compelling training program with a 70% emphasis on practical learning, stipends from the first month, modern infrastructure, and various benefits, the center faces low enrollment rates. It has the capacity to admit approximately 700 students for various skill development courses but manages to enroll only around 100 students. This indicates that there is a challenge in attracting a sufficient number of students to its programs.
3. **High Dropout Rates:** Another challenge is the high dropout rates, with many students leaving the programs before completion. This suggests that student retention is a concern for the center.

In response to these challenges, the RAMA Skill Development Centre has implemented various interventions, including awareness campaigns, partnerships

with local NGOs, and outreach programs, to bridge the gap between its initiatives and the target rural students. These strategies are aimed at addressing the challenges of low enrollment and high dropout rates by increasing awareness, providing comprehensive training, and ensuring that students see the value and benefits of skill-based employment. Collaborations with local NGOs and government support further enhance the center's ability to reach and retain students in rural areas.

**Question 3 : Discuss the interventions the skill development center has undertaken to increase student enrollment, and local schools, NGOs, and outreach programs play a crucial role in bridging the gap between the center's initiatives and rural students.**

Here are the interventions and the roles of these entities:

Interventions to Increase Student Enrollment:

1. **Awareness Campaigns in Local Schools:** The skill development center conducts ongoing awareness campaigns in local schools to inform rural students about career opportunities through skill development. These campaigns are designed to raise awareness among students about the benefits and prospects of skill-based employment.
2. **Partnerships with Local NGOs:** The center has established partnerships with local non-governmental organizations (NGOs) that have deep-rooted connections within the rural community. These NGOs play a vital role in bridging the gap between the skill development center's initiatives and the target rural students. They help in identifying potential candidates, providing support, and connecting the center with the local community.
3. **Outreach Programs:** Outreach programs are designed to actively engage with the rural student population. These programs are instrumental in making the skill development center's offerings more accessible to the students by bringing the information and opportunities directly to them. Outreach programs serve as a bridge between the center's initiatives and the rural youth.

Roles of Local Schools, NGOs, and Outreach Programs:

- **Local Schools:** Local schools serve as an essential platform for conducting awareness campaigns. They provide access to the target student population and offer a structured setting for disseminating information about the skill

development center's programs. Schools help in reaching students at a formative stage in their education and career development.

- NGOs: Local NGOs have established trust and connections within the rural community. They are well-positioned to identify and recommend suitable candidates for the skill development programs. NGOs can vouch for the credibility and benefits of the center's initiatives, which can encourage students and their families to consider enrolling in skill development courses.
- Outreach Programs: Outreach programs actively take the information and opportunities to the rural students. These programs may include on-site visits to villages and communities, conducting informational sessions, and engaging with students and parents directly. Outreach programs help overcome barriers that may prevent students from accessing the skill development center, such as lack of information or transportation.

By involving local schools, NGOs, and outreach programs, the skill development center creates a network of support and information dissemination that extends into the rural communities it aims to serve. This collaborative approach addresses the challenges of low enrollment and dropout rates, ultimately contributing to the center's mission of skilling rural India and narrowing the skills gap.

**Question 4: Can you elaborate on the skills mismatch in the manufacturing sector and how the training center and the parent company are preparing to address the shift in skill requirements, particularly with the transition to EV (Electric Vehicle) manufacturing?**

The skills mismatch in the manufacturing sector is a significant challenge that arises due to the evolving nature of the industry. In this case, the transition from traditional lead-acid battery manufacturing to the electric vehicle (EV) sector is a specific example of this shift.

**Skills Mismatch in Manufacturing Sector:**

1. **Technological Advancements:** The manufacturing sector, especially in the context of EVs, is undergoing rapid technological advancements. This includes innovations in battery technology, electric propulsion systems, and smart manufacturing processes. These advancements require a workforce with up-to-date technical skills.

2. **Specific Skill Requirements:** The transition to EV manufacturing necessitates a workforce skilled in areas such as battery technology, electric motor assembly, EV charging infrastructure, and software integration for vehicle control systems. These skills are distinct from those required in traditional lead-acid battery manufacturing.
3. **Automation and Robotics:** The manufacturing industry is increasingly incorporating automation and robotics to improve efficiency and productivity. Skilled technicians who can operate, maintain, and troubleshoot these automated systems are in high demand.

**Preparing to Address the Shift in Skill Requirements:**

1. **Customized Training Programs:** The RAMA Skill Development Centre can tailor its training programs to align with the specific skill requirements of the EV manufacturing sector. This may include offering courses on battery technology, electric motor assembly, and automation systems.
2. **Industry Partnerships:** Collaborating with EV manufacturers or related industries can provide insights into their skill requirements. It can also lead to the development of training modules that directly address these needs.
3. **Regular Skill Updates:** To ensure that trainees are well-prepared for the evolving industry, the training center can incorporate regular updates in its curriculum. This might involve periodic retraining to keep skills current.
4. **Soft Skills and Adaptability:** Alongside technical skills, the center can emphasize the development of soft skills, adaptability, and problem-solving abilities. As the industry evolves, employees must be able to learn and adapt quickly.
5. **Certifications and Recognitions:** Providing trainees with industry-recognized certifications can enhance their employability. The center can work to align its training programs with relevant certification requirements in the EV manufacturing sector.
6. **Exposure to Real-world Scenarios:** Practical training and exposure to real-world manufacturing environments can better prepare trainees for the challenges they will face in the industry.
7. **Collaboration with Industry Experts:** Inviting industry experts and professionals to conduct workshops or seminars at the training center can provide valuable insights and hands-on experience.

The skills mismatch in the manufacturing sector, particularly in the context of the transition to EV manufacturing, is a complex challenge. However, by tailoring training programs, staying informed about industry needs, and fostering collaborations, the RAMA Skill Development Centre and the parent company can equip their trainees with the skills necessary to meet the demands of the evolving manufacturing landscape.

**Question 5: Suggest any two measures which can be taken by RAMA Skill development centre to address the problem of skill gap and what are the key factors affecting the financial viability of such initiatives for MNCs like RAMA ?**

The answer to the first part of the question will vary from student to student .

The financial viability of such initiatives for multinational corporations (MNCs) like RAMA depends on several key factors:

1. **Return on Investment (ROI):** MNCs invest substantial resources in skill development centers, and they expect a return on their investment. The success of the center in terms of student enrollment, completion rates, and employability of graduates directly impacts the ROI. If the center cannot attract and retain students or if graduates do not meet industry demands, it can affect the financial viability.
2. **Sustainability:** Ensuring the long-term sustainability of skill development centers is vital. MNCs like RAMA need to assess whether the center can continue to operate effectively, adapt to changing industry needs, and remain financially viable over time. The center's ability to attract students and secure government and industry support is essential for sustainability.
3. **Changing Aspirations:** As noted in the case, changing aspirations among the rural population can impact the financial viability. If students are not interested in pursuing skill-based jobs or do not see the benefits of such training, it can lead to low enrollment and dropout rates, affecting the overall financial outlook.
4. **Government and Industry Support:** MNCs often depend on government and industry support to sustain skill development initiatives. The availability of government grants and subsidies, as well as partnerships with industries that hire skilled graduates, is crucial for the financial viability of such programs.
5. **Regional and Sectoral Specifics:** The viability of skill development initiatives can vary depending on the region and sector. MNCs like RAMA need to assess the specific needs and challenges of the region where their skill development center

is located and the industry sector they are targeting. Mismatched supply and demand in terms of skilled labor can affect financial viability.

In summary, government investments in skill development initiatives are instrumental in supporting the mission of the RAMA Skill Development Centre by providing financial support, making training accessible, promoting gainful employment, and reducing skills mismatches. However, the financial viability for MNCs like RAMA depends on factors such as ROI, sustainability, changing aspirations, government and industry support, and regional and sectoral specifics.

## **6. Background reading**

Skill Development in Rural Areas: Press Information Bureau Government of India  
- Ministry of Skill Development and Entrepreneurship

Website

<https://pib.gov.in/newsite/PrintRelease.aspx?relid=198879>

<https://www.msde.gov.in/en/organizations/nsda>

<https://msde.gov.in/en/schemes-initiatives>

## **7. Experience of using the case**

Using the RAMA Skill Development Centre case as a teaching tool was an enlightening experience for both myself and my management students. This real-world case offered a multifaceted perspective on the challenges and opportunities associated with skill development, social responsibility, and the evolving industrial landscape in India.

The case allowed students to delve into various aspects of management, including strategic planning, human resource management, financial analysis, and sustainability initiatives. It offered valuable lessons and discussions on several key areas:

1. **Social Responsibility:** The case emphasized the importance of corporate social responsibility (CSR) and the role of businesses in addressing societal challenges. It prompted discussions on how companies like RAMA Group can contribute to skill development and rural employment while fulfilling their CSR obligations.

2. **Talent Development:** Students were able to explore talent development strategies, including the importance of aligning training programs with industry needs. They learned about the challenges of attracting and retaining students in skill development courses, which encouraged discussions on marketing and recruitment strategies.
3. **ROI and Sustainability:** The case highlighted the need for companies to assess the return on investment in skill development initiatives. Students learned how to analyze the financial viability of such programs and the long-term sustainability of training centers in the face of technological advancements.
4. **Public-Private Partnerships:** The involvement of government agencies like the National Skill Development Corporation (NSDC) and Ministry of Skill Development and Entrepreneurship (MSDE) showcased the significance of public-private partnerships in addressing skill gaps. It prompted discussions on collaboration and resource-sharing between different stakeholders.
5. **Rural Development:** The case underscored the challenges and opportunities in rural skill development. It led to discussions on strategies to prevent rural-to-urban migration, economic empowerment of rural youth, and the role of skill development centers in achieving these goals.

Overall, using the RAMA Skill Development Centre case allowed my management students to apply theoretical knowledge to a real-world scenario. It encouraged critical thinking, problem-solving, and ethical considerations, which are crucial skills for future managers. The case served as a powerful illustration of how businesses can drive social change and contribute to the economic development of marginalized regions.

## Case Study 05

# Navigating Complexity: A Managerial Perspective\*

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### Introduction

Indian Railways had been playing a pivotal role in India's history, economy, and culture. It remained a lifeline for the country, providing affordable transportation to millions of people and serving as the backbone of the nation's logistics and supply chain network. Being one of the largest railway networks, Indian railways had employed a vast workforce that included a wide range of employees with diverse job roles. Managing such a massive and diverse workforce was a significant challenge. The work environment in Indian Railways was complex and unique, with various challenges and characteristics.

In this sprawling landscape of Indian Railways, employees navigated a labyrinth of challenges at every rung of the organizational ladder. From junior officers grappling with the complexity of internal systems to mid-level administrators negotiating the intricate web of labor unions and political pressures, and senior executives orchestrating strategic initiatives in passenger marketing, each level presented its unique set of hurdles. The challenges faced by these employees underscored the multifaceted nature of managing one of the world's largest and oldest railway networks. Over the career path in Indian Railways, employees developed an intimate and intensive understanding about how this massive organization worked where each role had different types of challenges in terms of scale and nature.

### Background of Indian Railways

Indian Railways had a fascinating journey which dated back to the colonial era. The idea of building railways in India was proposed way back in the early 1830s, but it

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\* This case was developed by Mahuya Basu (Globsyn Business School, Kolkata), Pallavi Chandwaskar (Dr. V.N. Bedekar Institute of Management, Thane), Nishita Desai (Institute of Management Development and Research, Pune) and Kavita Patil (G.H.Raisoni Institute of Engineering and Business Management, Jalgaon) during the 10<sup>th</sup> Online Case Writing Workshop organized by the Associations of Indian Management Schools (AIMS), Hyderabad from November 1- 3, 2023.

wasn't until 1853 that the first passenger train, ran between Mumbai and Thane. After that, the construction of railways expanded rapidly during British era as an essential means of transportation for both cargo and passengers.

In 1924, the British colonial government passed the first Railways Act, which established a Federal Railway Authority which aimed to unify and standardize the railways' operation. Prior to that, several private companies were involved in the construction and operation of railways in different parts of India. After independence, the railway system was nationalized in the year 1951 but The Indian Railways Act, 1989 formalized the nationalization process and established the Indian Railways as a state-owned entity.

Indian Railways had been undergoing rapid transitions in terms of modernization and expansion over the last few decades. New technologies were introduced, and existing lines were electrified. High-speed trains like the Shatabdi Express and Duranta were introduced to improve passenger services. As an organization, Indian railway was a unique one. The gigantic scale and size by itself made it one of the largest railway systems in the world, comprising over 68,000 route kilometers of track and serving millions of passengers and tons of freight daily. It operated in diverse geographical, climatic, and demographic conditions, which is a unique challenge in itself.

The cultural significance of the organization in India was also worth studying. Carrying the long legacy of British India, the system evolved as an independent societal system of its own. More than just a transport system, it had become a reflection of the diversity, history, and traditions of the country. The organization had a very strong accounting system and the system of accountability was primarily through its accounting system. The robust accounting system ensured that the organization operated within budgetary constraints, managed its resources efficiently, and maintained transparency in its financial transactions. This level of accountability was also essential, given the scale, complexity, and public nature of the railway system in India.

Indian railways also had a unique organizational structure – a system headed by political leaders but worked following a corporate structure. The Indian Railways operated under the leadership of the Union Minister of Railways, who was typically a member of the Cabinet in the Government of India. Beneath the political leadership, the Indian Railways functioned with a corporate-style management framework. It had a hierarchical structure that included Railway Board, Zonal Railways, divisional railways and functional departments. This unique organizational structure was

designed to strike a balance between political interests, public service, and the efficient management of a vast and complex transportation system. The political leadership were responsible to decide on the policy direction and secured funding, while the corporate-style management structure ensured the day-to-day operations and maintenance of the railways.

The system was governed by a detailed, intrinsic and structured procedural where every issue was addressed following a specific and often time taking process. It might have made the organization process driven and structured but also created redtapism and often binding to its employees.

### **Challenges at Various Managerial Levels**

Indian Railways, as one of the world's largest and busiest railway systems, presented a unique set of challenges at each career stage for an employee. Success in this environment required a combination of technical expertise, leadership skills, adaptability, and a deep understanding of the cultural and social aspects of railway operations in India.

