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Conference Proceedings of 7th Remsons International Research Conference

On

The New Normal in Businesses - Readiness and Resilience

Organized on

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Excerpts of Presidential Speech Shri Ashok Saraf



President RSET, Chairman DSIMS

President RSET and Chairman DSIMS, Mr. Ashok Saraf, narrated the history of the establishment of the Remsons Research Centre at DSIMS with a generous donation made by Shri Viswaprakashji Harlalka and he also highlighted the vision of Rajasthani Sammelan Education Trust (RSET) towards educational excellence. Mr. Saraf appreciated the theme of the Conference, particularly when the business environment is in a state of flux. He stressed on the need for vision to identify the inflexion point, looking at the strategic window of slowdown and uncertainty. He reiterated that though he missed business travel and interaction with clients during the lockdown, nonetheless, the business growth has been noteworthy. It stems from his firm conviction that readiness and resilience can usher the right Call to Action.

Excerpts of Keynote Speech

Mr Krishna Kejriwal (CMD, Remsons Industries Ltd.)



Chief Guest, Mr. Krishna Kejriwal, Chairman and Managing Director Remsons Industries delivered his insightful keynote speech on changing business strategies to keep pace with the downward swing of the economy. He opinionated that amid inevitable disruptions and exponential changes, the businesses need to scale up their skill sets through innovation and *just in time and place interventions*. Talking about contingencies like the pandemic, he urged the audience to exercise prudence to face the crisis and emerge victorious.

Unveiling of Publications

The Plenary Session also marked the unveiling of the Volume. 2, Issue 2 and Volume 3 Issue 1 of the Institute Journal "The Management Quest" by RSET Leadership Team. The Proceedings of the Remsons International Research Conference (RIRC) were too formally unveiled in the Conference.

Report of Remsons Centre for Management Research (RCMR) Dr. Sumana Chaudhuri (Chief Convener)

Presenting the Report of Remsons Centre for Management Research (RCMR) 2021, Dr. Sumana Chaudhuri mentioned that under the aegis of RCMR, DSIMS and DSGS conducted over twenty Internal FDPs in emerging areas of business and managerial scholarship. Also, to encourage the research and enhance the research capabilities of Institute faculty members, DSIMS and DSGS have deputed the faculty members for training to IIMs and other premier institutions, including Online FDPs organized by Higher Education Forum, Bombay Chamber of Commerce and Industry, ASSOCHAM and other industry and academic Institutes to undergo training in research methodology and participate in case study workshops.

Excerpts of Panel Discussion

The distinguished speakers onboard in the Remsons International Research Conference 2021 included an outstanding congregation of leading industry commanders and academic stalwarts across three continents, North America, Europe and Asia.

Professor David E Zepeda from Boston University, Massachusetts, in his opening notes mentioned that COVID-19 pandemic is far more than a health crisis: it is affecting societies and economies at their core. He provided us insights into current U.S. consumer behavior regarding healthcare. In many ways, Professor Zepeda mentioned that consumers in USA are taking charge of their health more than ever before. They are learning about their health risks, communicating with their doctors in new and different ways, and changing their attitudes about data privacy. Each of these factors has a significant influence on how patients are interacting with the health system. He opined that globally, healthcare supply chains are becoming more agile and adaptive while optimizing cost and decreasing time to market for bringing all citizens under the vaccination fold.

Professor Krishnendu Sarkar, Director, NSHM Knowledge Campus, Kolkata mentioned that the higher education sector saw some fundamental changes during COVID-19 and engagement with all stakeholders was a key attribute to be successful. Many professionals used this time to reskill themselves, opening new opportunities for academic Institutions. New Education policy (NEP 2020) also helped universities with flexible online programmes. Professional courses like engineering and management became more relevant during COVID19, as expressed by Professor Sarkar.

Professor Sachin Kamble from EDHEC Business School, Paris, focused on the Small and Medium Enterprises in European Union and how they have weathered the uncertainties of the pandemic induced slowdown. Professor Kamble, while drawing a comparison between SMEs in India and Europen Union, deliberated that the steps for reopening and reinvention remain unchanged, but businesses must now consider how the pandemic's progress, strength or recurrence in different geographies is impacting their recovery strategies by course correcting, again and again, as circumstances change abruptly and dramatically. This requires them to reassess assumptions, re-evaluate scenarios and strengthen their ability to sense and respond.

Professor Nripendra Singh from Clarion University, Pennsylvania made his insightful observation on the consumer facing industries in United States and ways adopted by them remain steadfast in their growth amidst a recessionary economy and conservative mindset by the consumers. As coronavirus infections spread throughout America, the USC Center for Risk and Economic Analysis of Terrorism Events (CREATE) study projects that the country stands to lose \$3 trillion to \$4 trillion in GDP over the next two years. The economic impact of the COVID-19 pandemic in the United States has been largely disruptive, adversely affecting travel, financial markets, employment, shipping, and other industries. Leading his discussion through a case study of Walmart in United States, Professor Nripendra Singh espoused a more consumer centricity to win over a growing breed of home bound consumers.

From Editor's Desk Dr. Sumana Chaudhuri

Under the aegis of Remsons Centre for Management Research (RCMR), DSIMS and DSGS organized 7th Remsons International Research Conference (RIRC) on 27 March 2021. The Theme of the conference was *New Normal in Businesses: Readiness and Resilience.*" The conference was inaugurated by Shri Krishna Kejriwalji, Chairman Remsons Industries ltd, amidst the august gathering of Shri Ashok Saraf, President Rajasthani Sammelan and leading industry commanders and academic stalwarts across three continents, North America, Europe and Asia.

In the Paper Presentation Track, six selected research papers, shortlisted based on their merit by the blind reviewers, were presented. This year witnessed an increasing trend of submissions from diverse areas of industry and academia. Professor Sumit Mitra, Professor of Strategic Management, Indian Institute of Management Kozhikode was the Session Chair. Based on fair evaluation by Session Chair and blind reviewers, three of the six papers were chosen as the Best Paper Awardees. In conclusion, Professor Sumit Mitra advised the next generation of teachers in business schools to build an element of preparedness and tolerance for ambiguity with respect to charting their course of research trajectory in the new normal.

Dr. Dhanashree Potey summarized the proceedings of the paper presentation. Prof. Pooja Goswami and Ms Sunita Pujar offered the vote of thanks in the plenary session and the Paper Presentation Session.

The Conference was an overwhelming success, attracting delegates and speakers from Mumbai as well as other reputed B –Schools across India. It has enabled the academicians, researchers and practicing managers to share their research findings, issues, concerns, doubts and insights for the future vis-à-vis specific domains of knowledge and practice. We hope that conference has not only provided great intellectual and social interactive platform to the participants, but also has given new perspectives from concrete facts. As a Convener, I am deeply privileged to present the Conference Proceedings and hope that this compendium of research papers will be found useful by the researchers, industry practitioners and policy makers.

RIRC2021 Paper Presentation

Session Schedule

Session Chair: Prof Sumit Mitra

Professor, Indian Institute of Management, Kozhikode

Sr No	Author	Title	Time
1	Elmo Gul Kripalani	Equity Crowdfunding initiating: Resilient Business Operations	12.15 -12.25 pm
2	Aishwarya Khasgiwala Priyanka Oza	A Study on Investors Perception and Awareness towards Sovereign Gold Bond in Mumbai	12.25 -12.35 pm
3	Ravindra Dey	A Study on the Effect of Personality Types on Resilience	12.35 -12.45 pm
4	Shreya Dharia Saamta Jain	Digital Persuasion and Learning:: Decoding the Impact of Behavioural Change using Technology	12.45 -1.55 pm
5	Saloni Surve Srishti Shetty	Digital Transformation and Work from Home: The New Normal in Businesses	1.55 -1.05 pm
6	Krishnendu Sarkar	A New Insight on Governance for a Sustainable Future	1.05 -1.10 pm

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Digital Persuasion and Learning – Decoding the Impact on Behavioural Change using Technology

A Case of TeamGlobal Logistics Pvt Ltd., Mumbai

Saamta Jain

Group Head HR and IR, Teamglobal Logistics, Mumbai

Shreya Dharia

Senior Executive, Parekh Integrated Services, Mumbai

ABSTRACT

In the new normal, corporates today are facing with the changing skill set requirements but the access to information has enabled companies to create a web of persuasive technology around us. Today digital learning environments are not only affecting our attitudes and beliefs but also have a good influence on our behaviours. Today, the choice of assorted classical and digital teaching methods is indispensable for companies and despite high initial investment cost, e-learning can ultimately lead to cost reduction and enhancement of work efficiencies. Advances in psychology, cognitive science, neuroscience and digital technologies are to be explored and exploited for creating a digitally persuasive environment in a number of context (i.e., e-commerce, social marketing, education and health etc.). The paper reviews the earlier researches in all relevant areas and draws insights from earlier researches. It will ponder on intriguing questions like, how behaviour can be changed using digital persuasion? How the mid-size companies can use these technologies for the learning and developmental needs of the team? Several other concepts, theories and principles of behaviour change and digital persuasion are discussed and reviewed. The main research question is that behaviour changes and learning can be given a positive direction with the use of persuasive technology. The research methodology used is empirical research complimented by secondary research. The objective of the paper is to provide with ethical considerations in designing persuasive environments and also sharing the frameworks and applications of the same.

Keywords: Persuasive Technology, Learning, Behavioural Change, Social Learning, Engagement.

1.0 INTRODUCTION

In the new normal all the organizations today are striving to be the Learning organizations as they have realized that "It is the survival of the fittest" and within the constraints of the available resources of people, practices and processes they have to set new benchmarks of efficiency and productivity. The Learning platforms have to reinforce and enact emerging changes and accordingly influence the positive behaviours of the people within the organizations. This paper attempts to understand how behaviour can be changed using the persuasive learning technology within the corporates. It will share insights on the psychological surveillance through gamification techniques, its links to new psychological concepts of 'character development,' 'growth mindsets' and 'personal

qualities,' and its connections productivity enhancements and accomplishment of the vision of the company.