#### **i. Challenges at the Junior Officer Level:**

As a junior officer within Indian Railways, grappling with the organization's complexities was a daunting task. The internal structure was a labyrinth of intricate interfaces with the external world, resulting in frequent delays in decision-making and action implementation. Specific challenges at this level included:

- a. Rigidity:** Indian Railways' established processes often lack adaptability, hindering swift responses to dynamic situations such as legal subpoenas or unforeseen operational challenges. This rigidity led to missed opportunities, suboptimal outcomes, and a general slowdown in responsiveness.
- b. Compliance Overload:** The organization's emphasis on compliance resulted in an overwhelming regulatory framework. Excessive documentation requirements and stringent regulations burdened employees with administrative tasks, diverting their focus from core responsibilities. This compliance overload often stifled creativity and innovation within the workforce.
- c. Employee Burnout:** The stringent adherence to rigid systems and the constant pressure to meet regulatory requirements placed a significant strain on employees. This pressure could lead to burnout, affecting productivity,

morale, and overall employee well-being. High levels of stress became prevalent among the workforce.

- d. **Handling Exceptional Cases:** Indian Railways' intricate system struggled to accommodate unique or exceptional cases that had deviated from established protocols. Such cases, which did not fit neatly into existing processes, posed a challenge in providing effective solutions. Consequently, operational bottlenecks and delays became common occurrences.

### ii. **Challenges at the Mid-Level Administrative Position:**

Transitioning to a mid-level administrative role within Indian Railways brought a new set of challenges, primarily related to managing powerful labor unions deeply entrenched within the organization. These challenges included:

- a. **Union Interference:** Labor unions wielded considerable influence and often exerted pressure on decision-making processes. Their demands, intertwined with political interests, could significantly impact organizational policies. This interference complicated the execution of strategies and day-to-day operations.
- b. **Bureaucratic Complexities:** Union activities intertwined with stringent administrative processes often created bureaucratic hurdles. Decision-making became cumbersome, requiring extensive negotiations and consensus-building with union representatives. These complexities lead to delays in approvals and implementations, affecting overall efficiency.
- c. **Inefficiencies:** The amalgamation of political and union pressures resulted in administrative inefficiencies. Delays in obtaining approvals and resolving disputes became common, leading to suboptimal resource utilization and operational inefficiencies. These inefficiencies negatively impacted the organization's bottom line.

### iii. **Challenges at Senior-Level Management:**

Elevating to a senior-level management position, specifically in passenger marketing, entailed a new set of strategic challenges centered around customer satisfaction, revenue maximization, and technological advancement. Due to its unique organizational structure, even top-level managers often felt that they lacked the required discretionary power and decision-making freedom, rather only had the implementation responsibility of middle level managers. Key challenges at this level included:

- a. **Diverse Customer Base:** Indian Railways served a vast and diverse passenger base, each segment having unique needs and preferences. Tailoring marketing strategies to address these diverse requirements became imperative. Understanding cultural nuances, regional preferences, and socioeconomic factors was crucial for effective communication and service customization.
- b. **Enhancing Customer Experience:** Informing passengers about services, amenities, and special offers was not enough; ensuring seamless and enjoyable travel experiences was paramount. Meeting and exceeding customer expectations became pivotal in building loyalty. Providing personalized services and anticipating customer needs contributed to a positive brand image and customer satisfaction.
- c. **Revenue Generation:** Indian Railways enjoyed a monopoly status hence did not face any close competition but the challenges came from highly regulated fare structure where pricing was based on several social, political and economic issues rather than the sole objective of profit maximization.
- d. **Safety and Security Measures:** Ensuring passenger safety during travel was a top priority. Rail track maintenance subject to stringent budgetary constraint and high traffic were primary challenge for rail safety. Educating passengers about safety measures and security protocols was also essential. Establishing a robust security infrastructure and crisis management protocols instilled confidence among travelers.
- e. **Digital Transformation:** Embracing digital platforms such as ATVMs, mobile apps, online booking, and e-ticketing was fundamental for staying competitive. Promoting these technologies not only enhanced passenger convenience but also streamlined internal processes. Emphasizing digital literacy and ensuring user-friendly interfaces were crucial for encouraging widespread adoption.
- f. **Feedback and Grievance Handling:** The grievances against Indian Railways were monumental in size, often included serious allegations and even legal disputes. Handling and resolution of such grievances effectively and timely itself was a huge challenge. Actively encouraging passengers to provide feedback was not just about collecting data but also using it for continuous improvement was necessary. Analyzing feedback enabled Indian Railways to make data-driven decisions, addressing customer needs and preferences promptly.

- g. **Corruption** at few frontline areas and lack of humane touch in its mechanical way of delivering services was hindering the image of Indian Railways even though employees at large were dedicated and honest in the spirit of delivering customer service.

## 1. **Strategic Interventions in Handling Challenges at Different Levels in Indian Railways:**

In the realm of Indian Railways, strategic interventions stood as pivotal milestones in addressing organizational challenges. These initiatives, meticulously designed and executed, had reshaped the railway system's operational landscape, focusing on improving customer service, streamlining processes, and embracing technology.

### a. **Establishment of a Dedicated Customer Helpline and Integrated Portal:**

Recognizing the need for seamless communication, a dedicated customer helpline and an integrated online portal were established. This intervention empowered passengers to report grievances and seek assistance conveniently. The customer portal streamlined the complaint process, ensuring that passengers' concerns were registered efficiently. By centralizing communication channels, Indian Railways enhanced accessibility and responsiveness, thereby elevating customer satisfaction levels.

### b. **Utilization of SMS, Mobile Apps, and Social Media Platforms:**

Indian Railways leveraged modern technology by introducing SMS services, mobile apps, and social media platforms like Twitter for passengers to register complaints and inquiries. Embracing these digital channels facilitated real-time communication, enabling passengers to voice their concerns instantly. By tapping into the widespread usage of smartphones and social media, the railway system enhanced its reach, ensuring that passenger feedback was received promptly and acted upon swiftly.

### c. **Implementation of Complaint Monitoring Cells:**

To ensure systematic grievance resolution, each railway zone established a designated Complaint Monitoring Cell. These cells were tasked with tracking and resolving complaints efficiently. By coordinating with relevant departments, these cells ensured that complaints were channeled to the appropriate authorities and resolved in a timely manner. This strategic

intervention enhanced the accountability of the system, fostering a culture of responsiveness and efficiency within Indian Railways.

**d. Training and Sensitization Programs for Railway Employees:**

Recognizing the pivotal role of employees in customer satisfaction, Indian Railways implemented comprehensive training and sensitization programs. These initiatives aimed to enhance employees' empathy towards passenger concerns and underscored the importance of addressing grievances promptly. Through workshops, role-playing sessions, and interactive modules, railway employees were equipped with the skills to handle diverse passenger issues effectively. By nurturing a customer-centric mindset among its workforce, Indian Railways fostered a culture of service excellence, ensuring that passenger needs were met with professionalism and compassion.

**2. Way Ahead:**

Indian Railways had made significant strides in addressing service quality-related issues like better timing, cleanliness, passenger amenities, catering services, security and safety, customer feedback and grievance handling. But at the same time various challenges remained including congestion, capacity constraints, and modernization. The organization had been working continuously on infrastructure upgrades, system improvements, and further enhancing the overall passenger experience to meet the evolving needs and expectations of travelers. The vast customer base, that contributed to the complexity of the organization could also be its biggest strength. Their support and assurance would make the political leadership to accept the much-needed refurbishment in railways to make the system more customer centric.

**Questions:**

1. How the challenges faced by a manager changed as he/she moved up from junior to senior levels?
2. How did managing a giant public organization like Indian Railways differ from standard management practices of any private organisation?
3. How did the organization structure influence business operation?
4. How did the strategies taken by Indian railways affect the service quality?
5. What was the role of optimization of operation in Indian Railways?

## *Teaching Note*

### **Navigating Complexity: A Managerial Perspective**

#### **1. A synopsis of the case**

The case study is from a management perspective about Indian railways. Indian Railways, one of the world's largest and oldest railway networks, faces unique challenges at every managerial level. The organization has undergone significant modernization and expansion, introducing new technologies and electrified lines to improve passenger services. It operates under a corporate-style management framework, led by a Union Minister of Railways, which balances political interests, public service, and efficient transportation management. Challenges at various managerial levels include rigidity, compliance overload, employee burnout, and handling exceptional cases.

To address these challenges, Indian Railways has implemented strategic interventions such as a dedicated customer helpline, SMS, mobile apps, and social media platforms for complaints registration, and Complaint Monitoring Cells for efficient complaint resolution. Additionally, comprehensive training and sensitization programs have been implemented to enhance employee empathy towards passenger concerns. These interventions have streamlined operations and elevated the organization's reputation as a customer-focused entity. The case study aims at enabling students to critically evaluate the current scenario and initiatives of Indian railways for their effectiveness as well as

#### **2. The target learning group**

The target learning group for the case suggested, are undergraduate final year BBA students And MBA students. This can also be discussed among the employees of Indian Railways, during the induction program to the new joinees in the railway and courses pertaining to service marketing

#### **3. The learning/teaching objectives and key issues**

Learning /Teaching Objectives of the case are as follows:

- 1) To promote critical thinking and analytical skills through study of case about Indian railways that throws light on the unique attributes of management at various levels

- 2) To impart understanding of managerial roles and responsibilities at various levels of management
- 3) To familiarize the students with the concept of customer care services, grievance handling, retaining customers, economic growth, revenue generation etc. with reference to Indian Railway
- 4) To make the student understand the complexity of challenges at different managerial levels
- 5) To come up with required interventions for the challenges in case study

**Key Issue:**

**Indian railways were facing several challenges and the key issues are highlighted below:**

1. Issues pertaining to service quality are a problem for Indian railways.
2. To improve the passenger experience by attending to their needs and expectations
3. Issues at various management levels faced by the Management People in the Indian Railways
4. challenges like congestion, capacity constraints and modernization, infrastructure upgrade and system challenges.

**4. The teaching strategy**

- **Pre-Reading:** Before class, assign the case to the students and ask them to come to the session with their analysis and perspective towards answers to the discussion questions.
- **Search-based assignment:** Prior to conduct of case, student groups can be suggested to study all the existing social-media handles of Indian Railways to check for their customer facing interface, service quality issues, customer complaints and their resolution.
- **Self experience-sharing:** As a passenger, what are the experiences of students, they can be asked to collate as per the central theme of the case, customer satisfaction level, complaints and issues, social media communications by railways.

- **Focused Group discussion method:** Class can be divided into four to five groups and each group can be asked to brainstorm on one of the issues mentioned in the case and to identify probable approaches.
- **Co-working spaces:** Instructors can also recommend students try a co-working space, in case of online forums break-out rooms are recommended (co-working spaces allow for free trial periods) for a minimum of two hours and compare their experience to the library or their individual study space.
- **Free range Class Discussion:** In class, instructors should provide a brief summary of the case before presiding over a free-range discussion of the questions at the end of the case. Once all students in the class have had an opportunity to contribute, assign students or student teams to design a hypothetical business simulation game based on any important management concept that the student or student group could run.

## 5. Questions for discussion

### 1. What are your observations with respect to the unique nature of management practices at Indian railways?

Suggested Answer points:

Indian Railways is a vast and complex organization with unique management practices. Some observations:

- **Large Scale and Network:** Indian Railways is a gigantic organization with an extensive network of tracks, stations, and rolling stock. Managing such a vast operation requires complex logistical planning and coordination.
- **Tiered Structure:** The organization follows a hierarchical structure with various divisions and zones, each responsible for specific geographic regions. This structure can impact decision-making and communication processes.
- **Public Ownership:** Indian Railways is a government-owned entity, and its management practices are influenced by the need to balance the demands of public service with financial sustainability.
- **Varied Services:** Indian Railways provides a wide array of services, including passenger trains, freight transportation, luxury trains, and special services. Each service type comes with its management challenges.

- **Reliability and Safety:** Ensuring the punctuality of trains and the safety of passengers is a top priority. This involves careful scheduling, maintenance, and infrastructure management.
- **Ticketing System:** The railway's ticketing system, including the online booking system, is notable for its scale and complexity, with millions of transactions daily.
- **Accessibility and Inclusivity:** Indian Railways must consider the needs of diverse passenger groups, including differently-abled individuals, and provide inclusive services.
- **Ecological Considerations:** The railway network's environmental impact is a growing concern, and Indian Railways has initiated green practices, such as solar power adoption and waste management.
- **Innovation and Upgrading:** Indian Railways has been actively pursuing modernization and digitization efforts, such as the introduction of high-speed trains, improved passenger information systems, and eco-friendly initiatives.
- **Government Priorities:** As a government entity, Indian Railways is influenced by the policies and priorities of the Indian government, which can affect its management practices.
- **Passenger Experience:** Given the size and diversity of its passenger base, the railway is constantly striving to enhance the overall passenger experience through various services and amenities.

In conclusion, Indian Railways' management practices are unique due to the organization's scale, public ownership, and diverse services. Navigating the complexities of managing a railway network of this magnitude requires a combination of traditional and innovative management strategies to meet the demands of millions of passengers and the nation's transportation needs.

## 2. What type of customer services are provided by Indian railways?

Suggested Answer points:

Customer services provided by Indian Railways include:

- Ticket booking and reservation services.
- Passenger amenities on trains, including catering services.

- Information services such as PNR status and train schedules.
- Parcel and freight services for businesses.
- Station facilities and cleanliness.
- Special services for differently-abled passengers.

3. **Analyze the customer complaint issues arising with the passengers of Indian railway.**

Suggested Answer Points:

Customer complaints in the context of Indian Railways can vary widely, covering a range of issues and concerns. Here's an analysis of some common customer complaint issues:

- **Delays in train arrivals and departures:** One of the most frequent complaints is related to train delays. Passengers often face inconvenience due to trains running behind schedule. This can be attributed to various factors, including operational challenges and maintenance issues.
- **Cleanliness and Hygiene issues:** Complaints about the cleanliness of trains and railway stations are prevalent. Passengers expect clean compartments, restrooms, and platforms, and lapses in this area can lead to dissatisfaction.
- **Safety Concerns of the passengers:** Passengers raise concerns about safety, including theft, harassment, and inadequate security measures. These issues can affect the overall sense of security during train travel.
- **Quality of Food and Catering Services:** Complaints about the quality, taste, and hygiene of food services on trains and at stations are common. Ensuring that catering services meet quality standards is a consistent challenge.
- **Reservation and Ticketing Issues:** Passengers often report problems with booking tickets, including issues related to online portals, availability, and the ticketing process. Problems with seat reservations can also lead to complaints.
- **Efficiency of Passenger Information system:** Lack of accurate and timely information about train schedules, platform changes, and service disruptions can be a source of frustration for passengers.

- **Accessibility to differently-abled:** Passengers with special needs may encounter difficulties related to accessibility, such as the absence of ramps, dedicated seating, and assistance.
- **Overcrowding:** Overcrowded trains and a lack of seating can lead to discomfort and dissatisfaction among passengers.

Indian Railways acknowledges these issues and continually works to address them through various initiatives, such as cleanliness drives, security measures, and digital enhancements for passenger convenience. Customer feedback and complaints are valuable in driving improvements, and the railway authorities often encourage passengers to report issues for resolution.

**4. Discuss about the effectiveness of the interventions carried so far by IR and its impact on customer satisfaction.**

Suggested Answer Points:

Indian Railways has implemented various interventions and initiatives over the years to improve its services and enhance customer satisfaction. While the effectiveness of these interventions can vary, they have had a notable impact on the overall customer satisfaction levels. Here are some key interventions and their impacts:

- **Adequacy of Online Ticket Booking and Reservation System:** The introduction of online ticket booking systems has greatly improved convenience for passengers. It has reduced the need to stand in long queues at ticket counters, resulting in higher customer satisfaction.
- **Success of Cleanliness Drives:** Indian Railways has launched cleanliness drives and campaigns to improve the hygiene and sanitation of trains and stations. These efforts have positively impacted the perception of cleanliness and customer satisfaction.
- **Safety Measures:** Enhanced safety measures, including the introduction of RPF (Railway Protection Force) and security checks at stations, have contributed to passengers feeling more secure during their journeys.
- **Punctuality Improvements:** Indian Railways has made efforts to improve punctuality and minimize delays. These measures, along with the implementation of modern signaling and tracking systems, have positively influenced customer satisfaction.

- **Convenience through Digital Services:** The development of mobile apps, such as “IRCTC Rail Connect,” provides passengers with real-time information, booking capabilities, and support, making it easier for them to plan their journeys.
- **Introduction of Premium Trains:** The introduction of premium and high-speed trains, like the Shatabdi and Rajdhani Express, has enhanced the overall travel experience for passengers.
- **Clean Energy Initiatives:** The use of solar power, bio-toilets, and other eco-friendly initiatives has not only reduced the environmental impact but has also contributed to a positive image for Indian Railways.
- **Passenger Feedback and Complaint Process:** The railway’s responsiveness to passenger feedback and complaints is noteworthy. Addressing issues raised by passengers in a timely and efficient manner has improved customer satisfaction.
- **Special Trains and Tourist Services:** The operation of special tourist trains and services like the Maharajas’ Express has expanded travel options and improved the experience for tourists.
- **User-friendliness Improvements:** Efforts to make trains and stations more accessible for differently-abled passengers have made rail travel more inclusive and accommodating. Though ensuring that all such amenities are well-maintained and are under working condition is a mammoth task and needs more prompt services.

While these interventions have had a generally positive impact on customer satisfaction, it’s important to note that there are still challenges to be addressed, such as:

- **Congestion,**
- **Quality of catering services, and**
- **Need for ongoing transformation and infrastructure advancements.**

Additionally, the effectiveness of these interventions can vary across different divisions and regions of Indian Railways.

5. **How are the service quality gaps identified and addressed by management of Indian railways?**

Suggested Answer Points:

The Indian Railways follows a multi-faceted approach to identify and address service quality gaps. Here's an overview of the general process:

- **Customer Feedback and surveys:** Passengers can provide feedback and file complaints through various channels, such as online portals, helplines, suggestion boxes, and social media. This feedback is a valuable source of information to identify service quality issues.
- **Regular Process Checks:** The division conducts regular inspections of stations, trains, and facilities to assess cleanliness, safety, and infrastructure conditions. This helps in identifying physical gaps in service quality.
- **Mystery Shoppers:** Some divisions employ mystery shoppers who pose as regular passengers to assess the quality of services and report on their experiences. This provides an unbiased view of the passenger experience.
- **KPIs:** Indian Railways uses various KPIs to monitor and measure performance, such as on-time performance, cleanliness, and passenger amenities. Deviations from these KPIs can indicate service quality gaps.
- **Quality Enhancement Initiatives:** Once identified, service quality gaps are addressed through a combination of initiatives. These may include increased maintenance efforts, staff training, infrastructure upgrades, and process improvements.
- **Technology Incorporation:** Indian Railways is increasingly integrating technology to improve services, such as providing real-time updates, e-ticketing, and better communication with passengers.
- **Budget Allocation:** Adequate budget allocation is crucial for addressing service quality gaps. Funds are allocated for maintenance, modernization, and improvement of infrastructure and services.
- **Transparency and Responsibility:** Indian Railways often maintains a high level of transparency and accountability in addressing service

quality gaps by publicly sharing information about improvements and changes.

It's important to note that the specific initiatives and approaches within the South-Eastern Division may vary based on the division's unique challenges and priorities. For the most up-to-date and detailed information on how service quality gaps are identified and addressed in this division, it would be advisable to refer to official reports, publications, or communications from Indian Railways.

## **6. Analysis of data**

NA

## **7. Background reading**

- [https://indianrailways.gov.in/railwayboard/view\\_section.jsp?lang=0&id=0,1](https://indianrailways.gov.in/railwayboard/view_section.jsp?lang=0&id=0,1)
- <https://analyticsindiamag.com/how-indian-railways-uses-ai-a-comprehensive-case-study/>
- <https://www.icmrindia.org/casestudies/catalogue/Economics/ECON005.htm>
- <https://italics.in/work-samples/Case-Study-on-Indian-Railways.pdf>
- <https://hbsp.harvard.edu/product/710008-PDF-ENG>
- <https://www.hbs.edu/faculty/Pages/item.aspx?num=37767>

## **8. Experience of using the case**

Case was administered in the MBA first year class of Perspective Management course. The students discussed the topics of managerial roles, Level Five leadership concepts very well in the context of the case. For the MBS second year students, the case was discussed as a part of strategic management course and a deeper level discussion on the issues hovering the strategic management of Indian railways was addressed.

## Case Study 06

# **Trials and Roadblocks: The Epic Voyage of Women Edupreneur\***

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Roshini embarked on her educational journey as a dedicated national-level badminton player starting from her 9th standard. Despite travelling long distances to attend college she managed to score 96% in her 12th grade exams and 85% in her BCom degree in 2003. Roshini spent countless hours in the college library, always ready to expand her knowledge. After graduation, she started her career as a lecturer in Art & Science College, earning a starting salary of Rs. 5000 per month. She was inspired by the wisdom of her teachers Dr. Rait and Dr. Rama, to always learn and grow, regardless of age. She took this advice to her heart and applied for the M.Com program at Presidency College, Chennai. She was clear about her goals while pursuing M.Com, then M.Phil and to become a lecturer.

After completing her M. Phil, she started her career as a lecturer in the MBA department. She had a passion to do MBA, hence she enrolled for MBA program at Indira Gandhi National Open University (IGNOU). She was passionate about starting her own business while working as a lecturer. She was encouraged by her brother to become an entrepreneur, who had done an MBA from IGNOU. Roshini's entrepreneurial journey began in 2009, when she started her first company, V Grow HR Consulting Private Limited. She soon realized that there was a need for a business school that would prepare the students for the real time work. Roshini started a Business School as the director and founder member in 2009. After a couple of years, she left that Business School due to her personal reasons.

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*\* This case was developed by Ravi Sankar Kummata (Guru Nanak Institutions Technical Campus, Hyderabad), Rohit Salunkhe (G H Raisonni Institute of Engineering & Business Management, Jalgaon), Pravin Mane (Bharati Vidyapeeth Deemed to be University Institute of Management and Entrepreneurship Development, Pune), Darshana Bhagowati (Globsyn Business School, Kolkata), Yogita D. Patil (G H Raisonni Institute of Engineering & Business Management, Jalgaon), D. Rose Mary (Guru Nanak Institutions Technical Campus, Hyderabad) during the 10th Online Case Writing Workshop organized by the Association of Indian Management Schools (AIMS) from November 1-3, 2023.*

Roshini has become a serial entrepreneur which includes Director for V Grow HR Consulting Private Limited, Chennai & Pondicherry (Since 2013), Chairperson of Happi Journey Tourism Company (Since 2015), Director for Avidus IT Academy (TCS iON Training Partner) Chennai and Pondicherry (Since 2017), Managing Partner (MY FUND PRO, SHAREKHAN FRANCHISEE) Since 2017, Director for EDSTEERINGS (Since 2017), CEO of Avidus Skill Academy, Chennai and Pondicherry (Since 2017), Founder member of Avidus Abroad Education (Since 2018), Managing Director of GETWHAT PACKAGING COMPANY ( Since 2019 ).

Roshini joined as Director of Avidus Academy of Management (AAM) Business School, Chennai in 2019. AAM offers MBA as well PGPM Programs with Global Exposure Opportunity Program (GEOP) to European Nations such as Paris, Belgium, Netherlands, Hungary, Singapore, Malaysia, and China. The school offers a two-year MBA program focusing on practical skills and industry exposure, making it a standout choice for middle-class and upper-middle-class students seeking quality education at an affordable price. AAM Business School offers distinctive advantages that set it apart from other educational institutions. However, it operates in a highly competitive environment, with numerous private business schools in Chennai vying for the attention of students and recognition in the industry. This ongoing competition in the educational sector creates a perpetual challenge for Roshini's business to maintain a competitive edge. AAM Business School offers unique advantages in the private business schools in Chennai. It demands a proactive approach for innovation, marketing, and quality assurance to remain a prominent and preferred choice among students and professionals.

Under the leadership of Roshini, AAM business school is focusing on practical skills and industrial exposure by providing an internship program for the period of 6 to 9 months with stipend. It offers affordable tuition fees and makes education accessible to a wider range of students. It is also promoting inclusivity and diversity within the school. These practices help AAM business school to differentiate itself from the other B-schools. Roshini believes in 'Network is net worth' and maintains a good alumni network to promote in a wider range. She also implemented a strategy of 'pay after placement' with which students can pay up to 25% of the tuition fee after getting campus placement.

### **Challenges Faced by Roshini in her Edupreneurship Journey**

Roshini encountered various challenges in her entrepreneurial journey and also as a women edupreneur. Roshini had a dream to start a business school that would provide

affordable and practical education to students. She pitched her idea to several investors, but they were hesitant to fund a new business, especially one led by a woman. Roshini refused to give up her idea. She spent a couple of months doing research in the education sector and developed a detailed business plan. She reached out to her network and all contacts for funds support her venture. Eventually, she was able to secure funding from a group of angel investors who were impressed by her passion and dedication. Roshini faced hurdles in her early career including a lack of administrative experience when she started her first business school. Slowly developed that business school from scratch. As she was having no experience in the administration, she faced several issues. This early experience shaped her approach to entrepreneurship, emphasising the importance of adaptability and continuous self-improvement.

After 2015, Roshini faced personal life challenges such as maternity and sudden demise of her beloved brother. Balancing her entrepreneurship journey with her personal life became complex. In the competitive landscape of the education sector, Roshini faced the constant challenge from rival educational institutions. To thrive in this environment, she needed to continuously innovate and strategically differentiate her contributions. She has introduced earn while you learn, paid internship programme and industry collaboration to stay ahead of the competition. Competition from other educational institutes underscores the need for adaptability and a focus on delivering unique value to students.

Roshini's journey highlights the need for creating more inclusive networking opportunities and support systems to help her. She needed to address the complexities of achieving work-life balance while pursuing her entrepreneurial dreams. Effective time management, delegation, and family support are crucial parts of the journey. Maintaining a competitive edge to have a commitment to continuous improvement, faculty development, and investment in state-of-the-art infrastructure and technology were the main challenges of Roshini. She had limited resources for marketing and branding her business as a new entrepreneur. Roshini knew that she had to be creative with her marketing efforts. She leveraged social media and digital marketing to reach a wide range of business. Roshini focused on building relationships with potential students and their parents. She visited schools and colleges to give presentations about AAM Business School. Roshini faced challenges to build a team of experienced and qualified faculty in her B-school. As a new business school, AAM didn't have the reputation of established institutions and found it difficult to attract top talent.

## **Roshini's Journey of Innovation, Inclusion and Determination**

Roshini initiated women edupreneurs groups to foster knowledge-sharing and support among women entrepreneurs in education. She used to organize events, webinars, and mentorship programs to strengthen the women edupreneur communities and encouraged collaborations with edupreneurs from different regions and cultures. Roshini also introduced an "Earn While You Learn" business model for MBA students at AAM. This program allowed students to apply their MBA knowledge immediately through internships, benefiting both students and the organizations they worked for. AAM provided paid internships, and organizations sponsoring the program received extra support from students, while students gained practical experience and insight into corporate culture. This flexible program attracted a diverse group of students and industry professionals, making higher education more affordable and facilitating career advancements and leadership positions.

Roshini planned her maternity in advance to ensure her business would not face any challenges. Three months before her maternity leave, she documented processes, responsibilities, and key contacts. She assigned these responsibilities to each faculty member and every stakeholder who could contribute to the organisation's growth. Roshini also communicated her leave of absence to all stakeholders in advance so that they could plan their work accordingly. To maintain business operations during her absence, she hired a marketing agency to handle various tasks, including website management, social media, flyer and presentation creation, online blogs, and other marketing efforts. Roshini made sure to attend all online meetings to stay informed and not miss any critical business engagements. Additionally, Roshini prioritised self-care and received support from relatives and family members for baby care. Even during her maternity leave, she regularly monitored feedback to ensure the business continued to function smoothly.

After the death of her brother, Roshini allowed herself to grieve and process her emotions. During this challenging time, she delegated responsibilities to trusted resources to ensure her emotions did not impact the business. She also took time off to re-evaluate her priorities. Roshini adopted a gradual integration approach at the workplace by completing small tasks and progressively taking on more significant ones. Furthermore, she encountered gender-based discrimination in partner meetings and with funding agencies. To address this, she proactively took charge of the situation and addressed it by speaking up directly and respectfully. Roshini also implemented diversity and inclusivity policies within her organization and introduced diversity in the hiring process.

## **Conclusion**

Building a Business School of a strong repute is a multifaceted challenge for a woman entrepreneur. Roshini through her continuous dedication, persistence and a zeal to uplift the society for the masses had turned her passion to life. It can be concluded that some of the elements of entrepreneurial leaderships such as creating a relevant business plan, ability to mobilise the resources at the right time, recognising the threats and the opportunities, an excellent networking in her entrepreneurial journey had led the AAM Business School to mark an edge and sustain over the competitors. AAM Business School's success serves as an inspiring example for other Business Schools. With Roshini's initiatives and her clear vision to create a Business School that focuses on practical skills, industry exposure with affordable fee, AAM is shaping the lives of the youngsters. It is evident that a truly passionate woman can inspire communities, the nation and the entire humankind.

## **Questions**

1. Discuss the various management attributes demonstrated through the leadership of Roshini.
2. What are the various challenges and limitations for Roshini as Women Edupreneur?
3. Prepare the SWOC Analysis of AAM Business School led by Roshini.