Methodologically, our research mobilizes the nodes and the network analysis to trace the organizational, social and macro-economic factors that are translated and encoded to make the 'persuasive technology' of 'psycho - compulsion' be a success and also to reinforce and reward positive behaviours that are aligned with corporate strategies. In organizational set-up what is more important is also team work and collaboration - whether it is within or outside the company. The aim of most of the learning and development programs are broadly classified into Functional. Behavioural and Technical, also called as 'FBT' In the current digital economy and Industry 4.0 what is more important is to foster social and emotional learning through Technology. This research was taken with an objective to understand how persuasive digital technology can be used to build the characters, traits and skills of the employees with reference to the business requirements. In the current Web 2.0 era, it is a well-established fact that the digital technology has enabled and facilitated positive change in the behaviour and also helped in Psychological wellbeing and mental health of the individuals. The term 'Persuasive Technology' connotes the change in behaviours through digital technology and has been in use since 1998. As stated by Fogg [1], "Persuasion is more than just computer-mediated communication and it focusses on human computer interaction." Oinas-Kukkonen [2] defined the term behaviour change support systems (BCSS): "A sociotechnical information system with psychological and behavioural outcomes designed to form, alter, or reinforce attitudes, behaviours or an act of complying without using coercion or deception". Persuasion has always been a basic and fundamental part of learning as a traditional approach and with the use of persuasive technology these principles are stimulating learners through the digital domain. In current post pandemic context, the concept of persuasive technology-based learning has gained more importance whether it is orienting teams on organizational vision, strategy or inducting and training the team on consumer behaviours, business retentions and sales.

1.1 TEAMGLOBAL LOGISTICS

Teamglobal is an integrated Logistics services provider headquartered in India. It offers services in multiple segments of logistics Viz. Sea Freight, Airfreight, Project Cargo Transportation, Cargo Terminals and Coastal Shipping. As a group it has multiples offices and is diversified into freight forwarding, warehousing, Container Freight Stations, Transportation.

Established in 2005, Teamglobal is an ISO 9001:2015 (QMS) & ISO 27001:2013 (ISMS) certified company with strong business ethics. Teamglobal specializes in carriage of (LCL) Less than Container load shipments and is the largest operator in India in this category. It has been accredited with the Best Consolidator of the Year – All India 9 times in a row from 2010 to 2019. Teamglobal is a member of leading global networks like World Wide Alliance, Air Cargo Group and GPLN for the different segments of business it operates. Teamglobal offers transport services between all major international cargo centres using combination by land, sea and air thus making us one stop

logistics shop for all our customers Logistics requirements globally. The company thrives towards service excellence using the expertise of IT coupled with the vision of Human Resource Department. A highly motivated team of HR professionals are continuously working towards making the vision of HR come through by making use of these persuasive technology and this is not only for the internal team but also for the customers.

At TeamGlobal the most crucial HR initiative was to work towards developing and implementing the persuasive technology to modify the behaviours for positive outcomes and to reinforce the positive behaviours.

1.2 Need for the study:

This study explores three questions:

- Does persuasive technology affect or bring changes in behaviours?
- · Does behaviour change use digital persuasion?
- Is it that behaviour changes and learning can be given a positive direction with the use of persuasive technology?

1.3 Objectives of the study:

- To learn how to analyse and evaluate digital learning that is likely to persuade individuals and change behaviours
- To understand basic psychological concepts used in persuasion and learning.
- To share the frameworks and applications of the same.

1.4 Scope of the study:

HR at TGL plays a vital role in the attainment of its goal by ensuring the company attracts and retains competent employees who in turn create an important source of competitive advantage for a firm. The study on employees at Teamglobal, a private sector logistics company. The respondents involved in this study were 113 employees' cross verticals and cross borders (Global) Time, resources, availability of respondents, geographical representation of industry were important constraints that affected the conduction of the study.

2.0 LITERATURE REVIEW & FUNDAMENTALS OF DIGITAL PERSUASION AND LEARNING

Fogg 2003 [3], in his seminal work propounded that computers and digital modes can be the best social actors and stimulating agents and if the social interaction, persuasion and learning are given the digital perspective they will change the approach to learning and possibly make it more engaging and impactful. He was of the view that technology holds strong potential to change the attitudes and behaviours of users and also stated that the user should not rely on the coercion and

deception techniques when training the people. To add to this the fact that learning is more when people are in their natural sense all the supporters of Digital Persuasion Techniques for learning have advocated for high impact learning through gamifications and engagements.

Digital technologies are facilitating Big Data and its predictive analysis as well. By having the various components combined together we can have an interplay for attitude and behaviour change. Infact these are reshaping the relationship between the professional groups, management and the employees and different and varied globally distributed teams as well. Significant changes are also witnessed in the accountability and responsibility of the people as these support decision trees, business simulations, adaptive learning through the virtual reality and augmented learning.

Through this paper we have attempted to understand the digital learning approach which is practised at TeamGlobal Logistics Pvt. Ltd. We have noticed that the new learning platforms and the digital technologies are not merely reconfiguring the professional practised by also redefining the rules and principles of learning.

We tried to uncover meaningful insights based on the strength of links between the behaviour modifications and Digital Persuasion Technologies. With the byte size, and flexi on the go learning we are able to develop new skills, also reskill and upskill the employees in a better and more customized manner. Though we are of the view that there is no supplement to the face-to-face teaching but in case a strong emotional appeal is used with the technology there can be a positive behaviour change. Technology can be one of the best enablers and if it fruitfully used the human interactions it can help in modifying behaviours and ultimately facilitate learning. The corporates need to ensure that it is a conversational learning which can be used through advancement in digital technology.

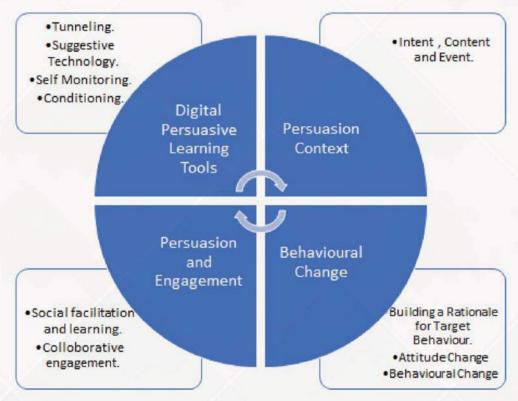
In modern day, the concept of design thinking has been developed and practiced immensely. The learning can be more when it comes through a structured process and when it also encourages cognitive learning along with the interpersonal skills it takes up the dynamism which is good enough to change the human behaviour. Engaging the employees and the learners through online quizzes, role plays, activities and moot courts etc can not only boost the social learning but also in a way build on the emotional learning. Through videos and animations, the learners can be taught the favourable and acceptable corporate behaviours. The motivational messages from leaders can reinforce the vision of the company and also help it to percolate down the team. The chatbot technology also facilitates learning through the conversational and discussion techniques. Current day, translating software has provided an upper edge by making an emotional appeal to the team members. When the digital technologies talk to the people in their native language it ensures that the message is not only conveyed clearer but also faster and accurately. These provides for new and novel experiences through real life simulations, video blogs, videos and smaller GIF's as well.

3.0 CONCEPTUAL FRAMEWORK

With ever-growing digital interconnectedness, emergent socio-technical environments are increasingly designed for active participation and contribution rather than for passive consumption Mumford, 2000). Learners have gradually become co-creators of content and value, and even co-designers of these environments in emerging cultures of participation as given by Fischer et al., 2005.

During taking this research we developed a model to make it a base for the research project which is as follows:

Figure 1 - Conceptual Framework



The TCEB Model of Digital Persuasive Technology: A comprehensive approach to Behavioural change

Developed by Dr. Samta Jain and Ms. Shreya Dharia

3.1 Construct:

Table 1: Construct

CONSTRUCT	DESCRIPTION	ASSOCIATIVE RELATIONSHIPS
Digital Persuasive and Learning Tools	 Tunnelling: Places the user inside a process with pre-determined Directions. Suggestive Technology: Persuasive design strategy for delivering a message at the opportune moment. Self-Monitoring: Allows to monitor Progress. Conditioning: Embeds emotional urges and feedbacks into the design. 	This Framework helps in development of Learning platform which is more influential and also a comprehensive PT tool.
Persuasion Context	 Intent: Endogenous: From within Exogenous: From Outside Autogenous: Self Developed Content: Cues, Incidences, Reflection based etc. Event: Business Scenario Modelling, gamifications, Simulations, Augmented reality and Virtual reality 	The message ideation, strategy, channel and the route play a significant role in making the Digital Persuasive Learning more impactful.
Persuasion and Engagement	 Social Facilitation: Learner learn by observing, imitating others and also through social influence and facilitation. Collaborative Engagement: Cooperation and collaboration influences individual learning and has a long-term multiplier effect. 	The cognitive abilities and behaviours of people are developed by social influences and environmental determinants and in the new normal what is more important is to have collaborative learning and engagement which can even be facilitated through online virtual modes.
Behavioural Change	 Awareness Intent Change in Beliefs and Attitudes Behavioral change 	There is various level of cognitive dissonance when a person moves from the variou stages listed before any behavioural change happens and technology can help to reinforce positivity by motivating towards the target behaviours.

4.0 HYPOTHESIS

H0: Digital Persuasion and learning does not have an impact on behavioural change in the new normal

H1: Digital Persuasion and learning has an impact on behavioural change in the new normal.

The above hypotheses are further divided into three sub hypotheses:

H0: Interactive Persuasive Technology cannot replicate real world scenario and are not engaging.

H1: Interactive Persuasive Technology can replicate real world scenario and are engaging.

H0: Persuasive technology does not have any impact on behavioural change.

H1: Persuasive technology has a positive impact on behavioural change.

H0: The intent, content and event of persuasive technology does not have an impact on behavioural change.

H1: The intent, content and event of persuasive technology has an impact on behavioural change.

5.0 RESEARCH METHODOLOGY

5.1 Data Sources

Primary data was collected from the employees at Teamglobal using a structured questionnaire. To get the required information, we designed and distributed a set of questionnaires via google form link, that represents the independent variables and dependent variables which were extracted from established questionnaire. Consequently, the sample size of the current study is N=113.