## *Teaching Note*

### **Trials and Roadblocks: The Epic Voyage of Women Edupreneur**

#### **Case Overview**

##### **1. Synopsis of the case**

This case study revolves around Roshini who transitioned from a lecturer to a successful entrepreneur and Director of AAM Business School in Chennai, India. The case delves into her journey, early challenges, and the growth of AAM Business School. It highlights the strengths and weaknesses of the institution and the challenges faced by women entrepreneurs in the education sector. The case also suggests future growth strategies and implications for other business schools in India.

##### **2. Target Learning group**

This case is developed for the use of management students and women entrepreneurs. Also, this can be used to study the management aspects like decision making, leadership, innovative practices, and entrepreneurship and for budding entrepreneurs.

##### **3. Learning Objectives**

- To understand the entrepreneurial journey of Roshini and the establishment of AAM Business School.
- To explore the strengths and weaknesses of AAM Business School.
- To analyse the challenges faced by women entrepreneurs in the educational sector.
- To evaluate the strategies for the growth and sustainability of educational institutions.
- To appreciate the management attributes and principles demonstrated in the case.

#### 4. Time Line and Teaching Strategy

Time Line	This case discussion is planned for 60-70 minutes for hands on experience of the entrepreneurial journey of Roshin and to analyse the challenges faced by women entrepreneurs in the educational sector.
15 minutes	Introduction: Begin the session with an introduction to the case study and its relevance to entrepreneurship, education, and management. Highlight the key objectives of the case study
20 minutes	Case Presentation: Present the background of AAM Business School and Roshini journey from a lecturer to an entrepreneur. Discuss the strengths and weaknesses of AAM Business School. Emphasise the challenges faced by women entrepreneurs in the education sector.
15 minutes	Analysis of Future Growth Strategies: Discuss the suggested future growth strategies for AAM Business School, including online course expansion, diversification, technology adoption, networking, and internationalisation. Explore how these strategies can contribute to the institution's success and growth.
10 minutes	Implications and Takeaways: Summarise the key takeaways and implications for aspiring entrepreneurs, educators, and educational institutions. Highlight the importance of practical skills, affordability, and a commitment to student success in the educational sector.
10 minutes	Conclusion: Conclude the case discussion by reiterating the significance of Roshini's journey and the growth of AAM Business School.

#### 5. Questions for Discussion

1. **What are the key strengths of AAM Business School, and how have these strengths contributed to its success?**
  - AAM Business School's success in the competitive education sector can be attributed to several key strengths. Firstly, under the leadership of Roshini, the institution benefits from her educational background and unwavering determination. AAM's focus on practical skills and industry exposure provides students with a strong foundation for their careers,

enhancing employability. Additionally, the institution's unique global exposure opportunities to European nations and affordable tuition fees make quality education accessible to a diverse student body. The "pay after placement" model adds financial flexibility and builds confidence among students. AAM's strong alumni network, adaptability, commitment to quality, and innovation further bolster its position in the education sector.

- The institution attracts and retains students by offering a well-rounded, cost-effective education, and the "pay after placement" model instills confidence in students. Industry recognition for its practical orientation and exposure results in increased job placements and corporate partnerships. AAM maintains a competitive edge through its adaptability and innovative approaches. Positive alumni impact contributes to its reputation, while its commitment to inclusivity and diversity aligns with social responsibility and broadens its reach. The institution's distinct features, such as global exposure and the payment model, differentiate it in the market, creating a unique niche for AAM.
- 2. What weaknesses did AAM Business School face, and how did it overcome these challenges?**
- AAM Business School encountered the formidable challenge of navigating the competitive terrain within the education sector. To address this, the institution likely adopted various strategic measures. This included a commitment to continuous innovation by updating its curriculum, teaching methods, and program offerings to stay aligned with industry demands and emerging educational trends. Establishing strong partnerships with businesses and industries allowed AAM to provide students with valuable real-world experience and job placement opportunities, effectively setting itself apart from competitors.
  - Simultaneously, AAM had to contend with limited resources, a common hurdle for entrepreneurial ventures in the education sector. Overcoming this challenge entailed effective financial management, requiring meticulous financial planning and resource allocation to maximize available assets and invest strategically in areas that would propel the institution's growth. Seeking grants and funding opportunities from educational and governmental institutions may have also been explored to support AAM's expansion and development endeavors.

**3. How did Roshini navigate personal life challenges and maintain a work-life balance while leading the institution?**

- Roshini skillfully navigated personal life challenges while upholding a work-life balance by implementing several effective strategies. She harnessed the power of efficient time management, allowing her to allocate her precious hours to both professional and personal pursuits. Delegation played a crucial role in her juggling act, as she relied on a competent team to share the responsibilities of leading the institution. Moreover, recognizing the importance of a robust support network, Roshini sought assistance from her family and colleagues, creating a strong safety net.
- By adeptly compartmentalising her professional and personal roles, she ensured that one did not encroach upon the other. Her adaptability was also a key asset, enabling her to flexibly respond to the demands of her entrepreneurial responsibilities and the intricacies of life's challenges. In this way, Roshini achieved a balance between her leadership role at the institution and her personal commitments, mastering the art of entrepreneurship while gracefully managing life's complexities.

**4. What implications does this case have for other business schools in India?**

- To excel in the education sector, institutions like AAM Business School should adopt various strategic principles. These include a commitment to innovative pedagogy, with a focus on practical skills and industry exposure integrated into the curriculum to equip students for real-world challenges. Affordability is another critical aspect, aiming to make quality education more accessible to a diverse range of students.
- Moreover, fostering global exposure through international exchange programs enhances students' global competitiveness, while implementing flexible payment models eases financial burdens. Engaging with alumni networks for mutual benefits, promoting gender diversity in leadership roles, and seeking market differentiation through unique selling points are all essential strategies. Lastly, investing in quality assurance and embracing innovation and adaptability to stay responsive to emerging trends in education are vital for long-term success in the competitive landscape of the education sector.

**5. What are the essential attributes and principles demonstrated by Roshini D. T. in her entrepreneurial journey?**

- Roshini D.T.'s entrepreneurial journey was characterized by several fundamental attributes and principles that played a pivotal role in her success. Her passion for education and commitment to delivering practical and affordable learning experiences were the driving forces behind her entrepreneurial endeavors. Roshini's continuous pursuit of knowledge and commitment to personal and professional growth defined her journey, extending beyond academic achievements. Her adaptability allowed her to navigate the challenges of entrepreneurship, even without prior administrative experience, showcasing her ability to venture into unfamiliar territory.
- Furthermore, Roshini demonstrated a willingness to take calculated risks, evident when she embarked on her entrepreneurial venture. Her resilience enabled her to persevere through setbacks and failures, rebounding from adversity and persisting in the face of various challenges. Throughout her entrepreneurial odyssey, Roshini's commitment to her vision remained unwavering, guiding her decisions and ensuring that she stayed true to her goals. These qualities collectively defined her entrepreneurial journey and contributed significantly to her achievements.

### **Assignments and Assessments**

**Group Discussion:** Divide students into groups and ask each group to analyse the strengths and weaknesses of AAM Business School. Each group should present their findings and recommendations.

**Case Analysis Papers:** Assign individual or group case analysis papers that require students to evaluate Roshini's entrepreneurial journey, the challenges faced by women entrepreneurs, and the implications for other educational institutions.

**Classroom Debate:** Organise a debate on the role of practical skills versus theoretical knowledge in modern education, using AAM Business School as a case in point.

**Future Growth Strategies Presentation:** Assign groups to present and elaborate on one of the suggested future growth strategies for AAM Business School, exploring the potential benefits and challenges.

**Evaluation:** Students can be evaluated based on their participation in class discussion, the quality of their case analysis papers, and the effectiveness of their presentations. The assessment criteria should include critical thinking, application of management principles, and the ability to draw actionable insights from the case study.

**Note:** This teaching plan is a guideline and can be adapted to suit the specific needs and time constraints of the course or program in which the case study is used.

## Case Study 07

# Resilience and Renewal: The Entrepreneurship

*Journey with M. N. Technologies\**

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### Introduction

This case study offers a compelling exploration of the Journey of an entrepreneur, Sahil, as he transitioned from the world of academia to the dynamic and ever-evolving realm of entrepreneurship. From the outset of his entrepreneurial Journey, Sahil's passion for technology, specifically in website development and design, served as a guiding light, illuminating the path to his future success. Sahil's entrepreneurial spirit, however, did not emerge overnight; instead, it was a lifelong inclination that began to take root during his formative years. His innate curiosity and ambition drove him to venture into the market, where he introduced the innovative concept of selling and customizing desktop computers at significantly reduced costs compared to prevailing market rates. This early foray into the business world foreshadowed his future success and demonstrated his innate entrepreneurial acumen.

To further sharpen his skills and knowledge in software development, Sahil embarked on a journey of continuous learning and improvement. He diligently pursued various certification programs, an early indicator of his commitment to personal and professional growth. This insatiable thirst for hands-on experience eventually led him to collaborate with a small firm, facilitated by valuable connections from his father. The genesis of Sahil's transformative Journey into the world of entrepreneurship can be traced back to two decades ago, in 2003, when he took his first steps in the city of

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\* This case was developed by Kiran S. Kakade (Lala Lajpatrai Institute of Management , University of Mumbai, Mumbai), Darshan Bagade, (DES's Institute of Management Development and Research, Pune), V. Sasikala (Rajalakshmi School of Business, Chennai), Mukesh Ahirrao, Kaustav Shyamal Mukherjee (G.H. Rasoni Institute of Engineering & Business Management, Jalgaon.), Dr Makarand Wath (School of Commerce, SVKM's Narsee Monjee Institute of Management Studies, NMIMS Deemed-to-be-University, Indore, Madhya Pradesh) during 10th Online Case Writing Workshop organized by the Association of Indian Management Schools (AIMS), Hyderabad from November 1-3, 2023.

Solapur. Nestled in the heart of Maharashtra, Solapur is renowned for its flourishing textile industry and nurturing environment for budding entrepreneurs. It was within this fertile ground that Sahil emerged as the latest addition to a lineage of trailblazing entrepreneurs who have called Solapur home. In 2008, Sahil's entrepreneurial spirit found its earliest expression with the establishment of M. N. Technologies in Pune.

### **Early Entrepreneurship Journey**

In the nascent stages of its entrepreneurial Journey, MN Technologies, guided by the vision and leadership of Sahil, encountered a formidable array of challenges. The start-up, in its quest for sustainability and growth, adopted a prudent financial strategy known as bootstrapping. This approach entailed relying on Sahil's savings and the initial revenue generated from early clients to support the company's daily operations. While bootstrapping showcased a commendable level of financial discipline and independence, it also revealed inherent limitations, particularly in allocating resources for crucial marketing and sales initiatives. These limitations became a significant impediment to the company's endeavours to acquire new clients and achieve scalable growth, thereby posing substantial hurdles along its path to success.

However, the early entrepreneurship journey of M.N. Technologies was a complex financial challenge. In the early days of the company's existence, Sahil faced many other trials and tribulations that would test his entrepreneurial mettle and shape the trajectory of his venture. These hurdles ranged from the formidable task of raising the necessary funds to build the company's essential infrastructure, navigating the complicated process of registering the business, to securing potentially lucrative government projects. Each of these challenges presented a distinct set of obstacles, and each required its unique solution.

One of the initial challenges Sahil faced was the need to raise capital to fund the start-up's operations and growth. This task was particularly challenging as bootstrapping relied heavily on his personal savings and early client revenues. To address this financial constraint, Sahil explored various avenues, including reaching out to family and friends for financial support and exploring potential investors who shared his vision for the company. He was acutely aware that securing the necessary funding was essential to underpin the company's expansion and overcome the resource allocation limitations imposed by bootstrapping.

Simultaneously, building the essential infrastructure for M.N. Technologies posed its own unique set of challenges. From acquiring the necessary hardware and software

to establishing a physical office and assembling a team of talented professionals, each step required meticulous planning and execution. Sahil's hands-on approach and technical expertise played a crucial role in setting up the infrastructure efficiently and effectively. The infrastructure challenges were financial but also logistical and operational, requiring careful coordination and resource management.

Another formidable challenge in the early entrepreneurship journey was navigating the complex regulatory landscape and registering the company. This process involved complying with legal requirements, obtaining the necessary permits and licenses, and adhering to the intricate bureaucracy associated with business registration. Sahil's attention to detail and understanding of the legal aspects of starting and running a business was instrumental in surmounting this challenge, ensuring that M.N. Technologies operated within the bounds of the law. Furthermore, securing government projects represented a unique opportunity and challenge for M.N. Technologies. These projects held the potential for substantial revenue and credibility, making them an attractive pursuit.

However, they also required a deep understanding of the governmental procurement process, competitive bidding, and the ability to meet the stringent requirements and timelines associated with such contracts. Sahil's strategic thinking and negotiation skills came to the forefront as he navigated the complexities of government contracts and successfully secured some initial projects. These challenges required a unique combination of financial acumen, technical expertise, regulatory knowledge, and a relentless determination to overcome adversity. Sahil exhibited a notable capacity to surmount these hurdles individually, demonstrating his unwavering commitment to M. N. Technologies' growth and success. Through sheer grit and relentless effort, he conquered the financial, infrastructural, regulatory, and procurement challenges, gradually paving the way for the company's ascent.

By 2015, the dedication, resilience, and resourcefulness of Sahil and his team had paid off. M.N. Technologies has established itself as a reputable technology company with a strong foundation for growth and innovation. The early entrepreneurship journey, though loaded with obstacles, had forged a company that was well-prepared to thrive in the competitive landscape of the tech industry. The challenges faced during the initial stages of M.N. Technologies' Journey are emblematic of the realities encountered by many start-ups and entrepreneurs. These challenges, whether financial, infrastructural, regulatory, or related to securing projects, serve as a reminder that the entrepreneurial path is rarely smooth. It demands determination, resourcefulness, strategic thinking, and adaptability to overcome the hurdles and carve a path to success.

## **Balancing Success and Personal Loss**

Sahil experienced a personal crisis at the peak of his success, when M.N. Technologies was obtaining large government contracts and experiencing tremendous financial growth. His father's death cast a shadow on his professional achievements, leading to a deep sense of regret. Sahil had sometimes ignored precious times with his family in his relentless pursuit of professional advancement and achievement, a finding that would define a pivotal chapter in his life. His father's death served as an unsettling reminder of the significance of balancing personal and professional life. Sahil's extremely emotional experience pushed him to re-examine his objectives and renew his dedication to his family, enriching both his personal and professional journeys with greater purpose and perspective. This chapter of his life emphasized the importance of striking a balance between personal and professional goals, supporting a complete and happy life journey.

Following the loss of his father, Sahil embarked on an emotional journey of self-discovery that led him to reevaluate his commitment to his family. In 2018, when his mother fell seriously ill, Sahil made a remarkable and selfless decision. He decided to take a nine-month break from his company, MN Technologies, an entity he had painstakingly built and nurtured, and granted full control and authority to a close friend to run his business. Sahil took a tough choice to choose his family over his business. It was a highly personal and moving decision that marked a significant shift in his views and objectives. The hard world of entrepreneurship had pushed him to the height of professional achievement, but it had taken its toll on his personal life. The death of his father had made him realize that no amount of professional success could compensate for the moments he had missed with his family.

As he took that extended leave from his firm, he handed over the reins to a trusted friend, knowing that the success of his company, employees, and clients depended on his capacity to maintain its continuity in his absence. During this era of deep selflessness, he was a consistent presence by his mother's side at a time when she needed him the most. Sahil displayed exceptional effort and selflessness during this break. During his mother's sickness, he not only gave physical care but also emotional support, affection, and company. During this time, he was able to reconnect with his family on a deep and meaningful level, repairing the emotional wounds inflicted by his previous commitment to his business. This extraordinary pause from his professional life allowed Sahil to be a dedicated caregiver and support his ailing mother during a critical time, making a profound statement about his values and priorities.

### **A Test of Entrepreneurial Leadership**

While Sahil's personal Journey during this period was transformative, it was also a test of his leadership and M. N. Technologies' resilience. Giving ownership of his company to a trustworthy friend meant surrendering his company's destiny to someone else. It was a difficult decision, packed with uncertainty, but it highlighted the strength of his relationships and the dedication of his team. Sahil's friend stepped up to the plate during his absence, taking responsibility for day-to-day operations and guiding the company through this critical phase. This experience not only proved the value of solid relationships and teamwork but also the vitality of a well-structured firm with a talented team. Sahil's short departure, while emotionally tricky, allowed him to experience his company's tenacity and adaptation, reinforcing his faith in the power of his professional network and M.N. Technologies' enduring legacy.

### **Personal and Professional Betrayal**

Sahil faced a series of incredible hurdles on his stormy entrepreneurial Journey, testing the limits of his perseverance and determination. A sad revelation would heighten M.N. Technologies' emotional difficulties at a time when he was facing both personal loss and career growth. Sahil realized that his confidant and valued friend, a significant person within the corporation, had secretly engineered a betrayal of unparalleled proportions. This surprising revelation came when Sahil found that his friend had secretly siphoned off all of the company's clients and projects to start his own competing business. This betrayal struck at the heart of personal trust and professional integrity, leaving Sahil reeling from the combined blows of personal anguish and professional honesty.

The discovery of this betrayal came as a complete surprise to Sahil. For years, he saw his friend as an essential component of the organization, someone who shared his vision and goals. Their common experience in establishing M.N. Technologies had generated a sense of solidarity and confidence that went beyond business. This intimate friendship was founded on a shared history and mutual respect, making the betrayal challenging to discover. The ramifications of this betrayal were threefold. Sahil was presented with the crushing knowledge that someone he considered a close friend had deceived him. Professionally, the consequences were equally severe.

The friend's covert actions had a significant influence on M.N. Technologies, as he had successfully transferred all of the company's clients and projects to his new venture. M.N. Technologies was in a perilous position after losing clients and projects that had

taken years to win, resulting in a substantial setback to its growth and reputation. Sahil had the daunting task of not just reclaiming lost momentum but also repairing the trust of clients and partners caught in the crossfire of this treachery. To add to the gravity of the situation, before Sahil could fully assess the repercussions of this betrayal, a slew of new issues arose.

These difficulties appeared one after the other, giving a complex and multidimensional backdrop to Sahil's trip. One of the immediate obstacles was dealing with the aftermath of the betrayal of a friend, which necessitated a quick and planned response. M.N. Technologies needed a strategy to rebuild its client base and re-establish its market reputation. Sahil realized that, while the betrayal had been awful, it could not define the company's destiny. He needed to devise a thorough strategy to re-establish M.N. Technologies as a respected and dependable technology partner and regain the trust of clients caught up in the upheaval. Sahil was also faced with reorganizing the company's processes to accommodate the unexpected loss of clients and projects.

This necessitated a detailed examination of the company's strengths and a re-calibration of its service offerings. Given the immediate financial impact and the necessity to maintain the business's long-term viability, it was a daunting issue. As if these obstacles were not enough, the tech industry's broader landscape continued to develop. Sahil's responsibilities were complicated further by technological improvements, market dynamics, and growing competitors. He needed to stay alert, adapt to ever-changing industry trends, and ensure that M.N. Technologies remained competitive and inventive in a fast-changing world. Sahil had to deal with the emotional fallout of the betrayal and the professional difficulties.

Coping with the loss of a close friend, as well as sentiments of betrayal and hurt, was not an easy feat. He had to balance his personal feelings while also managing the demands of guiding his company through difficult times. This part of the entrepreneurial path highlights the complex interplay of personal and professional problems. After a startling betrayal by a close friend, he found himself navigating a complex and adversity-filled landscape. It required not only analytical insight but also emotional resilience and a solid dedication to the future of his organization. Sahil had to marshal every ounce of his will and ability to face the problems that occurred in quick succession following his deception. It was a time when his leadership would be put to the ultimate test, and his ability to traverse the complex web of personal and professional trials would determine M.N. Technologies' fate.

## **Remarkable Resilience and Determination**

This entrepreneurial Journey dives into the difficult path, commitment to rebuild, and strategic initiatives taken to differentiate his firm, M.N. Technologies, in the competitive tech market. We get insights into how resilience and determination can propel individuals and corporations to fantastic achievement as we investigate the hurdles and astounding tactics adopted. Sahil set out on a mission to revitalize M.N. Technologies and initiate a new chapter with the steadfast support of his younger brother. Their partnership was defined by a shared commitment to rebuilding and a burning determination to rise from the ashes of disaster. They created a strong team, each bringing their own set of abilities and attributes to the table. As they set out to rebuild what was once a great business, Sahil's unrelenting passion and imaginative spirit shone through. His desire became a driving force, directing their actions throughout the expedition. It was not just about resurrecting the company; it was about building something more splendid, something more substantial.

## **Bounce Back - Adapting and Thriving During the Covid Pandemic**

In a world struggling with the unique challenges offered by the COVID-19 pandemic, this Journey of entrepreneurship stands as a remarkable story of resilience, flexibility, and entrepreneurial spirit. During a period when many firms were facing complex challenges and losses, Sahil saw an opportunity to reshape his company's destiny. This journey segment dives into critical events in Sahil's path, showcasing his capacity to adapt to hardship, his imaginative approach, and his determination not only to weather the storm but to thrive among it. The COVID-19 pandemic shook worldwide markets, leaving companies of all sizes dealing with uncertainty, financial difficulties, and operational disruptions.

Many businesses were forced to shrink, cease operations, or, in the worst-case scenario, permanently close their doors. Sahil, on the other hand, regarded this massive task as a chance for transformation rather than a reason to retreat. The tipping moment occurred in the early days of the epidemic when it became evident that the commercial landscape was fast altering. Sahil's foresight made him see that the market desperately needed innovation and adaptation. He recognized that firms needed to pivot and realign themselves with changing consumer expectations in the new normal.

Sahil displayed steadfast dedication to his company's success during the pandemic. He dedicated not only his time but also his effort and resources to developing a new client base and providing high-quality services. This dedication served as the

foundation for his company's endurance. Sahil chose to invest strategically when others were retrenching and slashing costs. He understood that the crisis had created unique chances for the organization to recruit new clients and expand its reach. M.N. Technologies began to acquire a competitive advantage by providing high-quality services and reacting to changing market demands. Sahil's ability to quickly adjust to a changing business situation became a defining characteristic of his path during the pandemic. M.N. Technologies, formerly based on a traditional business model, underwent a thorough transition to meet the demands of the new normal.

One of the most significant changes was the company's approach to remote work. M.N. Technologies quickly shifted to a flexible, remote work paradigm after recognizing that many firms and employees have embraced telecommuting. This change enabled the organization to access a larger talent pool, diversify its personnel, and optimize its operations. The ability of the corporation to pivot in response to the challenges of the epidemic became a source of competitive advantage. The pandemic provided M.N. Technologies with a once-in-a-lifetime opportunity to grow its client base. Businesses in a variety of industries sought technological solutions to facilitate flawless operations as they rushed to adapt to the remote work environment. Sahil positioned his organization to deliver these solutions, exhibiting a thorough awareness of the market's evolving requirements. M.N. Technologies began to garner the trust and confidence of a growing client base by providing services of high quality and giving creative solutions tailored to each client's requirements.

During the pandemic, the company's capacity to give value and solve significant business concerns became a key engine of its growth. M.N. Technologies' ability to adapt and grow in adversity extended beyond operational adjustments. Sahil understood the value of sustaining staff morale and creating a positive work atmosphere. Despite the uncertainties of the pandemic, he prioritized employee well-being and established a friendly virtual workplace culture. The organization arranged virtual team-building activities, offered resources for remote work arrangements, and ensured open communication lines. This attention to employee well-being not only maintained staff productivity but also developed a sense of team connection and devotion.

The business world constantly changes necessitating entrepreneurs' ability to adapt and respond to new conditions and obstacles. Sahil's trip demonstrated the value of adaptation. The entrepreneur was willing to grow and remain competitive by pivoting the business model and embracing new technology and techniques. Start-ups, in

particular, must be able to adapt to shifting circumstances. The capacity to see the need for change and welcome it with an open mind is a characteristic that distinguishes successful entrepreneurs. Adaptability is a valuable asset in a world where the only constant is change.

A positive mind-set is a powerful force in overcoming obstacles and attaining success. Sahil's unflinching optimism shone brilliantly throughout the story, even in the face of significant failures. This attitude not only inspired and invigorated the staff, but it also played a critical role in keeping the organization persistently focused on its objectives, even in the face of hardship. A good attitude can transform problems into opportunities for growth and achievement. It is a driving force that generates determination and perseverance, allowing entrepreneurs to overcome even the most daunting challenges. Sahil's optimism became a guiding light for M.N. Technologies, illuminating the route to success.

### **Way Forward**

Sahil's entrepreneurial career, as exemplified by M.N. Technologies, is an exciting journey of unflinching tenacity, steady perseverance, and unwavering pursuit of a profound goal. Personal grief, professional obstacles, and significant global disruptions have distinguished this Journey. Instead of succumbing to adversity, Sahil's entrepreneurial spirit soars, culminating in fantastic growth and resounding triumph and exemplifies the attributes that define and drive successful entrepreneurs: patience, tenacity, persistence, vision, and resilience. These traits have not only allowed him to weather the storms but also to drive M.N. Technologies toward sustained growth and expansion. His leadership is an example of commitment to an entrepreneurial dream and an inspiration to others who follow.

The Journey of an entrepreneur emerges as a fantastic story of unrelenting tenacity, unyielding determination, and remarkable growth. When confronted with personal and professional adversities, the entrepreneur not only weathered the storm but emerged more robust and determined to pursue their vision. Let Sahil's experience serve as a monument to the timeless qualities that underpin the path to entrepreneurial success as we complete this case study. In a world where obstacles and uncertainty are unavoidable, resilience, flexibility, and positivism illuminate the path forward for individuals who dare to pursue their aspirations and make a lasting influence in business.

## **Questions**

1. In your opinion, which entrepreneurial skill set was the most crucial for Sahil in overcoming adversity?
2. How did MN Technologies initially fund its operations, and what were the advantages and limitations of the bootstrapping approach?
3. How did Sahil's experience with work-life balance evolve throughout his entrepreneurial journey?

## *Teaching Note*

### **Resilience and Renewal: The Entrepreneurship Journey with M. N. Technologies**

#### **1. A synopsis of the case**

The case is about the entrepreneurial journey of Sahil, who made a transition from a student to an entrepreneur. In 2008, he founded M.N. Technologies in Pune, India. This enterprise evolved into a versatile service provider offering a comprehensive range of solutions, including Website Development, Digital Transformation and consulting, and Customised Solutions. The narrative explores his challenges, such as fundraising, building infrastructure, and navigating complex administrative processes. Amid intertwined personal and professional crises, Sahil showcased notable resilience and determination, laying the foundation for his journey's triumph.

Sahil's unwavering passion for technology, particularly in website development and design, ignited the inception of M.N. Technologies. Despite financial constraints and resource allocation demands in the early stages, his steadfast determination and resourcefulness allowed him to surmount these challenges, setting the stage for the company's future growth. An impactful turning point in Sahil's journey came with a personal loss, leading him to re-evaluate his work-life balance and prioritise his family's well-being while maintaining professional excellence. Notably, he took a break to care for his ailing mother, underscoring his exceptional dedication to family and professional pursuits.

Throughout his journey, Sahil faced emotional hindrances, including the betrayal of a trusted friend. Nevertheless, his resilience and unwavering determination remained unshaken, propelling him to rebuild his business with unwavering support from his younger brother. This entrepreneurial journey underscores the power of resilience and determination in adversity, highlighting Sahil's remarkable transformation from a student to a successful entrepreneur. In the fiercely competitive landscape of the tech industry, M.N. Technologies grappled with the challenge of differentiation. As the company expanded, optimising operations and adapting to evolving market dynamics became paramount. The unexpected arrival of the COVID-19 pandemic marked a significant turning point in the company's journey. In response to adversity, Sahil and his team embraced the situation as an opportunity for renewal and growth, showcasing their remarkable resilience and adaptability. Sahil's journey stands as a testament to the capacity of the human spirit to overcome challenges and achieve success, both personally and professionally.

## **2. The target learning group**

This case is tailored for undergraduate and postgraduate students in entrepreneurship courses and executive education programs focusing on strategic management, innovation, and resilience in business.

## **3. The learning/teaching objectives and key issues**

Learning Objectives:

1. To understand the intertwining of personal and professional challenges in entrepreneurship.
2. To analyze the entrepreneurial skill sets demonstrated by Sahil.
3. To Explore critical issues in the early stages of entrepreneurship, including fundraising, infrastructure building, and securing projects.
4. To discuss the significance of maintaining work-life balance and family priorities in an entrepreneurial journey.

### **Key Issues:**

- Raising necessary funds for a start-up.
- Building essential infrastructure and navigating the complex process of registering the company.

- Securing lucrative government projects.
- Balancing personal and professional priorities.