5.2 Research Design

Research design is a blue print that has details about the methods to be used in research for the variables. Hence, this master plan has to be designed in a way that it is in line to meet the exact needs of the objectives. The research design for this study was the cross-sectional study. Furthermore, the study was co-relational in design because there was an intention to establish the relationship between dependent and independent variables of the study. Hypothesis testing and regression analysis was done. The dependent variable is behavioural change and the independent variables are Persuasive technology, Interactive Persuasive Technology and the intent, content and event of persuasive technology. The co-relational research aims to ascertain if there is a positive association between the two variables.

5.3 Sampling Technique:

In this research, Purposive sampling from non- probability sampling method was used to select the representative sample from the organization.

5.4 Research Instruments:

This research study used primary data as the principal source of information in which individual employees of Teamglobal were considered as the unit of analysis along with secondary data, reviewed research papers. The study employed questionnaire as a method of data collection which consisted of 12 questions on 5-point Likert scale.

5.4.1 Measurement Tools:

To measure behavioral change, questions were employed on all parameters of the proposed TCEB model on five-point Likert scale ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree. Simplicity of items and less ambiguity was ensured throughout the questionnaire through Cronbach Alpha Scale. The questions ensured clarity and simplicity which allowed respondents to indicate level of agreement with the statement provided.

5.5 Data Collection and Data Analysis Techniques:

The collected data through questionnaire were analyzed using statistical techniques. The collected data was analyzed using 'Statistical Package for Social Sciences' (SPSS) software version 19.0. Karl Pearson correlation was used to find the nature of relationships among the variables. As a final point, to find out the degree of behavioral change associated with digital persuasion and learning, a simple linear regression model was developed.

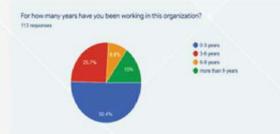
6.0 DATA ANALYSIS AND INTERPRETATION

a) Respondent's demographic data:

With respect to Age: The current study draws its findings on data from 113 employees at Teamglobal Logistics across PAN India offices. Among 113 respondents 45.1% were in the age group of 31-40 years, followed by 28.3% who were less than 30 years followed by 21.2% into the age group of 41-50 years and remaining, 5.3% constituted of above 50 years employees. With respect to occupational status in the company:



Graph 1: Age of the respondents



Graph 2: Number of years in organization

Out of the 113 employees, 25.7% of respondents worked for their current organizations for the more than 3 years but less than 6 years. And a majority of 50.4% respondents worked between 0-3 years

in the organization. However, there were 15% respondents who have been working for more than 9 years and 8.8% between 6-9 years in the organization.

b) Descriptive Statistics:

Table 2: Descriptive Statistics for Constructs.

Descriptive Statistics						
Particulars	Mean	Standard Deviation	N			
Behavioral Change	4.1327	.80738	113			
Intent content & event of persuasive technology	3.96	.834	113			
Persuasive Technology	4.00	.791	113			
Interactive Persuasive Technology	4.1504	.81527	113			

The independent variable behavioural change had a mean score of 4.13 and SD = 0.80 specified that there are fair learning practices in the organization. Besides, Intent content & event of persuasive technology produced a mean of 3.96 and SD = 0.83, Persuasive Technology with a mean of 4.00 and SD = 0.79 and Interactive Persuasive Technology displayed a mean of 4.15 and SD = 0.81, wherein N = 113 constant for all. Therefore, this implies that employees exhibit a high level of Behavioural change as an effect of Persuasive Learning.

c) Inferential Statistics:

Pearson's correlation coefficient (r) is a measure of strength of association between two variables. It shows whether variables are related. Correlation can range between -1.0 and +1.0, we need to know its significant value (i.e.; if its occurrence is by chance or if there is a high probability of its actual existence) As for this study, both significance levels of p=0.01 and p=0.05 are generally accepted conventional levels. This indicates that 99 and 95 times out of 100, we can be sure that there is a true or significant correlation between the two variables and there are only 1% or 5% chances that the relationship does not truly exist. The correlation matrix between dependent and independent variables are exhibited in table (3)

Table 3: Correlation

Variables	Test	Digital Persuasion and Learning	Intent content & event of persuasive technology	Persuasive Technology	Interactive Persuasive Technology
Behavioral Change	Pearson Correlation	1	.737	.769	.770
	Sig. (2-tailed)		.000	.000	.000
	N	113	113	113	113

Table 3 above depicted positive correlation between Behavioral Change & Digital Persuasion & Learning. The following results were indicated:

The highest positive correlation in this study was found between Behavioural Change and Interactive Persuasive Technology (r =.770, p<0.01). The second highest correlation was observed with Persuasive Technology (r =.769, p<0.01) and the third highest correlation was found between Behavioural Change and Intent, Content & Event (r =.737, p<0.01) It is understood that learning practices in the organization is very impactful on behavioural change on the employees. In other words, the results indicate that all these variables have significant correlation with employees' behavioural change.

Regression Analysis:

Regression analysis is a technique used for determining the statistical relationship between independent and dependents variables. We have applied linear regression model to test our hypothesis.

Table 4: Model Summary

				Model	Summary				
Model R		D Adinost ID		Std. Error		Chang	Change Statistics		
	R	R R Square A	Adjusted R Square	of the	R Square Change	F Change	df1	df2	Sig. F Change
1	.887ª	.787	.781	.378	.787	134.210	3	109	.000

- a. **Predictors:** (Constant), Interactive Persuasive Technology, Persuasive Technology, Intent content & event of persuasive technology.
- b. Dependent Variable: Behavioural Change.

Therefore, the research can conclude that impact on behavioural change is on the higher side and the nature of the relationship is positive.

		C	Coefficients				
Model	Unstandardized Coefficients		Standardized Coefficients		a:	95.0% Confidence Interval for B	
Model	В	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
(Constant)	0.23	0.2		1.16	0.25	-0.163	0.622
Intent content & event of	0.59	0.07	0.611	8.9	0	0.46	0.724
persuasive technology Persuasive Technology	0.15	0.08	0.142	1.86	0.07	-0.009	0.3
Interactive Persuasive Technology	0.2	0.08	0.203	2.6	0.01	0.048	0.354

Dependent Variable: Behavioural Change.

Beta indicates value of standardized regression coefficient. It represents the effect that standard deviation difference in the independent variable would have on the dependent variable in standard deviation (the standardized scores of the dependent variable).

The value of R Square implies that 78% variation in the dependent variable (Behavioural Change) is because of independent variable Intent content & event of persuasive technology. The value of F (134) implies that the model possesses significant overall strength. This ensures the correctness of the model. On the basis of Beta coefficients, the model implies that Digital Persuasion & Learning causes 61% positive variation (t= 8.895 and also p<0.001). Hence, H0 is rejected and H1 which declares that 'The intent, content and event of persuasive technology has an impact on behavioural change' is accepted.

The value of R Square implies that 78% variation in the dependent variable (Behavioural Change) is because of independent variable Persuasive Technology. On the basis of Beta coefficients, the model implies that Digital Persuasion & Learning causes 14% positive variation (t= 8.895 and also p<0.001). Hence, H0 is rejected is rejected and H1 which declares that 'Persuasive technology has a positive impact on behavioural change' is accepted.

The value of R Square implies that 78% variation in the dependent variable (Behavioural Change) is because of independent variable Interactive Persuasive Technology. On the basis of Beta coefficients, the model implies that Digital Persuasion & Learning causes 20% positive variation (t= 2.599 and also p<0.001). Hence, H0 is rejected is rejected and H1 which declares that 'Interactive Persuasive Technology can replicate real world scenario and are engaging' is accepted.

7.0 DISCUSSION ON FINDINGS

The general objective of this research was to assess the impact of Digital Persuasion and Learning on the Behavioral Change at TeamGlobal. Descriptive statistics in the form of means as listed proves that learning is definitely essential in the organization.

Inferential statistics, on the other hand generated tabulated statistics that shows the results of correlations, coefficients and regressions on the data collected from respondents through questionnaire. The above-mentioned result has been drawn after applying linear regression on the collated data in order to check the causal (cause and effect relationship) The probability of f-statistic shows the significance level of the research. As per standards, if the p value is < 0.05, it is significant. In this study, the tables demonstrate p value as 0.000 which is < 0.05 thus this model of research is statistically significant and proves the significant relationship between variables.

The findings of this study are supporting to other research papers on Digital persuasion and learning. Digital Learning is considered as most important practice at TGL, the more employees get persuasive, the more positive change in their behaviour would be. Learning developed a connect, a

sense of ownership and oneness amongst employees, they tend to have affinity, loyalty and courtesy towards the organization.

8.0 CONCLUSION

In the new normal, TGL seem to have readily accepted and become resilient to technology today. Home, workplaces and employees are highly influenced by technology to an extent that it is persuaded to having an impact on their behaviour too.

Digital persuasion, is the technology that has urged to bring in attitudinal changes of behaviours in the employees through interactive persuasive technology and engaging them. It tends to spark an intrinsic motivation in the employee and remove the barriers that restrict them from changing.

Persuasive Technology is interdisciplinary in nature that focuses on the framework, progress and assessment of interactive technologies intended at changing individual's attitudes or behaviours.

Persuasive apps content, intent and event possess features to remind employees, motivate, and help them reach their goals through messages, alerts or notification in a Bluetooth-enabled interface of an app while behavioural change that is being influenced, about doing or not doing something at a specific point in time after being heard to, motivated and so forth. This research has focused on understanding the behavioural impact due to digital persuasion and learning.

Every effective digital product uses theories and practices of persuasion. Games, health apps, mixed reality training scenarios, e-commerce sites, all need to keep individuals engaged, lead them towards a goal, encourage to make a behaviour change, or nudge them along a path. These persuasive apps also need to measure, track and evaluate their own effectiveness. By exploring concepts from psychology and behavioural economics, we understood how these disciplines currently influence or could influence behavioral aspects.

9.0 MANAGERIAL RECOMMENDATIONS:

The research study at TeamGlobal Logistics have witnessed that the new Persuasive Digital technologies which are explored in the new normal have many benefits in the behavioural pattern change. It is important that while we are moving the globally distributed work spaces and the virtual world, we develop a critical inclination towards more precisive persuasion technology based on the TCEB Model proposed by the authors. The limitations of Technology should not be underestimated and therefore learning should be made in comprehensive and blended form. More broadly for the corporates, we must have a strong sense of responsibility and ownership to engage with these technologies as part of the assemblages of practice. Need is to practise the following:

- Critically examining the Digital Persuasive technology and learning and before developing understanding the influence on both knowledge and practice.
- Harnessing the capabilities of Digital technology for Behaviour change in all possible formats is very crucial.
- Establishing an interplay between the physical and virtual learnings and Persuasive Technology can be augmented and customized in accordance with the same.
- The Business Partners must collaborate with the technology specialist to understand the Intent, content and event to be created and developed in context of the business.
- Cross pollination of ideas is very important to make the PT work to the full potential.
- Gamifications and engagements should be at the centre of all delivery through Persuasive Technology and equally there must be emphasis on self-monitoring and conditioning.
- The ownership of career progression, skill and knowledge development should not only be vested with HR and the Business Heads but must be with the individual employees.
- There must be explicit debates on the requirements of New Normal and accordingly the changes to be done in the use of these technologies.
- There has to be a regular and frequent review of the impact on the behaviours and performance of the individual employees.
- There is a high requirement of a full-circle feedbacks which also can be automated at the same time through the use of technology.

10.0 LIMITATIONS:

The present study has some limitations. Firstly, the study focused only on a single organization consequently, the outcomes cannot be universally applicable and restricts from generalizing the results in a broader perspective. Thus, a further research can be carried to make the result more general by encompassing more dimensions of digital persuasion and learning and more organizations into the research design. The findings of the research are relatively on a smaller sample size, which indicates it does not represent the entire population. Although there more dimensions of the proposed model, the study studies only three dimensions. Lastly, time constraint in collecting data added to further limitations.

11.0 DIRECTION FOR FUTURE RESEARCH:

Though the research has some limitations that threaten the implication of this research, the study can head to a number of directions. Firstly, interested researchers could conduct longitudinal studies to

investigate the changes over time in the new normal. A similar study can be conducted to find out the influences of other digital learning practices. Also, future researchers can examine the relationship among the demographic variables (age, sex, level of education, and years of service). Finally, further investigation can be conducted taking different parameters to find the degree or extent of behavioural impact.

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A Study on Personality Types and their Level of Resilience During the New Normal

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ABSTRACT

This study investigates different personality types and their resilience capability during the 'New Normal'. Along with their coping abilities, how happy can these different personality types be along with how anxious and stressed they can get was also an area of focus. Brief Resilience Coping Scale (BRCS), the Oxford Happiness Scale, Perceived Stress Scale (PSS-4) and the Triguna Scale were used to gauge the personality types and the levels of resilience, happiness, stress and anxiety of individuals with sample size of N=103. Online questionnaires were administered to individuals of various age groups. Responses received from the study show that the respondents who had a dominant sattva guna were happier, more resilient and better at dealing with stress and anxiety compared to those who had other dominant gunas such as Rajas and Tamas. The respondents who portrayed a dominant Tamas guna were likely to be more anxious and stressed and showed lower levels of resilience.

Keywords: personality types, anxiety, stress, happiness, resilience, new normal

INTRODUCTION

The year 2020 saw many things including a global shut down which led to new terminologies coming into existence one of them being "the New Normal". New Normal had quite a few meanings world-wide. For a few it meant an entirely new way of life, some places it meant rise of local enterprises, for some it meant home schooling their children, for some it was a year that highlighted their mental health. The thought that arises from the new normal is, if it could change the meaning of life to such a great magnitude, how successful have people with different personalities been in coping with the stress or anxiety brought out by this global pandemic.

Personality traits are considered to be powerful interpreters of possible outcomes in various spheres be it individual performance in organizations, relationships, mental well-being and health. One's mental temperament dictates their strengths, areas of improvement and their reaction to setbacks and success witnessed by them.

Personality traits can give out a lot of information on how a person would react or what one can expect from them in a particular situation. It showcases one's coping abilities to various stressors or how people deal with situations that they come across in their daily life. This impacts various dominions related to the individual when it comes to their career, the decisions they take. It also

affects how happy they generally are regardless of the obstacles that they face.

The primary purpose of this study is to understand various mental temperaments and the level of resilience that each temperament holds. It also focuses on understanding how happy, anxious and stressed individuals with different mental temperaments can be. Another facet of the study focuses on how levels of resilience varies between different generations.

LITERATURE REVIEW

Personality has always garnered the attention of psychologists in the past. This tradition has an influence on Indian psychology too. Personality is said to be studied and understood with reference to two systems in Indian traditions. One of which is the biological system and the other being the psychological system. The biological system is proposed and understood by the medical texts and scriptures like Ayurveda, which have very explicit ways of understanding health and ill-health and how it is to be treated. These texts are very expressive and extensive, where Ayurveda is considered to be a part of the Atharva Veda. These depend almost entirely on the Pancha Mahabhutas, their combinations leading to Tridoshas which includes Vata, Pitta, and Kapha and their psychological correlates of Trigunas—Sattva, Rajas, and Tamas (SRT)—to explain the body, the mind, their constituents, and the equivalent behavior patterns including the spiritual aspect involved (Shilpa S. & Murthy, C. G. V., 2012).

The Indian thought system, more specifically the theory of the trigunas, can help in understanding how people respond to their environment including life situations that they face. In the philosophy of Yoga, all matter in the universe ascends from the vital substrate called Prakriti (nature). From this ethereal Prakriti the three primary gunas which are nothing else but a quality of energy, are said to emerge. These gunas create the essential aspects of all nature which includes energy, matter and consciousness.

The theory of gunas is based on the psycho-philosophical system of the Samkhya School which differentiates between the physical and mental reality. The Samakhya system along with the *Vedantic* School assumes that every phenomenon, every atom, every human being and his/her actions are a play of prakriti The dynamism of prakriti is due to the continuous pull of the three gunas, namely, sattva which speaks about being balanced, rajas stands for passionate, and tamas stands for resistance to change or inertia. These gunas are called attributes, constituents, elements, qualities, or principles, which underlie every first-hand phenomenon (Innes-Brown and Chatterjee 1999; Suneetha and Srikrishna 2009).

Each human being, at any point in time, represents an amalgam of these three attributes in certain proportions. He/she may have the predominance of one of them 6 S. Modhor the other at different times. These three gunas can be explained by some similar meaning words as well as by describing the qualities, nature of knowledge, work, and the agent in these classifications.

Sattva or Balanced

Quality: Purity, serenity, poise, calmness, judgement, transparency, compassion, clarity, goodness, altruism, dispassion, serenity, etc., or in sum balanced.

Nature of Knowledge: Believes in cohesion of everything.

Work: Action, which is rightly controlled, done without any want of fruit for himself/herself.

Agent: Freedom from attachment and conceit, full of a fixed impersonal determination, and a calm rectitude of zeal, unelated, or undepressed by success or failure.

Rajas or Passionate

Quality: A love of fame, passion, lust, trouble, impatience, envy, pride, display of power, etc., or in sum passionate.

Nature of Knowledge: Seeing variety of things only in their separation and variety.

<u>Work</u>: Action performed under the territory of desire, with an egoistic sense of own personality, done with extravagant effort.

Agent: Devoted to work, passionately wishing for of the fruit of his hard work, impure, often violent, cruel, and brutal in the means used, full of joy and grief in success or failure.

Tamas or Inertia (Resistance to Change)

Quality: Aggression, greed, ignorance, silliness, offering resistance, lethargy, forgetfulness, confusion, darkness, ruthlessness, etc., or in sum resistance to change.

Nature of Knowledge: Small and narrow way of looking at things, which has no eye for the real nature of the world.

<u>Work</u>: Action accepted from delusion, in mechanical obedience to instincts, without being concerned with the strength or capacity, or its outcomes, involving a waste of efforts or injury to others.

Agent: Works with a motorized mind, are stupid, stubborn, cunning, insolent, lazy, and procrastinating.

The tri-guna model suggests that the psyche is influenced by three energies that operate in dependence on one another and each strive for dominance, pushing the other two aside when they gain strength. These three energies are termed sattva, rajas and tamas. In short, when sattva guna is dominant in an individual, the said individual has strong well-being, is calm, happy, motivated and persevering. Dominant rajas leads to stress, over-activity and restlessness. When tamas becomes dominant, it makes a person negative, depressed and leads to a lack of motivation. The inference of the tri-guna model is that sattva should be the dominant guna in order for a person to experience higher level of well-being. Sattva can be secured by a number of interventions such as meditation, increasing spiritual consciousness, self-regulation and developing virtues. Studies investigating the tri-guna model have demonstrated that many of the theorized relations are supported by empirical data (Puta, M., 2016).

The Oxford Happiness Inventory as a comprehensive measure of personal happiness, was framed mainly for in-house use in the Department of Experimental Psychology of the University of Oxford in the late 1980s (OHI, Argyle, Martin, & Crossland, 1989). The formulation of the scale and some of its properties were appraised by Argyle, Martin, and Lu (1995). The scale has always been found to act steadily, and other workers have reported its use both in the UK (Furnham & Brewin, 1990, Joseph & Lewis, 1998), in Spain (Sanchez, 1994) and the USA (Valiant, 1993). The OHI has also been used cross-culturally to have a comparison between students in Australia, Canada, the UK and USA (Francis, Brown, Lester, & Philipchalk, 1998). The OHI follows the outline and format of the Beck Depression Inventory (BDI, Beck, Ward, Mendelson, Hock, & Erbaugh, 1961) which provided, when reversed, a set of 20 multiple-choice items relevant to subjective well-being. Furthermore additional items were added to cover different areas of happiness which were originally not included and 29 items were retained in the final scale.