#### **4. The teaching strategy**

The case is designed for an interactive classroom discussion, encouraging students to analyze Sahil's journey and its implications. It emphasizes critical thinking, problem-solving, and strategic decision-making. The teaching strategy includes group discussions, role plays, and a reflective analysis of the entrepreneurial challenges presented.

#### **5. Questions for discussion**

- 1. What were some of the unique solutions Sahil implemented to overcome the challenges he faced during the early entrepreneurship journey of M.N. Technologies?**

Despite financial constraints in the early stages, Sahil likely implemented resourceful solutions to maximise the limited resources available. This may have involved finding cost-effective ways to develop websites and provide services, such as leveraging open-source tools and collaborating with freelance developers. After a personal loss and realising the importance of work-life balance, Sahil took a break to care for his ailing mother. This decision showcased his exceptional dedication to family and professional pursuits. Balancing personal and professional life is often a challenge for entrepreneurs, and his approach to this challenge was unique in its prioritisation of family. When Sahil faced the betrayal of a trusted friend, he displayed resilience by rebuilding his business. He did not let this setback deter him, and he found support from his younger brother to continue the entrepreneurial journey.

This highlights his ability to overcome personal and professional setbacks. In the competitive tech industry, Sahil and M.N. Technologies faced the challenge of differentiation as the company expanded. To address this challenge, they had to optimise their operations and adapt to evolving market dynamics continuously. This adaptability is a unique solution to staying competitive in a rapidly changing industry. The unexpected arrival of the COVID-19 pandemic marked a significant turning point in the company's journey. Sahil and his team embraced the situation as an opportunity for renewal and growth. This ability to pivot and adapt to a crisis demonstrates

their resilience and ability to find unique solutions even in challenging circumstances.

**2. What strategic recommendations would you suggest to Sahil to elevate MN Technologies to the next level?**

M.N. Technologies, which has already found success in website development and digital transformation solutions, is poised to reach even greater heights by diversifying its revenue streams. This could involve delving into emerging technologies like AI, IoT, and block chain, as well as offering industry-specific solutions to expand its clientele. To maintain a competitive edge, a solid commitment to research and development (R&D) is essential, with dedicated resources aimed at exploring cutting-edge technologies and creating proprietary solutions. In addition, the company should prioritise talent acquisition and retention within the tech sector, potentially through establishing a structured training and development program to upskill existing team members.

Strategic partnerships and alliances with other tech companies and industry leaders can provide access to shared resources and new markets while expanding beyond the local market into regional and international territories, which can diversify M.N. Technologies' customer base. Investing in digital marketing and branding efforts can elevate the company's online visibility and establish it as a thought leader in the tech industry. Embracing a customer-centric approach through continuous feedback gathering and service adjustments fosters lasting client relationships. Operational efficiency can be maximised by optimising internal processes, while sustainability practices, risk management, data security, and regulatory compliance should be central to the company's strategy. Implementing a Customer Relationship Management (CRM) system further aids in managing client relationships and contributing to the company's growth and success.

**6. Analysis of data**

While the case primarily focuses on qualitative aspects of Sahil's journey, the lack of quantitative data is intentional. The emphasis is on understanding the qualitative aspects of resilience and decision-making in entrepreneurship.

**7. Background reading**

- Korber, Stefan & McNaughton, Rod. (2017). "Resilience and entrepreneurship: A systematic literature review". *International Journal of Entrepreneurial Behavior & Research*. 24. 10.1108/IJEER-10-2016-0356.
- "Bootstrap Finance: The Art of Start-ups" by Amar Bhide (Harvard Business Review)

**8. Experience of using the case**

Educators can leverage this case to stimulate discussion on the complexities of entrepreneurship, the significance of resilience, and the strategic decisions entrepreneurs must make. It provides a rich context for exploring the challenges faced by start-ups and the importance of adaptability in a rapidly changing business landscape. Encourage students to draw connections between theoretical concepts and real-world applications, fostering a holistic understanding of entrepreneurial ventures.

## Case Study 08

# KH Private Ltd: Dilemma of the Process and Quality Issues\*

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### Industry Overview

**Leaders in cookware industry:** Conair Corp., Meyer Corp., Groupe SEB, Hawkins Cooker Ltd., The Vollrath Co. LLC, Wilh. Werhahn KG, The Middleby Corp., Gorenje Group, TTK Prestige Ltd., Newell Brands Inc. Co. brand share of Pressure cookers and brand share of non-stick cookware are shown in Annexure -1.

### About the company

Kitchen Essentials was founded in 1995 with the goal of offering high-quality stainless-steel kitchenware, houseware, cookware, and hotel ware. Kitchen Essentials designs and manufactures items with a thorough understanding of how they will be used. In order to design goods that are durable, stylish, and easy to use, we engage highly talented and experienced technicians. Depending on the purpose and end use, their goods are made from Stainless Steel Grades 200, 304, and 430. Their commitment to excellence is exemplified by the design and manufacture of our goods. Quality, mass manufacturing, and prompt delivery are all priorities. Kitchen Essentials TM is a well-known and renowned brand in India, with a strong reputation in the international market for OEM manufacture. When it comes to international markets, their clients include importers, distributors, retailers, chain stores, and specialist retailers. Exports to Europe, the United States, South East Asia, the Far East, Africa, and other nations have resulted from the company's grasp of international trade and commitment to supplying high-quality products.

### Problems faced by the company:

Teams of KHP namely the Production Manager Mr. Sridip and General Manager G.K. discussed about the problems faced in the production floor of the unit and they found out the following problems:

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\* This Case was developed by Anumala Kalyani (Narsee Monjee Institute of Management Studies, Hyderabad, India), Gajulapally Radhakrishna (KLHGBS, Hyderabad, India), and Wagle Anish (Narsee Monjee Institute of Management Studies, Hyderabad, India).

### **Problems faced by the company:**

Teams of KHP namely the Production Manager Mr. Sridip and General Manager G.K. discussed about the problems faced in the production floor of the unit and they found out the following problems:

#### **Cooker Assembly (refer to annexure 3)**

- Absence of QC after sunray and buffing process (refer to figure 6.1 & 6.3) because of which the defects are identified in the assembly line of cooker after cleaning.
- There is no record keeping of how much quantity was sent to rework.
- In cooker assembly line, the people involved in the process were moving due to which the entire assembly line was stopped.
- There is no traceability of product between inline inspection and final inspection report.
- There is no proper format of inward inspection and there will be no availability of product drawing to the inspector.
- In daily production sheet there is no start & end time due to which there is no traceability of the individual performance with respect to time.
- Absence of cycle time of individual process due to which we cannot set a benchmark for the operator.

#### **SS Kitchen Set Assembly (refer to annexure 3)**

- In the assembly line of kitchen set, the operator in the assembly line has to move from the line to bring the material required from the stored place. This resulted into stoppage of line.
- The cleaning person moves out of the assembly line due to which the cleaning process slows down further which is also a bottleneck.
- Shortage of products required to pack a kitchen set because of which the packaging was stopped.

And the teams also found that the following wastes are found in the production floor

1. Wastage due to defects
2. Wastage due to over-processing

3. Waiting Wastage
4. Non-Utilization of skills
5. Wastage due to Transportation
6. Inventory
7. Wastage due to Motion
8. Excessive production
9. Traceability of the defective products
10. Defect analysis
11. Quality check on inward material
12. No continuous monitoring in the assembly line

To solve these issues Mr. G.K (GM) has appointed a consultant by name Mr. Vasikaran. First of all, Mr. Vasikaran wanted to retrospect the companies process, process flows (refer to annexure 2) of different items produced go through the market conditions and then to find out the alternatives for the above-mentioned problems.

### **Cookware market product line analysis**

*The factors that influence sales trends:* Regular LPG-fuelled cooking stoves are among them. Induction cookware is becoming increasingly used in both household and commercial settings. The market's obstacles, such as the pandemic's setback. The researchers worked on the report considered all of the factors and produced an accurate report that projects growth and trends for 2021 and subsequent years. The Cookware Market Segmentation Based on Material - Aluminium - Stainless steel - Others Stainless steel, which had a market share of 54.7 percent in 2020, had the most use and demand.

Stainless steel has a wide range of uses, and its rust-free and non-reactive qualities ensure that cookware created from it lasts. The amount of chromium added to nickel determines the material's quality. The optimum type of stainless steel is 18/10. Aluminium, on the other hand, is expected to grow in popularity between 2021 and 2028. The CAGR is predicted to be 7.4 percent. Aluminium is lightweight and is frequently reinforced with metals such as copper or magnesium. Because naturally occurring metal is reactive to the atmosphere, aluminium cookware must be anodized or coated with a non-stick coating.

## **Product application Insights**

Pots and pans were the most popular cookware items in 2020, accounting for 63.1 percent of the global market. Cooking requires pans and pots, and with the introduction of stylish and versatile cookware, this cookware has seen increased demand depending on individual needs. Colour, function, and design variations were requested. Ceramic and steel, for example, were in high demand. With increased customer awareness, sustainable cookware was also in high demand. In terms of value, the residential sector dominated the cookware business in 2020, with a share of 77.3 percent. Demand in the cookware business will be driven by urbanization, residential communities, and nuclear families in the next years.

## **Product line of the company**

The company has basically 5 main product categories which they offer:

1. Pressure Cookers, 2.Hard Anodized Cookware, 3.Non-Stick Cookware, 4.Stainless Steel Cookware, 5.Tripoly.These are the 5 main product categories which the company manufactures and then sells in both in the domestic and international market. There are separate units set up for all the 5 mentioned with an average daily production capacity of over 1000 units per day of different shapes and sizes. After listening to G.K and Sridip (Production Manager) and going through the market conditions Vasikaran has come up with the following solutions or alternatives for different products.

### **1. Pressure cooker**

- Addition of four people in the cleaning process and Shifting the machine near the assembly line
- Combining two operations (air spray & lid dismantle) and Proposed assembly inspection report, sample format of the defect matrix and root cause analysis

### **2. SS Baby pot**

- Shifting the manual riveting near the conveyor

Sridip has started following the above solutions and after incorporating them, he found the below mentioned results in the production line of the factory.

**1. Pressure cooker:**

- Throughput time reduced to 2.65 minutes from 3.45 minutes (refer to annexure 4), and the cleaning process reduced to 46 seconds from 92 seconds. Movement of material and people reduced. Reduction in cost (refer to annexure 5) to keep track of the defect's quantity and the frequency of a particular defect. Trace the quantity being available in the assembly line and also, the product's quantity to be dispatched by job order number
- **SS Baby pot:** Movement of material and people reduced Improvement in the ergonomics

**Questions for discussion**

1. What is an assembly line? What is process flow? What are value-adding and non-value-adding activities? How will you identify them? What is productivity?
2. What is throughput time? And what is cycle time and how do you calculate cycle time?
3. What is cost analysis? What are Standard Operating Procedures (SOPs)? How do SOPs help in maintaining quality?

## *Teaching Note*

### **KH Private Ltd: Dilemma of the Process and Quality Issues**

#### **Synopsis**

This case rotates around the problem of the process flow, cycle time, need of standard operating procedures and cost incurred to run the processes required for manufacturing a product. Quality team and General Manager are debating the problem. Right process flow is very important for a company to run efficiently. It helps standardize the process which in turn helps to maximize the output. In the assembly line, individual parts are manufactured at different places and then they get assembled in assembly line. Hence, quality of those products also plays an important role as if any defects identified in the assembly line will hamper the productivity of the entire line. So, there is also a need to improve the quality procedures that are followed. So, this case explores all the factors that contribute to the smooth functioning of the process with minimum resource utilization. This case enables for the smooth functioning of assembly line and process involved in improving quality.

#### **Target group of teaching case study**

It is intended for use in MBA Operations Management. Students must be able to learn the production systems, solve the cycle times and analyse the cost. This case can be taught while introducing different production systems.

#### **Teaching objectives**

After discussing this case, the professor will be able to enable the students with the following of canvases of like concepts: Understand how the assembly line works, Reducing cycle time by eliminating non-value-adding activities, Reducing cost, Creating Standard Operating Procedures to increase the quality, Creating a new assembly layout.

**The Teaching Strategy:** The case study should be given to students before the class so that students come prepared for discussion.

## Time Allocation

S.No.	Particulars	Time (in minutes)
1	Introduction to production systems	20 minutes
2	Cycle time calculation	10 minutes
3	Identifying non-value adding activities	10 minutes
4	Cost analysis	10 minutes
5	Setting SOPs	15 minutes
6	Concept learning & consolidation of discussion	25 minutes

## Teaching plan

The discussion need to start with an introduction to different production systems. Subsequently, the instructor may discuss the importance of identifying non-value adding activities so as to reduce the cost and through put time which is a very essential part of any manufacturing firm. The instructor will be discussing the importance of productivity, cycle time, and throughput time. Importance of maintaining quality and setting up the standard operating procedures for quality control need to be discussed.

## Case Analysis

### Brief on different production systems

The production systems are classified into the following types:

1. Job shop production, 2. Project industries, 3. Batch (intermittent) production 4. Process industries (Flow or Continuous process production) and 5. Cellular production.

**Job shop production:** Job production is a technique that businesses typically use to execute all of these tasks simultaneously. When products are unique, this strategy is frequently employed. For instance, an architect will always create unique designs for each building or other structure. A single worker or team of workers completes the entire task throughout job production.

**Project industries:** The key feature of the 'project type industries is that the materials, tools, equipment and personnel are brought to the location where the product is to be fabricated.

**Batch (intermittent) production:** Intermittent production is defined by APICS (American Production and Inventory Control Society) as a form of manufacturing in which the job pass through the functional departments in lots or batches and each lot may have a different routing.

**Process industries (Flow or Continuous process production):** Process manufacturing is defined as the production that adds value by mixing, separating, forming and/ or performing chemical reactions. It may be carried out in either batch or continuous mode. Process industries manufacture highly standardized non-discrete products in extremely" large volumes using a continuous process. Products that flow into continuous streams fall in this category. In flow type or process industries products are typically bulk commodities, which may be packaged to order. Steel, ores, cloth pharmacy products, gases, chemicals; petroleum products, cement, rubber, paint, paper processing etc. are some of the examples of process production.

Mass production falls under this category only. The manufacture of discrete parts or assemblies using a continuous process are called Mass production or Repetitive production. When the volumes are very large, a fixed assignment of resources, which otherwise would be risky, is justified. The machinery is arranged in a line or product layout. Specialized departments will disappear and their place is taken by assembly lines. Material handling systems can automate, thus bringing down the cost of material handling per unit. Automobile assembly line is a typical example of mass production.

**Cellular production:** The cellular production system is based on group technology, which seeks to achieve superior performance (efficiency) by exploiting similarities inherent in the parts. In cellular production, groups of parts that have similar processing requirements are grouped into part family.

### **Relevant Readings**

1. Most textbooks on Operations Management (at the MBA level) include detailed coverage of different manufacturing or production processes or systems. However, they may differ slightly in the terminology used.
2. Production and Operations Management (6e) by S N Chary, Mc Graw hill Publication.
3. Operations Management Theory and Practice (3e) by B. Mahadevan, Pearson Publication.
4. Willy Shih, Michael W. Toffel (2019). Production processes, HBR.

5. Steven J. Spear (2004). Learning to lead at Toyota, HBR.
  6. Industrial Engineering and Production Management (2018). S.Chand and company Limited, New Delhi.
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## **References**

1. Assembly Line - Meaning, Importance, Types, Process & Example | MBA Skool
2. <https://www.qualitygurus.com/value-added-vs-non-value-added-activities/>
3. <https://www.isixsigma.com/manufacturing/cycle-time-vs-throughput-time-whats-the-difference/>
4. IshinAkyar (2012), Standard Operating Procedures (What Are They Good For ?), DOI: 10.5772/50439 <https://www.intechopen.com/chapters/37593>
5. Markets Guruji - <http://www.marketsguruji.com/stove-kraft-ltd/>
6. Martand T Telsang (2018). Industrial Engineering and Production Management.
7. S.Chand Publication (3<sup>rd</sup>ed), New Delhi.
8. Quality assurance: Importance of systems and standard operating procedures

## **Annexures**

### **Annexure- 1 - Brand Share (by Volume) 2020**

#### **Pressure Cookers**

<b>S.No.</b>	<b>Brand</b>	<b>Brand Share</b>
1	TTK Prestige	48.2%
2	Pigeon (Stove Kraft Ltd)	11.4%
3	Hawkins Cookers Ltd	34.9%
4	Others	5.5%

#### **Non-Stick Cookware**

<b>S.No.</b>	<b>Brand</b>	<b>Brand Share</b>
1	TTK Prestige	58.2%
2	Wonderchef	22.3%
3	Pigeon (Stove Kraft Ltd)	18.9%
4	Others	0.5%

(Source: <http://www.marketsguruji.com/stove-kraft-ltd/>)

### **Annexure- 2 - Process Flow**

Process flow plays a very important role in smooth functioning of any company. For the process to be smooth in the manufacturing company, the facility layout becomes a very significant factor as it helps in maximizing the efficiency of the production line by ensuring smooth flow of work, material and information in the system. An ideal layout will help in many ways as follows:

1. Effective material handling
2. Optimum use of available area
3. Reducing the production delays
4. Elimination of bottlenecks
5. Efficient utilization of labour

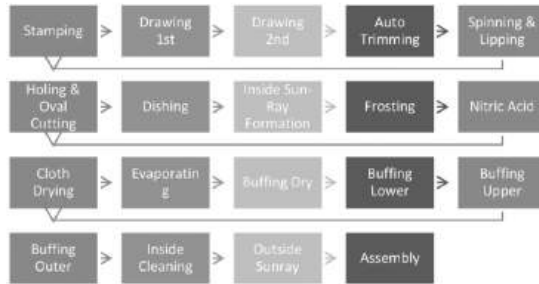


Figure 2.1: Aluminium Inner Lid Non IB Pressure Cooker Process Flow

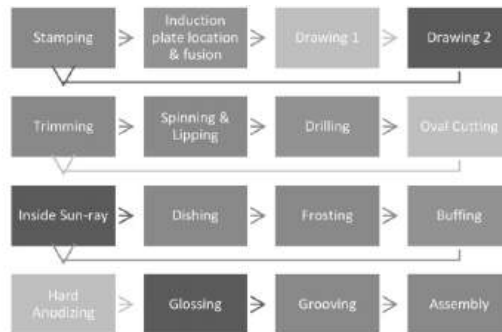


Figure 2.2: Aluminium Hard Anodized Inner Lid Pressure Cooker Process Flow

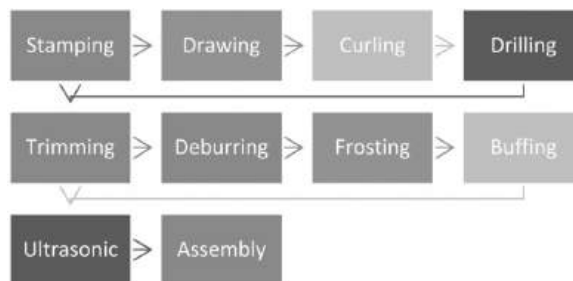


Figure 2.3: Aluminium Lid Process Flow

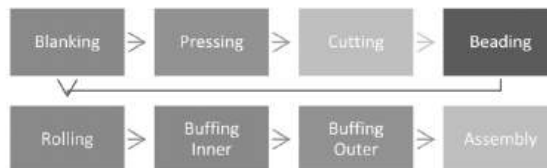


Figure 2.4: SS Baby pot Process Flow

Annexure-3 - Assembly Line of different products

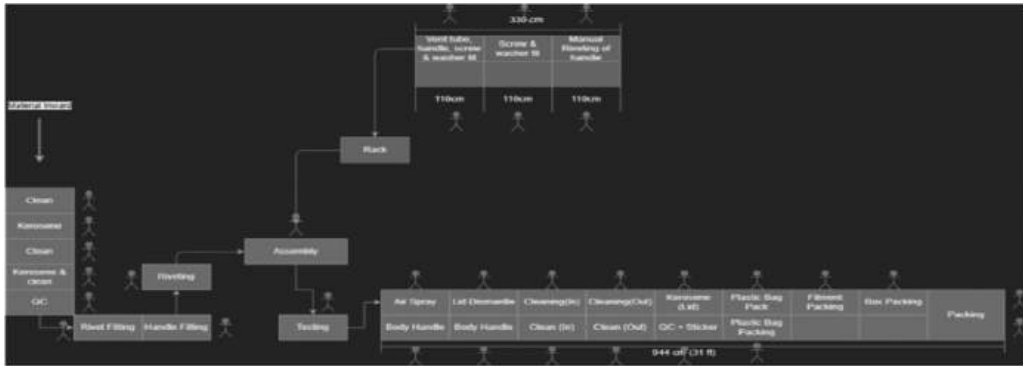


Figure 3.1: Pressure Cooker Assembly Line

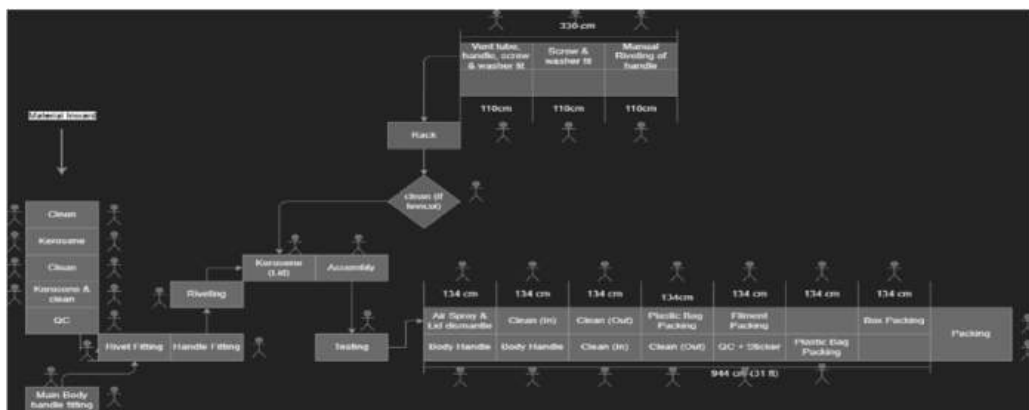


Figure 3.2: New Pressure Cooker Assembly Layout



Figure 3.3: SS Baby pot Assembly Layout



**Annexure- 4 - Cycle time Analysis**

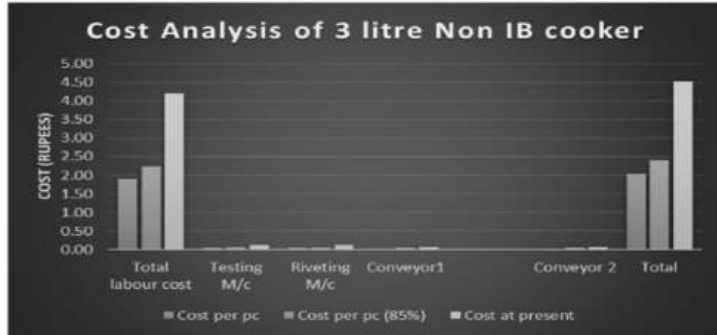
**Table 4.1: The cycle time for 3 litre Non IB Cooker**

Assembly Cooker Non IB sleek (3litre) Homezone									
S. No.	Process	Cycle Time (in sec)			Avg Cycle time per piece	Per min	Per Hour	Per Day	Per day (85 % efficiency)
		1	2	3					
1	Cleaning1	21	20	18	19.67	3.05	183.05	1647.46	1400.34
2	Kerosene1	14	7	18	13.00	4.62	276.92	2492.31	2118.46
3	Cleaning2	23	18	19	20.00	3.00	180.00	1620.00	1377.00
4	Kerosene2	19	20	24	21.00	2.86	171.43	1542.86	1311.43
5	Cleaning3	15	18	21	18.00	3.33	200.00	1800.00	1530.00
6	Rivet fitting	14	13	16	14.33	4.19	251.16	2260.47	1921.40
7	Handle fitting	8	7	8	7.67	7.83	469.57	4226.09	3592.17
8	Riveting	9	10	9	9.33	6.43	385.71	3471.43	2950.71
9	Pressure Testing	10	12	11	11.00	5.45	327.27	2945.45	2503.64
10	Air spray	10	12	9	10.33	5.81	348.39	3135.48	2665.16
					144.33				
11	Lid dismantle	3.5	4	4	3.83	15.65	939.13	8452.17	7184.35
12	Kerosene	10	11	10	10.33	5.81	348.39	3135.48	2665.16
13	Cleaning(inside)	6	7	6	6.33	9.47	568.42	5115.79	4348.42
14	Cleaning(outside)	14	16	16	15.33	3.91	234.78	2113.04	1796.09
15	Plastic packing	15	10	8	11.00	5.45	327.27	2945.45	2503.64
16	Safety box	10	11	10	10.33	5.81	348.39	3135.48	2665.16
					57.17				
17	Body handle fitting	32	25	29	14.33	4.19	251.16	2260.47	1921.40
18	Clean(inside)	10	9	12	10.33	5.81	348.39	3135.48	2665.16
19	Clean(outside)	8	9	8	8.33	7.20	432.00	3888.00	3304.80
20	Sticker application	5	5	6	5.33	11.25	675.00	6075.00	5163.75
21	Plastic packing	8	9	8	8.33	7.20	432.00	3888.00	3304.80
22	Inserting in box	8	7	8	7.67	7.83	469.57	4226.09	3592.17
23	Box packing	6	7	7	6.67	9.00	540.00	4860.00	4131.00
					61				
		Throughput Time			205.33 sec				
					3.42 min				

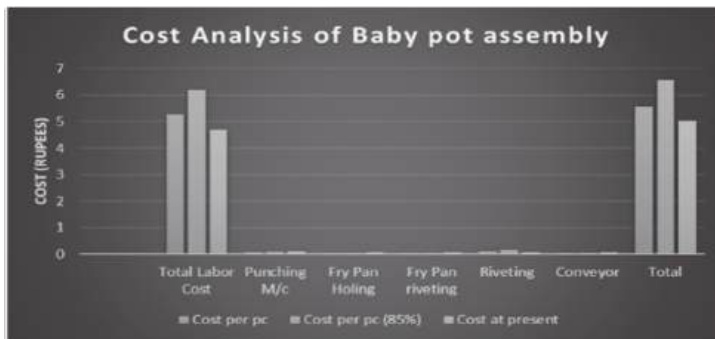
**Table 4.2: The cycle time for SS baby pot**

Baby pot set (39 pc) Assembly (UNHCR)									
S.No.	Process	Cycle Time (in sec)			Avg Cycle time per piece	Per min	Per Hour	Per Day	Per day (85 % efficiency)
		1	2	3					
1	Body Pot Holing(5+7Lit)	11.30	10.40	10.60	10.77	5.57	334.37	3009.29	2557.89
2	Manual riveting(5 people)	67.00	85.00	63.00	71.67	0.84	50.23	452.09	384.28
3	Riveting M/c	30.00	29.00	30.00	29.67	2.02	121.35	1092.13	928.31
3.1	Riveting final	21.80	23.20	22.50	22.50	2.67	160.00	1440.00	1224.00
4	Etching + clean	6.00	6.70	5.80	6.17	9.73	583.78	5254.05	4465.95
5	Cleaning(7 people)	68.00	82.00	56.00	68.67	0.87	52.43	471.84	401.07
6	Packing	10.30	9.60	10.80	10.23	5.86	351.79	3166.12	2691.21
7	Plate assembly	10.40	11.10	11.20	10.90	5.50	330.28	2972.48	2526.61
8	Cutlery assembly	2.00	2.80	2.50	2.43	24.66	1479.45	13315.07	11317.81
9	Cup assembly	8.00	10.00	8.50	8.83	6.79	407.55	3667.92	3117.74
					<b>219.33</b>				

### Annexure- 5 - Cost Analysis



Graph 5.1: Cost Analysis of the 3 litre Non IB Cooker Graph



Graph 5.2: Cost Analysis of the Baby pot Assembly

### Annexure-6 - Types of Defects



Fig 6.1: Showing various types of defects

## Book Review 01

# Win the Leadership Game every time. Nine Invaluable Laws to Magnify your Success

(Authors: Payal Ninjiani. New York: Routledge, Year of Publication: 2023).

*P. Narayana Reddy\**

There are many books on leadership development - both at individual level as well as corporate level or in the society. In spite of having so many on the same subject, still, Payal's book on **win the leadership game every time** is definitely adding new insights on the subject leadership. The contents of the book are very precisely in its objective and the author is clear in her mind how to win the game with exceptional leadership qualities. While reading the book, it reminds some old shadows of ancient, spiritual and contemporary issues on leadership.

After reading the book, one can grasp its intention rather the author's intention is to influence people to become leaders in their own field and in turn influence the society to be a better place to live. Throughout the book, author's intention is very much explicit. The author has presented the contents in three parts. Part one is introduction with eleven important components which sets the framework for part two which is the real contents of the leadership laws. Part two narrates nine laws that governs the leadership transformation of any individual may be within. Part three is conclusion and final observation expressed as outcome of the books that it intends. Author believes that there are certain laws that magnify the success. Means, though success is within but comes explicitly by practicing certain laws.

The basic premise on which this book starts its journey is on the following 11 important hypothetical issues.