Research from the past has established relationships between the OHI and a variety of trait and cognitive variables that are associated with psychological well-being. A strong positive association was found with extraversion, which was confirmed by Furnham and Brewin (1990) Considerable positive associations have also been reported between the self-esteem and OHI, the life regard Index and the life orientation test (Hills & Argyle, 2001a), and fulfilment of life (Hills & Argyle, 2001b). Joseph and Lewis (1998) found a strong positive link between the OHI and the depression-happiness Scale.

The Perceived Stress Scale (PSS) is a self-report questionnaire developed in 1983 to quantify a person's assessment of stressful situations in the previous 1 month of his or her life. It is a universal measure of stress that is simple to use, and there is no shortage of studies authorizing its authenticity and validity in a variety of situations and in multiple languages. The tool contains 14 items, which measure how unpredictable, uncontrollable and overloaded respondents feel their lives are. The respondents therefore rate how often they experience events that are stressful on a 5-point Likert scale ranging from 'never' to 'very often'. The higher the score, the greater the respondent feels that their demands exceed their ability to cope. There are no cut-off scores. Instead, an individual's score is equated to a normative value.

RESEARCH PROBLEM

This study aims to investigate the level of resilience that different personality types exhibit along with their levels of happiness, anxiety and stress during the 'New Normal'.

HYPOTHESIS

H₀₁- Sattva personality type does not correlate with Resilience.

H₀₂- Sattva personality type does not correlate with Happiness.

H₀₃- Sattva personality type does not correlate with Anxiety.

H₀₄- Tamas personality type does not correlate with Stress.

H₀₅- Resilience does not vary between Gen X and Gen Y.

SAMPLE AND SETTING

The study respondents were a convenience sample of 103 individuals. The sample comprised of 45 males (44%) and 58 females (56%), with the median age group being between 25 and 40 years.

MEASURES

The Oxford Happiness Questionnaire (Argyle, M., & Hills, P., 2002) was administered to determine the level of happiness of the respondents. Responses were scored on a 5-point scale using anchors of Strongly Disagree and Strongly Agree. Scores were totalled to produce scores ranging from 5 to 25. Higher scores indicated higher level of happiness.

The 4-item Brief Resilience Coping Scale (Sinclair, V. G., & Wallston, K.A., 2004), was used to measure the degree of resilience individuals of different mental temperaments had to the drastic change in lifestyle caused due to the New Normal. Responses were scored on a 5-point scale using anchors of Strongly Disagree and Strongly Agree. Scores were totalled to produce scores ranging from 4 to 20. Higher scores indicated greater resilience coping.

The 4 item Perceived Stress Scale 4 (Cohen et al., 1983) was administered to determine the level of stress of the respondents. Responses were scored on a 5-point scale using anchors of Strongly Disagree and Strongly Agree. Scores were totalled to produce scores ranging from 4 to 20. Higher scores indicated higher level of stress.

The Triguna Scale (Modh, S., 2020) was administered to find out types of Personality of the respondents which included 3 sub scales Sattva, Rajas, and Tamas each consisting of 6 items. Responses were scored on a 5-point scale using anchors of Strongly Disagree and Strongly Agree. Scores were totalled to produce scores ranging from 6 to 30 for each sub scale. Sub scale with the highest scores indicated the dominant personality type.

FINDINGS AND DISCUSSIONS

The responses were subjected to internal consistency analysis using Cronbach's Alpha as the metric, and a value of 0.681 was obtained (Table 1). H0₁ states that Sattva personality type does not correlate with Resilience. Data collected from responses show a significantly positive correlation between sattva and resilience (Table 2). This suggests that it is more likely that individuals with higher level of Sattva guna in their nature also have higher level of resilience compared to the other gunas/ personality types. The null hypothesis can thus be rejected, and the alternate hypothesis: Sattva personality type positively correlates with the Resilience can be accepted.

H0₂ states Sattva personality type does not correlate with Happiness, data collected from the responses indicate significant positive correlation between sattva guna and happiness (Table 2). The positive correlation suggests that individuals with a dominant sattva guna in their nature are happier in comparison to other gunas/ personality types. The null hypothesis is thus rejected, and the alternate hypothesis: Sattva personality type positively correlates with Happiness can be accepted. H0₃ states that Sattva personality type does not correlate with Anxiety, data collected from the responses indicate significant negative correlation between sattva guna and anxiety (Table 2). The negative correlation suggests that individuals with a dominant sattva guna in their nature are less likely to be anxious in comparison to other gunas/ personality types. The null hypothesis is thus rejected, and the alternate hypothesis: Sattva personality type negatively correlates with Anxiety can be accepted.

H0₄ states that Tamas personality type does not correlate with Stress, data collected from the responses indicate significant positive correlation between tamas and stress (Table 2). The positive correlation suggests that individuals with a dominant tamas guna in their nature are more likely to be stressed in comparison to other gunas/ personality types. The null hypothesis is thus rejected, and the alternate hypothesis: *Tamas personality type positively correlates with Stress* can be accepted.

H0₅ states that Resilience does not vary between Gen X and Gen Y, data collected from the responses indicate no significant differences between mean scores of Resilience, Happiness, Stress, Anxiety, Tamas, Sattva and Rajas. The null hypothesis is thus accepted.

LIMITATIONS AND SUGGESTIONS

The findings of the study suggest that the respondents who have a dominant sattva guna in their nature are better at coping and not that stressed and anxious and can be said to be better at dealing with the changes brought about by the new normal. A possible reason could be the traits of the Sattva guna that has made it easier for the respondents to have accepted the new norm and have acclimatized to the changes in lifestyle. The study was also focussed on different age groups. Happiness stress and anxiety were explored keeping the current changes in lifestyle in mind. Following are suggestions for further studies:

- a. The sample size and demographics can be widened to include a more diverse sample.
- b. A survey can be targeted for individuals with different personality traits with a deeper focus on the effect it could have on their well-being and mental health.
- c. Parameters which are relevant for a wider demographic can be utilized to better understand the personality types of the sample.

CONCLUSION

The pandemic undoubtedly left an after effect on the lives of people. It lead to a change in the way people lived their lives, their daily routine came to a halt. They had to continue working and act as if things were normal even when they weren't because life still goes on. The 'New normal' phenomenon has been accepted easily by some, but some have had to accept it with a pinch of salt. Responses received from the study show that only 19% of the entire lot of respondents were happy. 42% of the respondents had a good level of resilience, however 8% of them were stressed and 4% were anxious. These scores point out to the undeniable effect that the change in lifestyles of many due to the 'New Normal' has had on the emotional well-being of people.

Surprisingly, the responses also highlighted a dominant Sattva Guna in the respondents which was around 10% in comparison to Tamas guna which was 8% and Rajas guna being 4%. These scores indicate that even when the times get tough with the help of a dominant Sattva guna people will be able to cope with difficult situations to a great extent. However, the Tamas guna being on a higher side can also lead to them getting stressed and anxious easily. The higher Tamas guna could be a possible explanation to the respondents not being happy.

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ANNEXURE

Table 1: Reliability Statistics	
Cronbach's Alpha	N of Items
.689	48

	OXHS	BRCSC	STRS	ANXT	RJSK	STVK	TMSK
OXHS	1	V N					
BRCSC	.667**	1					
STRS	507**	457**	1				
ANXT	368**	403**	.520**	1			7
RJSK	.106	.107	024	050	1		
STVK	.441**	.551**	310**	372**	.073	1	
TMSK	071	047	.356**	.375**	.128	053	1\

^{**.} Correlation is significant at the 0.01 level (2-tailed).

OXHS- Happiness, BRCSC- Resilience, STRS- Stress, ANXT- Anxiety, RJSK- Rajas, STVK-Sattva, TMSK- Tamas

/		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	.030	2	.015	.044	.957
OXHS	Within Groups	34.500	100	.345		
	Total	34.531	102	E-		
	Between Groups	3.654	2	1.827	2.946	.057
BRCSC	Within Groups	62.025	100	.620		7
1	Total	65.680	102			
	Between Groups	.743	2	.372	.547	.580
STRS	Within Groups	67.940	100	.679		
	Total	68.683	102	1		
	Between Groups	1.628	2	.814	1.825	.167
ANXT	Within Groups	44.614	100	.446		div.
	Total	46.242	102			
	Between Groups	2.616	2	1.308	3.238	.043
RJSK	Within Groups	40.405	100	.404		
	Total	43.021	102			
	Between Groups	4.258	2	2.129	4.538	.013
STVK	Within Groups	46.920	100	.469		
	Total	51.178	102			
	Between Groups	.695	2	.347	.996	.373
TMSK	Within Groups	34.882	100	.349		
	Total	35.577	102			

OXHS- Happiness, BRCSC- Resilience, STRS- Stress, ANXT- Anxiety, RJSK- Rajas, STVK- Sattva, TMSK-Tamas

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.
	16 - 25	25 - 40	.395*	.157	.014
RJSK	10 - 25	40 above	.137	.151	.364
	25 40	16 - 25	395*	.157	.014
	25 - 40	40 above	257	.152	.095
	40 above	16 - 25	137	.151	.364
		25 - 40	.257	.152	.095
	16 - 25	25 - 40	171	.169	.316
		40 above	481 [*]	.162	.004
CONTRACT.	25 40	16 - 25	.171	.169	.316
STVK	25 - 40	40 above	310	.164	.062
	40 -1	16 - 25	.481*	.162	.004
	40 above	25 - 40	.310	.164	.062

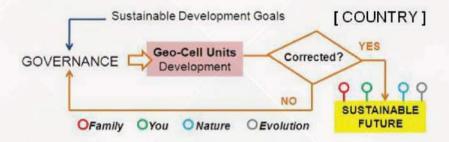
A New Insight on Governance for a Sustainable Future

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ABSTRACT

A model architecture is presented to classifying the development of geographical cells, using a hypothetical vulnerable geographic cell XYZ, as a case, for better governance of sustainable development and environmental sustainability goals that have been with weak indicators and thereby prone to detrimental outcomes threatening the human-nature co-existence. The computation for the classification had innovatively targeted the entities of family, you, nature, and evolution and its 177 attributes for development-gap analysis and correction. It provoked a fresh hypothesis to governance, which got constructed in form of fyne governance for vulnerability resilience and mechanisms that would lead to the assurance of a sustainable future, where, fyne entities as a composite would quantify the overall fitness of habitat or geographic cell in the context of sustainable development goals 2030.



Keywords: Governance; Sustainable Development, Sustainable Future, Geographic Cell, Development Classification, Vulnerability

INTRODUCTION

The sustainable development goals despite global alliances and national mandates were far from satisfactory in terms of its desired outcomes. To counter that a fresh insight on governance got laid with the classification of development of a geographical unit or cell, that makes a government unit. The computation for the classification involved the entities of *family*, *you*, *nature*, and *evolution* (*fyne*) meant to get graded as 'underdeveloped', 'developing', and 'developed' geographical cells (Geocell). Where, it will be imperative to attain higher classification grades to combat various vulnerabilities and sustain desired developments.

The Questions. Can the poor nations with rich bio-diversity leave their wealth of nature unexploited for the cause of global environmental concerns? How do those nations walk the quote

"there is no Plan B; because we do not have a Planet B" (Ban Ki-moon, 2014)? How do they confront the challenges or pressures to sustain human civilization with cohesive inter-relationships of social, economic, and environmental development? In the want of acceptable answers, how can they prosper and progress without addressing their social, cultural, economic, and environmental vulnerabilities? Those were some of the research questions that led us to hypothesize a novel model of governance. It stemmed from empirical pieces of evidence that will be imperative for nations to reverse the degradation of biodiversity and restore the environment within and also beyond geopolitical boundaries for the sake of a sustainable future (Toynbee, 1987; Sachs, 2015). Furthermore, that families as units of society have to be valued and nurtured, and living within environmental limits would entail the involvement of family, self, enterprise, and society for the effective usage of natural resources and its future security (Desforges, 2003).

LITERATURE STUDY

Sustainable Development and Environment Sustainability: From the study of various literature (Kates et.al, 2001; Meadows, 1972; Brundtland,1987; Bunge 2012) it was evident that Sustainable Development (SD) is meant to ensure equal opportunity, cohesion, and inclusion of existing and future communities and to ensure that natural resources are unimpaired and Environment Sustainability (ES) is an integral part of SD that is associated to factors like, renewable resources, energy conservation, resources efficiency, smart homes and habitats, emissions control, sustainable agriculture and forestry, livelihoods, natural resources protection, waste management, etc. The Earth's finite resources and human population growth and its uncontrolled developmental urges need to be controlled within limits that meet the needs of the present without compromising the ability of future generations to meet their own needs. However, the Climate Agreements to reduce (carbon) emissions had little to show on the ground, and other non-polluter regions suffered due to the environmentally adverse by-products of certain business activities of other polluter regions. While the 2030 Agenda for SD got adopted with its 17 goals the ES is still captive to a political boundary for its discretionary use or misuse.

Poverty, Politics, Governance & Development: The health impacts of noncompliance to SD goals and ES most adversely affect the poor and further restricts their chances to rise out of poverty and often expose them to greater vulnerability of natural and man-made development hazards (Kaya 1997). The relationships among health, poverty, and environment are complex and one global solution to ES may not fit all, because right from the base of the societal pyramid and upwards there is a disparity in income; its opportunities, and thereby a disparity in quality of the human development. Besides, in addition to enforcing their legislation, the governments need to create an investment policy that will incentivize ES outcomes. Good governance has to involve participation right from the villages to the district, and from district to the state and country with optimal allocation of funds, its timely release, and its fair utilization (Stojanovic 2016). While it may be true that the interfaces and interactions within and among the citizens, governments, and businesses vary from region to region, and decisions are usually influenced by the physical, economic, social, and

political environments at the local levels, still governments have to prioritize needful remedial actions to live within the set environmental limits (Gorbachev 2006).

OBJECTIVE

To provide a fresh perspective into the development of self, enterprise, society, economy, and vulnerability control as one of the major areas of focus. And, to offer a computational approach to governance of development.

METHOD

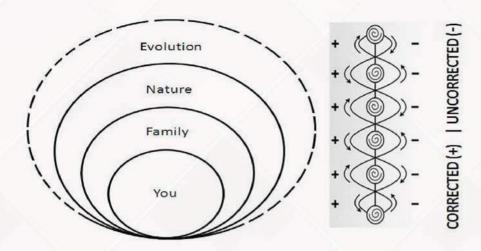
Fyne Framework for Governance - A design hypothesis for management of SD

Fyne: Entities and Relationships: Fyne was construed as an abbreviated term for this investigation with presumably four development entities of sustainable future, namely: Family, You, Nature, and Evolution (societal). Where Fyne as a composite word would attempt to quantify the overall fitness of habitat in the context of SD.

Family: The entity of Family (see Table 1) was defined with five sub-entities of, Domicile (A), Livelihood (B), Lifestyle (C), Empowerment (D), and Entertainment (E) along with an indicative set of attributes to help map its evolution over time and to broadly understand the societal trajectory with deviation d from its previous states. The challenge would be to ascertain the causation of d and its resultant change c and its influence on development D. Since the last few decades the average life expectancy, speed of progress, potential of earnings, access to education, health, livelihood, lifestyle, etc. have all increased manifold, the d and c would likely be changing fast. So it will be difficult to predict the year 2030 of a typical family of today. A Family must be seen as a vital socio-eco-politico-cultural unit for local to global development, it will be therefore important to regulate the d and c for SD.

You: The entity of You, was seen as the driver and the binder entity of *fyne* with its six sub-entities of Intuition, Logical, Communication, Values, Passion, and Endurance (see Table 2). This entity had evolved with Family with a spiral of ongoing change. The entities of Family and You were supposed to be in relationships within a societal ecosystem and were considered in this investigation as You^S (You Set) involving the human leadership aspects of *Self*, *Enterprise*, and *Society*. The outcome of human-nature actions based on the actions of self, enterprise, and society will eventually affect the entity of Nature, its ecosystem, which in turn shall affect the entity of Evolution, of society (see Figure 1). You^S will rationally and optimally drive the use of resources for development and growth.

Figure 1: The Cycle of F-Y-N-E and inter-relationships



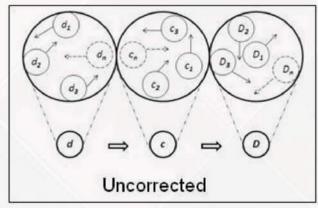
Nature. Nature is the natural, physical and material world or the universe in the broadest sense. It can refer to the phenomena of the physical world and the living world in general. For this investigation, the entity of Nature limited itself to the ecosystem; which would entail a variety of abiotic (non-living) and biotic components (living). Human activity has affected the entity of Nature (Stern, 2009) and one such indicator is Anthropogenic Global Warming (AGW) and coping with its challenges was an onerous task for scientists and economists (Nordhaus, 1994). The responsibility is designed to rest on You^S to mitigate Nature's vulnerability forms (see Table 3), concerning climate-change-related anomalies and sustain the climate-sensitive sectors such as agriculture, forestry, water, and land-use. About hazards and disasters, the vulnerability was linked to the relationship that people have with their environment. It referred to the inability to withstand the effects of a hostile environment. It can be said that with SD actions from local to global levels the vulnerability can be managed and controlled to a significant extent.

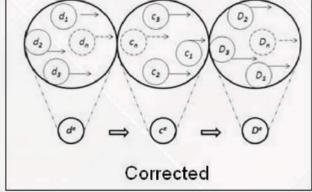
Evolution (Societal). The scope of Evolution (see Table 4) was limited to societal structures, institutions, and cultures that have paved the way for civilizations and their future. The indigenous characteristics of civilization; culture, customs, ideology, polity, labor, markets, social structures, security, etc. gradually assimilated more the characteristics of powerful civilizations, always with an urge to have the power to exercise control over nature and other human beings. With political boundaries; the civilized world became a composition of nations. Nations race to attain or retain supremacy over other nations; its nature; its people; its markets have all influenced the entity of Evolution. Its sub-entity Transfer was meant to ensure that the wheel of Evolution progressively moves on the right path towards a sustainable future. That as a baton to be passed from one generation to another and this will continue in the cycle of fine, where its entity of Family would transfer its values to the entity of You, You to You^S, You^S to the entity of Nature, and finally to the entity of Evolution. That will be how the fine cycle was conceptualized to collectively and correctively evolve.

Fyne Correction

The d patterns of Family will help gauge the deviations in social interactions, social group sharing in limited geography or social territory, typically subject to the same political authority and dominant cultural expectations. Societal evolution can be analyzed in the patterns of relationships between individuals who share a distinctive culture with institutions. The fact of the matter is that the development trends and their influence on societal evolution would require a correction (see Figure 2) of its uncorrected part with a random array of d, c, and D vectors, where families, as societal units, are not in sync with the SD goals. The random array of d and c, in both abiotic and biotic components of Nature, can add to vulnerability and even impair societal evolution and human civilization. The fine correction for SD will signify that a nation can address SD goals at its local levels. Then only the effective deviation d^e with its directional parity to goals will be expected to bring in effective change c^e and in turn, the directional parity of c^e to goals will bring the desired correction as effective development D^e . The consistency in D^e compliances at local levels and its integration at wider levels shall lead to SD. This adherence to corrective pursuits in minimizing the vulnerability to the extent possible shall lead to a corrected societal evolution. A small country like Bhutan was a big example for us, because, it had it's D^e aligned for low-carbon driven climateresilient development.

Figure 2: Fyne Corrections





Source: Author

Fyne Governance

Fyne Governance (*FyneGov*) got conceptualized to mitigate the vulnerabilities and to sustain the desired change and progress of *fyne* entities and their attributes, as the next practice of good governance. Good governance has to encourage decentralized planning with participatory, consensus-oriented, accountable, transparent, responsive, effective and efficient, equitable, and inclusive approaches (Goldman, 2010). Besides, it has to ensure freedom from corruption and exploitation on one hand and empowerment of all to uphold the people's participative spirit with righteousness and justness.

Geo-Cell as a unit of FyneGov.