1. Winning is about having a faith in one self and his/ her abilities. No one can stop winning if you have committed with self-faith.
2. Winning should be an addition. If all people have the authentic winning addition, miracles will happen in the world.

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\* *Director General, ICBM-SBE, Hyderabad.*

3. Believe leadership is nothing to do with the position or title. Accept that brutal truth. You have to realize no one will tell you about it.
4. Your success begins in your mind.
5. One has to realize that we in race to win every time and every stage.
6. Failures will hurt but no need to afraid because success will come with new lease of life.
7. success needs to break the conventional growth approaches.
8. Realising the new rules and approaches is essential in modern days of success
9. You should not be like others if you want success.
10. We play the wrong game, so failure.
11. Winning should help to sharpen the saw.

**Chapter 1** on *The law of gap*: the law of gap says that gaps exist in some parts of our life. It is difficult to control or anticipate every gap that appears in our way. But one can control how the gap may be by adjusting oneself to the gap or adjust the gap to oneself or one may wait to fill the gap. Some may work out how to close it. They explore all possible options to close the gap every time in their journey from time to time. That is why they become leaders.

**Chapter 2** on *The law of mastery*: In this chapter, the author has tried to give clear idea about the mantra for success. She believes that winning is less about natural talent and more about the mastery of your craft.

**Chapter 3** on *The law of authenticity*: Practicing authenticity is a challenging task but to become the best leader it is essential to be honest and authentic self every day. It is proved beyond doubt that one needs to realize that one cannot be all things to all people. One has to have priorities, goals and dream and to play the best game as a human being.

**Chapter 4** on *The law of circles*: Network of some valuable connections is important to achieve the intended success. So one has to build one's circles or what we call as network. But one has to realize that just network may not be sufficient but winning circles are more important. So one has to curate one's own winning circles to win.

**Chapter 5** on *The law of problems*: In this chapter, it is analysed that problems are common to all but type of problem differs from person to person irrespective of the

financial status. But connecting with the followers' problems will make oneself a great leader.

**Chapter 6** on *The law of transference*: The basic and fundamental issue in successful development of oneself is based on transferring the leader's energy to the team and the organization. The growth and development of a leader is to understand between preserving knowledge to oneself to transferring from oneself to others. The author believes that if the transference is more outbound then that leads to success.

**Chapter 7** on *The law of mirror*: In the present day fast changing environment, leaders should recognize their not physical appearance but their behavior must have their influence on others. She believes that this reflection is nothing but law of mirror. In other words, law of the mirror says you are treated and you should allow other people to treat you. Treating people with respect is more than anything else is the best quality of a leader.

**Chapter 8** on *The law of visibility*: The great leaders live among their people, their clients and their team. They don't tell what to do or show them how to do it. They live daily among them. They are visibly with them while smiling and sharing their concerns. It means that leaders practice the law of visibility. Ultimately, the great leaders make their visibility relevant.

**Chapter 9** on *The law of energy*: The law of energy principle is that achieving anything worthwhile in one's own career requires a high level of physical, mental and spiritual power. Recharging and reconnecting though required but they are short lived. In the process of making oneself great, all his/her personal energies must become organization's energy.

The major issue whether it is in business/ industry or for that matter in the society, is that why majority of people get stuck in the bottom of the pyramid or fail in their career in the mid-way? A few percentages of people see the success. In spite of having better skills and abilities, success is rare to many. Real challenge is that why the success is not for all. Author feels that the role of leadership comes at this stage. This book has touched upon this basic issue of **why not to win**. The author has tried with all her experiences and incidents in her journey of becoming a successful leadership trainer, addressed one facet of successful leadership and succeeded in influencing the people.

The main objective of this book is to guide people to win the race with the help of nine important laws with which the author came out as a framework. At every stage in the book, the relentless effort of the author over a period of more than twenty years as a trainer executive coach and working with the people is clearly indicated. She believes that there are ways to win the game always and at every stage and at all levels in the career and in life. Author strongly believes that the suggested laws will transform oneself into a winner. Leaders always believe as the author perceives that they move things forward with proactive approach.

The author Ms. Payal Nanjiani's understanding of winning is unique and innovative in comparison to other experts in the same field. Proof is that her experience as a trainer and executive coach for more than two decades helped thousands of people to become winners in their field across the world. The substantiated evidence is well recognized by the industry and business. Her approach hugely demonstrated people to change their thinking, decisiveness in action and winning as leaders throughout. The book **wins the leadership game every time** is a great read and offers people great insights and effective transformation the way they think and act at their work place.

The book is effectively integrated the theory with anecdotes, stories, live examples from industry, business, scriptures and her own learnings while doing executive trainings. All these innovative and in depth analysis of various dimensions of leadership helped her in distilling into a niche for herself and helped the corporate and academic world. At the end of every chapter/law, there is a practical Rapid Action Plan (RAP) for the readers. Readers can practice at their convenience to improve step by step in their field to become the extraordinary leaders over a period of time.

This is nothing but work sheet to people to practice and move to the next level. So the entire effort on her personal front and across her training journey on leadership helped her to become the leader and also a great lesson for others to become leaders. The book has come for reprint in less than a year itself shows how the book is influencing the society. In my view, this book will definitely be an addition to the existing literature on leadership and will be an asset in one's own library.

## Book Review 02

# Transforming Education for the Future

(Author: Sajjad Ahmed. Amazon Asia-Pacific Holdings Pvt. Ltd.,  
Year of Publication: 2024, ASIN: B0CRVZD9DT, Pages: 224, e-Book Price: 449)

*Surbhi Agrawal\**, *Namrata Jain\*\**

The book *Transforming Education for the Future* is a transformative journey for the students from the traditional teaching of classrooms to Artificial Intelligence (AI) competencies in K–12 education. From limited resources of teaching and learning to personalized learning for each student, the book effectively presented the way AI can play a pioneering role in reshaping learning paradigms. The author demystified AI-related complexities and highlighted its educational potential in different aspects. Providing significant weightage on the ethical considerations while using AI, the book presented an overview of the global AI curricula, the significance of teacher training for the right AI education, and explored innovative tools and learning environments in different geographies of the world. The book is a comprehensive exploration on the significant impact of AI on education with real-life case studies signaling a shift towards personalized, inclusive, and technologically enriched learning experiences.

**Chapter 1: Introduction** is divided into 3 parts in the book that is: *Rapid Advancements in AI Technology*, *The Need for AI Competencies in K-12 Education*, and *Challenges and Opportunities in Integrating AI into Education*. The chapter presented the journey of AI from an add-on to becoming a significant part of the everyday working of the people, emphasizing on education system. Beginning from historical innovations such as the abacus and printing press, bringing smart algorithms and insights made education more dynamic, visual, and future-ready. But using AI also calls for the ethical security of the users such as protecting student privacy and ensuring fairness in AI tools. The chapter is a call to action, encouraging a shift in traditional teaching methods to meet

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the needs of the 21st century while maintaining high ethical standards in the new era of education.

**Chapter 2:** *Historical Perspectives* further elaborated the history of educational technology. The chapter is segmented into three parts: *The Evolution of Educational Tools*, *Pioneering AI Initiatives*, and *Lessons from Early AI Integration into Schools*. It outlined the transformation of education from traditional chalkboards to advanced AI-driven methodologies, knowledge-based systems, and immersive virtual environments, presenting a significant leap towards a dynamic and technology-enhanced education era. Besides benefits, the chapter also covered major challenges in AI integration such as cultural adaptability and training various stakeholders in education. Overall, the narrative speaks about the benefits AI brought to education with its advancements but contains hurdles that are important to look upon in the modern educational landscape.

**Chapter 3:** *Understanding AI* breaks down the complexities of Artificial Intelligence into three sub-parts namely *What is AI?*, *AI in Everyday Life: Relatable Examples of AI Applications*, and *Ethical Considerations in AI Education*. The chapter helped in understanding the complex yet core concepts of AI including machine learning, neural networks, and natural language processing. It illustrated AI as the backbone of modern technological outputs that makes it important to learn in the present time. The author explained various relatable applications that people use in daily life such as Siri, Alexa to other healthcare platforms, emphasizing how AI customizes interactions to user needs. But besides it, the chapter also critically emphasized on the issues such as data privacy advocating the responsible use to protect diverse student communities and ensuring AI benefits are equitably shared.

**Chapter 4:** *Mapping Existing AI Curricula* delved into the details of AI education globally and dissected into three parts namely *Global Overview of AI Curricula*, *Curriculum Content and Learning Outcomes*, and *Curriculum Alignment with Educational Standards*. The chapter presented varied approaches countries took for AI education, covering basic to advanced topics such as robotics and its integration with traditional subjects. It underlined the importance of practical tools and effective teaching methods to advance education. Moreover, it stressed the collaborative efforts in curricular development through expert consensus and industry-academic partnerships. The chapter acts as an essential guide for educators and policymakers, detailing the process of creating comprehensive and relevant AI educational frameworks for preparing future-ready learners.

**Chapter 5:** *Tools and Environment* structured into three focused areas: *Preparing Tools and Environments, AI-Powered Educational Software, Chatbots, and Virtual Tutors*, and *Creating AI-Friendly Learning Environments: Infrastructure and Accessibility*. AI technologies such as chatbots and virtual tutors have the potential to tailor education to individual needs, supporting practical skills through simulations and coding exercises. The chapter stressed the importance of adaptive learning and engagement techniques including gamification and real-time feedback to enhance student involvement. Such initiatives can help create inclusive, accessible learning spaces, that align with global educational goals. But it also requires infrastructure necessities such as high-performance computing and secure internet connectivity for supporting diverse learners in AI-enhanced educational scenarios.

**Chapter 6:** *Pedagogies and Teaching Strategies* explained the transformative role of AI in education with a focus on tailored or customized learning experiences and divided into three parts that is *Personalized Learning, Collaborative Learning: Leveraging AI for Group Activities*, and *Assessment and Feedback: AI-Driven Tools and Automated Feedback*. The chapter explained the way AI-enabled adaptive platforms and intelligent tutoring systems can help in customizing assessments and feedback, enhancing both individual learning outcomes with group activities. AI opened the doors of global interactive learning environments with its capability to facilitate virtual collaboration, intelligently assemble groups, and provide real-time analytics for group dynamics.

**Chapter 7:** *Teacher Training* delved into empowering educators for the new technology-driven education system and segmented into three critical areas - *Upskilled Educators, Professional Development Programs: Successful Initiatives*, and *Overcoming Resistance: Addressing Concerns, and Encouraging Teacher Buy-In*. The chapter highlighted the acute need for educators to become facilitators and mentors in AI-enabled learning through comprehensive and continuous professional development. And it can only be done via practical initiatives such as collaboration with the industry for hands-on exposure to AI technologies, leveraging online platforms for flexible learning and experiential certification programs to validate skills. The chapter overall urged to try eliminating job displacement fears and foster teacher engagement realizing their prime role to inspire and lead students in the new era of AI and education.

**Chapter 8:** *Key Considerations for Future Planning* addressed the critical role of government and its policies in shaping the future of AI education and is divided into six parts namely *Lessons from Successful AI Integration, Identifying Gaps in Current Curricula, Addressing Ethical and Societal Implications of AI Education, Inclusivity in AI*

*Education Ensuring Accessibility for All Students, Collaborations and Partnerships for Effective Implementation, and The Role of Government and Policy in AI Education.* The chapter outlined the necessity of realistic policies for equal AI education access, setting national AI competency standards, and the need for sufficient funding and technological infrastructure support for the right teacher training and other effective AI integration. Overall, the right government initiatives and adaptable policies are necessary for the economies to create effective AI education and prepare students for an AI-driven future.

**Chapter 9:** *Strategies for Implementation* provided a layout with strong suggestions to create strategies integrating AI and education. The chapter included seven parts namely *Building Enabling Policies for AI Education, Designing National Curricula or Institutional Study Programs, Leveraging Technology: AI Tools for Education, Establishing Supportive Learning Environments, Fostering Teacher Professional Development, Engaging Stakeholders: Parents, Students, and the Community, and Continuous Monitoring and Evaluation of AI Programs.* It navigated the AI-driven education complexities with respect to geographic and societal contexts. The chapter stated that different geographies can have varied and flexible curriculum aligning their national policies and other standards. It also explained the importance of involving parents, students, and the broader community in AI educational initiatives and the critical role of continuous monitoring and evaluation for right learning outcomes.

**Chapter 10:** *Empowering Young Minds through Game Development and Computer Language Learning* is again dissected into three subparts namely *The Importance of Early Exposure, Engaging Programs for Young Coders, and Strategies for Effective Teaching.* The chapter explained the benefits of early exposure of children aged 8 and above to game development, coding, and robotics fostering computational thinking, problem-solving, creativity, and confidence in digital literacy. The author emphasized that with the help of parental support, a certain level of gamification in education can help children in playful learning with real-world connections and teamwork fostering foundational knowledge of AI.

**Chapter 11:** *Charting the Course: Professional Learning Paths for Tech-Savvy Adolescents* further elaborated the AI education for adolescents. The chapter is divided into three parts that is *The Importance of Professional Learning Paths, Tailored Learning Paths, and Strategies of Effective Teaching.* It included concepts such as AI, Machine Learning (ML), Data Science, Blockchain, and Game Development for adolescents. Early exposure to such fields cultivates technological fluency, aligning with industry trends, and encouraging a proactive approach to learning. The author wants to shift the focus on

project-based learning with practical and right mentorship in AI-influenced education for adolescents to nurture them as good professionals and entrepreneurs for the future.

**Chapter 12:** It presented various *Case Studies* focusing on AI integration in education at different levels in K-12 schools. The chapter is dissected into three parts - *Successful AI Integration in a K-12 School*, *Challenges and Solutions in Implementing AI Curricula*, *Student Success Stories*, and *Teacher Perspectives on AI in Education*. The case studies help to understand the real-life examples and situations of K-12 schools globally and their success in combining modern technologies and AI concepts with conventional subjects in different school grades.

The last part, *Conclusion* presented the overall gist of the book categorizing into three parts namely *Recapitulation of Key Findings*, *The Future of AI in Education*, and *A Call to Action: Embracing AI for Lifelong Learning*. It highlighted the importance of adapting continuous technological advancements in education. The book equally focused on the way educators' roles evolved with the changing scenario. In addition to imparting knowledge of subjects, educators should teach students about the ethics involved while using AI. The book is well presented in the sense that the chapters and its sub-parts were written in the form of points facilitating reading. However, in the efforts to cover the vast prospects of AI, the detailed explanation of some of the concepts has been overlooked. Overall, the book is a good one for the reader to understand the transformative potential of AI in education for all stakeholders.

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