The evidence of FyneGov will be in the transformation of an underdeveloped geo-cell (geographic cell) to a developed geo-cell and the onward sustainability of its fyne entities and its attributes. Each such geo-cell, therefore, needs to be classified on stipulated development parameters for the good governance of fyne (see Table 5). Metrics like NAS shall be required to classify geo-cells as underdeveloped or as developing or as developed using benchmarked computational techniques for FyneGov for quantifiable assurance on sustainable future. Further, each of the parameters would have to get assessed against benchmarks and assigned scores under its Aspect (see Table 6 and Table 7). Based on the geocell's priority the parameters have to be relatively weighted in a total weight of 1, $\sum W_i=1$, and similarly for the six Aspects as well, where $\sum W_i=1$.

Moreover, each parameter needs to be further broken into measurable sub-parameters along with its percentage distribution W_k as per relative influence (weight), where the total of W_k under each parameter will be 100%, $\sum W_k=100$. Against each W_k the compliance percentage C_k has to be then marked based on the actual on-ground status. This will be how the final computation of NAS will get carried out (see Appendix).

Steps for Computation of Parameter Score (PS), Aspect Score (AS), and NAS

- 1. Sub-Parameters are to be listed under each parameter (see Table 6 and Table 7).
- 2. Say, the W_k of a Sub-Parameter *Global Growth Sustainability* is 30 (in a percentage scale of 100) against Parameter *Per-Capita Income* under Aspect *Self* for an XYZ geo-cell then how its C_k gets marked?
- 3. C_k value of sub-parameter *Global Growth Sustainability* has to be appropriated based on sub-parameters percentage compliance vis-a-vis various development indices that are globally acceptable like Human Development Index (HDI), Industrial Production Index (IPI), Gross National Product (GNP), Gross Domestic Product (GDP), Environmental Performance Index (EPI), ICT Development Index (IDI), Census, etc. Appropriate IT systems have to be in place to provide the analytics and even automatically return the estimated C_k values.
- 4. Say, the percentage compliance of that sub-parameter is targeted as 77.5%. Then its C_k shall be calculated as 77.5% of W_k of global growth sustainability; which will be 77.5/100*30 = 23.25
- Likewise, all the C_k values of each of the sub-parameters will be ascertained to get the PC (Parameter Compliance)
- 6. The CG (Compliance Grade) will get calculated in a grade of 4 for each parameter using the formula, PC/100 * 4
- 7. The PS will get calculated as; CG * W_i.
- 8. AS will get calculated as; ∑PS * W_i.
- 9. Finally, NAS will get derived by adding all the six AS as; ∑AS₁-6

A Hypothetical XYZ Geo-Cell Case

Using the method as stated above, the parameter-wise C_k and the NAS of an XYZ vulnerable geocell was computed as an example under FyneGov. The C_k , BP, W_i , W_j , and W_k values were at the most assumptions on XYZ vulnerabilities typical to a multi-hazard geocell (UNDP, 2017). Based on that the NAS obtained was 2.54, indicating the XYZ's 'Developing' status of BB, which has to improve to 'Developed status' of at least AA by 2030, with a NAS value in the range closer to 4.0, of say, 3.41-3.79, in line with mandated SD Goals. For that, XYZ has to target for at least a high C_k of 85 percent on an average for each of the Parameters. And, it will be how the FyneGov model would facilitate ascertaining and implement conductive and cogent actions to deliver on SD Goals 2030. The dashboard of FyneGov for all geographical cells under the government's purview can be considered for trials and needful acceptance to achieve the national SD mandates using digital means till the last mile. The government at all levels must be accountable for the mandated realization of goals, where a national IT system can be of immense help for transparency in governance, right to local-development and information, decentralized planning, allocation, monitoring, evaluation, decision-support, and communication.

DISCUSSIONS AND CONCLUSION

Fyne's concept to the governance of development is expected to promote inquiries and empirical evidence-based studies and trials for further modeling of FyneGov for effective SD and ES. The sustainable goals and climate goals have been failing on their implementation deadlines since the last few decades due to lack of transparency and urgency from political governments, rampant political conflicts, and increasing acts of violation of peace; limits of growth and development. It is in this context that the discussions would be important to effectively comply with SD goals 2030. The perspective of fyne can act as a meaningful provocation to design solutions to resolve the conflicts of man-made development with the laws of nature. For example, all geo-cells with belowpar NAS classifications, indicating high vulnerabilities, can enact a definitive development mechanism improving its NAS grade closer to AA by 2030? Besides, the FyneGov model architecture is expected to provide scope for meaningful prospects for research scholars, educators, entrepreneurs, scientists, technologists, planners, development professionals, policymakers, advocacy groups, institutions, governments, and inter-governmental agencies to deliberate and deliver innovative ways to combat various vulnerabilities at local, regional and global levels. The correction on fyne's development-gaps in all geo-cells would be important for a sustainable future of the world.

The development classifications for geographical cells will provide a dynamic dashboard for governance backed by an integrated decision-support system. That way, government, international governments, and other development agencies can prioritize their resource allocation and its timely utilization for vulnerability mitigation and sustainable development either for a particular

geographic cell or for a cluster of cells and finally, covering the entire nation. Aside, it can extend its coverage beyond national boundaries and add to the web of *fyne* development data and gapanalysis to --a) comprehensively describe what all has happened with the development of a particular national or transnational Geo Cell or clusters, b) to prescribe for corrective actions and c) predict on vulnerability that will compel governments to take preventive and resilient measures. The *FyneGov*, in its tested and trusted form, is expected to promote coordinated policies, strategies, and convergent actions on vulnerability correction and inclusive development. Besides, it will help prioritize locally, alert globally and ensure optimal movement of resources among the geo-cells to address the development needs and vulnerability control of *fyne* entities and their attributes, especially in areas with poor NAS grades. It can be expected that national governments take justifiable actions to tax more the uncorrected-SD economic activities, enact trade treaties based upon the emission caps, augment the forest areas, restrict carbon-intensive industries, prohibit the killing of wild animals, ration energy, enforce standards on energy efficiency, fund alternative energy production, control the population levels, invest more on mass transit systems and many other such effective *fyne* development steps.

APPENDIX

Computation of NAS for an XYZs Geo-Cell Case

Step 1: Parameter-wise Ck computation

Sub	CODE 0101: PER-CAPITA INCOME			Sub	CODE 0102: AVERAGE AGE		
Code	SUB-PARAMETER	Wk	Ck	Code	SUB-PARAMETER	W _k	Ck
1	Per Capita Income Sustainability	35	19.50	1	Population below 30 years	60	27.50
2	GDP Growth Sustainability	30	23.25	2	Population above 30 till 60 years	25	16.25
3	Population Sustainability	35	12.75	3	Population above 60 years	15	9.50
Total		100	55.50	Total		100	53.25
	CODE 0103: GENDER EQUITY	16		-/	CODE 0104: LITERACY		
1	%age women married above 18 yrs	15	10.00	1	Average Literacy > 80%	45	22.75
2	%age women in organized sector	60	27.50	2	Gross Enrolment Ratios > 30	30	15.00
3	%age women in unorganized sector	25	16.50	3	100% Internet Access	25	5.25
Total		100	54.00	Total		100	43.00
	CODE 0105: LIFE EXPECTANCY				CODE 0201: AGRICULTURE		
1	Average Longevity > 75 years	35	29.25	1	Integrated farm practices >30%	40	28.25
2	Crude Death Rate < 7	35	29.50	2	Traditional practices sustained	30	27.50
3	Healthcare access for all	30	26.25	3	Ground water control	30	25.75

Total		100	85.00	Total		100	81.50
	CODE 0202: INDUSTRY				CODE 0203: HOUSING		
1	Jobs led growth	40	23.75	1	Access to housing loan for all	40	27.25
2	Jobless growth	20	18.25	2	Low cost housing schemes	25	21.75
3	Environmental Compliance	40	28.75	3	Urban amenities in rural areas	35	16.25
Total		100	70.75	Total		100	65.25
	CODE 0204: TRANSPORT			1	CODE 0205: LAND USE		
1	Non-fuel based > 35%	40	28.75	1	Coastal area S ^N	25	17.50
2	GHG emission control > 85%	35	26.50	2	Marine / Blue Economy S ^N	35	21.25
3	Energy efficient vehicles > 70%	25	16.00	3	Terrestrial area S ^N	40	14.25
Total	7	100	71.25	Total		100	53.00
SC	CODE 0301: HABITAT DIVERSITY			SC	CODE 0302: DIGNITY		
1	Coastal habitat management	30	19.75	1	Quality of Life: Human	40	27.75
2	Marine habitat management	35	29.00	2	Quality of Life: Animals	30	19.00
3	Terrestrial habitat management	35	21.00	3	Quality of Life: Plants	30	21.25
Total		100	69.75	Total		100	68.00
SC	CODE 0303: VULNERABILITY CONTROL			SC	CODE 0304: ENERGY		
1	Vulnerability Assessments- Disaster Management	30	25.00	1	Renewable Energy Maximization	35	17.00
2	S ^N Goals Compliance	40	22.25	2	Energy Use Optimization	30	18.75
3	CoV Maximization (CoV _{max})	30	25.00	3	Energy Efficiency Maximization	35	22.25
Total		100	72.25	Total		100	58.00
SC	CODE 0305: ECOLOGY			SC	CODE 0401: PRODUCTION		
	SUB-PARAMETER	$\mathbf{W}_{\mathbf{k}}$	Ck		SUB-PARAMETER	Wk	Ck
1	Restoration	40	20.50	1	Farm-Based Value Products	30	17.50
2	Augmentation	20	9.25	2	Non-Farm Based Value Products	25	19.00
3	Preservation	40	19.25	3	Economies of Scale	45	28.50
Total		100	49.00	Total		100	65.00
SC	CODE 0402: DISTRIBUTION			SC	CODE 0403:CONSUMPTION CONTROL		
1	Channel Integration	25	21.50	1	Per Capita Waste		35.25
2	Ethical and Fair Practices	30	18.50	2	Demand Chain Optimization	35	25.50
3	Supply Chain: Loss Prevention	45	23.25	3	Human Population Management	25	17.50
Total		100	63.25	Total		100	78.25
SC	CODE 0404: WEALTH GENERATION			SC	CODE 0405: POLICY		
1	Waste to Wealth	25	0.75	1	PCSD (Policy Coherence for Sustainable Development) Goals	30	14.00

2	Environmental Assets	35	22.50	2	Financials for PCSD	35	17.25
3	Human Assets	40	16.75	3	Inclusive Development	35	13.75
Total		100	40.00	Total		100	45.00
SC	CODE 0501: CCC			SC	CODE 0502: PJA		
1	Climate Data Management	25	12.25	1	Human-Human Conflict Control	35	33.00
2	CCC Decision Support System	30	14.00	2	Human-Nature Conflict Control	35	33.00
3	Climate Smart Activities	45	22.50	3	Accountability and Justice	30	24.00
Total	N. W.	100	48.75	Total		100	90.00
sc	CODE 0503: GLOBAL PARTNERSHIPS	1		SC	CODE 0504: FOSTER INNOVATION		
1	Global Value Chains	30	21.75	1	Green Development		26.00
2	Global Environment Funds	35	29.75	2	Clean Development Alternatives		24.25
3	Global Development Funds	35	26.00	3	Lean Development Alternatives		24.75
Total		100	77.50	Total		100	75.00
SC	CODE 0601: EMPOWERMENT			SC	CODE 0602: ETHICS		
1	Capacity Building & Self-Help	35	29.25	1	Traditional & Family Values	35	29.50
2	Freedom, Choice and Decision	35	30.25	2	Culture and Social Festivities	35	32.75
3	Women & Child Development	30	21.75	3	Responsible Business Conduct	30	22.75
Total		100	81.25	Total	775	100	85.00
SC	CODE 0603: SECURITY			SC	CODE 0604: TRANSFER		
1	Health and Education	30	22.50	1	1 You ^S and S ^N Best Practices		10.25
2	Livelihood, Food & Nutrition	30	17.50	2	2 Human-Nature Co-existence		14.75
3	Intellectual, Physical, Natural, Digital	40	26.25	3	Happiness 40		21.25
Total	//	100	66.25	Total		100	46.25

Step 2.1: You^S Leadership Computation of NAS

Yous	Code	Parameter	W _i (∑Wi=1)	Parameter Compliance (C)	Compliance Grade CG (C in Scale of 4) (C*4)/100	PS = (CG *Wi)
	101	Per-Capita Income	0.18	55.50%	2.22	0.4
	102	Average Age	0.24	53.25%	2.13	0.51
	103	Gender Equity	0.18	54.00%	2.16	0.39
Self	104	Literacy	0.25	43.00%	1.72	0.43
-	105	Life Expectancy	0.15	85.00%	3.4	0.51
	Aspect	Code: 01 $W_j = 0.19$			Σ PS =2.3	1
			Aspect S	$core (01) = \sum PS *V$	$V_{\rm j}=0.44$	
Enter prise	201	Agriculture	0.19	81.50%	3.26	0.62
En	202	Industry	0.18	70.75%	2.83	0.51

203	Housing	0.18	65.25%	2.61	0.47		
204	Transport	0.2	71.25%	2.85	0.57		
205	Land Use	0.25	53.00%	2.12	0.53		
Aspect	Code: 02 $W_j = 0.18$			$\Sigma PS = 2.7$			
		Aspect Sco	ore $(02) = \sum PS *V$	$V_{\rm j} = 0.49$			
301	Habitat Diversity	0.19	69.75%	2.79	0.53		
302	Dignity	0.18	68.00%	2.72	0.49		
303	Vulnerability		72.25%				
		0.18		2.89	0.52		
	Control				K		
304	Energy	0.22	58.00%	2.32	0.51		
305	Ecology	0.23	49.00%	1.96	0.45		
Aspect	Code: 03 $W_j = 0.17$		$\Sigma PS = 2.5$				
	204 205 Aspect 301 302 303 304 305				$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		

Step2.2: SD Leadership Computation of NAS

SD	Code	Parameter	W_i $(\sum W_i=1)$	Parameter Compliance (C)	Compliance Grade CG (C in Scale of 4) (C*4/100)	PS =(CG *Wi)
	401	Production	0.15	65.00%	2.6	0.39
	402	Distribution	0.15	63.25%	2.53	0.38
nics	403	Consumption Control	0.25	78.25%	3.13	0.78
Economics	404	Wealth Generation	0.2	40.00%	2	0.4
Eco	405	Policy	0.25	45.00%	1.8	0.45
		Aspect Code: $04 ext{ W}_j = 0.1$	17		$\sum PS = 2.4$	
		Aspect	Score (04) =	$= \sum PS *W_i = 0$.41	-
	501	Combat Climate Change (CCC)	0.35	48.75%	1.95	0.68
Common Goals	502	Peace, Justice, Accountability (PJA)	0.25	90.00%	3.6	0.9
	503	Global Partnerships	0.15	77.50%	3.1	0.47
m	504	Foster Innovation	0.25	75.00%	3	0.75
ర		Aspect Code: 05 $W_j = 0.1$	15		$\sum PS = 2.8$	4.
		Aspect	Score (05) =	$= \sum PS *W_i = 0$.42	
	601	Empowerment	0.2	81.25%	3.25	0.65
	602	Ethics	0.2	85.00%	3.4	0.68
utio	603	Security	0.2	66.25%	2.65	0.53
Evolution	604	Transfer	0.4	46.25%	1.85	0.74
E		Aspect Code: $06 ext{ W}_j = 0.1$	14		$\Sigma PS = 2.6$	
				$= \sum PS *W_j = 0$		
		$NAS = \sum AS_{(01-06)} = 0$				
		Geo-Cell Classifica	ition Case:	Developing (G	rade BB)	

Table 1: Family

Sub Entity	Attributes
A	Rural ¹ , No Electricity ² , Bare Minimum Civic Amenities/Utilities ³ , Joint Families ⁴ , Local Governance ⁵ , Rich Biodiversity ⁶ , Clustered by Avocations/ Social Status ⁷ , Semi-Urban ⁸ , Electricity ⁹ , Moderate ^{3,4,5,6,7} , Urban ¹⁰ , Available ³ , Depletion ^{4,5,6,7} , Modern Infrastructure ¹¹ , Organized Governance ¹² , Very Moderate ^{6,7} , Global ¹³
В	Agriculture ¹⁴ , Fishery ¹⁵ , Animal Husbandary ¹⁶ , Forestry ¹⁷ , Handicrafts ¹⁸ , Traditional Business ¹⁹ , Self-Help Avocations ²⁰ , Dominant Gender Male ²¹ , Skills Based ²² , Non-Farm ²³ Moderate ^{16,17,18} , New Business ²⁴ , Gender Female ²⁵ , Migration ²⁶ , Industrial ^{14,15,16,18, 19, 20, 22, 23, 24} , Knowledge Based ²⁷ , Technology ^{14,15, 20, 22, 23, 27} , Gender Equity ²⁸
С	Traditional Clothing, Food, Culture, Arts, Architecture, Language, Customs ²⁹ , Local Markets & Goods ³⁰ , God Fearing & Superticious ³¹ , Domesticated Animals ³² , Needs Driven ³³ , Ethics & Integrity ³⁴ , Human-Nature Bonding ³⁵ , Peace & Happiness Driven ³⁶ , Resistance to Change ³⁷ , Majorly29, Slow Erosion30, 31, 32, 33, 34, 35, 36, 37, Regional/National Markets & Goods38, Commoditification39, Accommodation of New - Clothing, Culture, Language, Customs 40, Fine Dining 41, Sparsely 29,33,34,35,36,37, Amalgamation30, 31,35, Global Markets & Goods42, Advent of Luxury39, Widespread40, Modern Public and Private Transport43, Rarely29,33,34,35,36,37,38, Global39,40,41,43, Glitz and Glamour44, Want/ Market Driven45, Problem of Plenty46
D	Informal ⁴⁷ , Moral ⁴⁸ , Formal Education (School, University) for Haves ⁴⁹ , Poor Access for Havenots ⁵⁰ , Philosophy, Religion & Spirituality ⁵¹ , Traditional Vocational Know-hows ⁵² , Enquiry & Experimentation ⁵³ , Wider Access ⁴⁹ , 51, 52, 53, Multidisciplinary ⁵⁴ , New Skills & Knowledge ⁵⁵ , Gender Inclusive ⁵⁶ , Policy Driven ⁵⁷ , Collaborative Development (Content, Methods & Materials) ⁵⁸ , Advent of Technology in Education ⁵⁹ , Proliferation of Professional Programs ⁶⁰ , New Jobs Creation ⁶¹ , Modern Technology Enabled ⁶² , Access to Global Resources ⁶³
E	Indigenous Performing Arts, Music, Sports and Culture ⁶⁴ , Community Fairs, Festivals, Fete, and Other Celebrations ⁶⁵ , Localized ⁶⁶ , Limited Mediums ⁶⁷ , De-Localized ⁶⁸ , Improved availability of Machines and Machinery ⁶⁹ , Commoditization ⁷⁰ , Multiple Mediums ⁷¹ , Growth of Entertainment as Industry ⁷² , Globalized ⁷³ , Technology-aided ⁷⁴ , Private (digital) Screen ⁷⁵

A: Domicile, B: Livelihood, C: Lifestyle, D: Empowerment, E: Entertainment

Source: Author

Table 2: You

Sub-Entity	Attributes
Logical	Intelligence Quotient ⁷⁶ (IQ), Scientific Methods ⁷⁷ , SMART ⁷⁸ (Specific, Measurable, Achievable, Relevant, Time-oriented) Goal Setting, Tangible Actions ⁷⁹ , Tangible Metrics ⁸⁰ (Cost Optimization, Benefit Maximization)
Intuition	Emotional Quotient ⁸¹ , SMART Ideas ⁸² Goal Setting, Lateral Thinking ⁸³ , Design Thinking ⁸⁴ , Disruptive Innovation ⁸⁵
Communication	Verbal ⁸⁶ , Non-Verbal ⁸⁷ , Design Motivation ⁸⁸ , Fellowship ⁸⁹ , Relationship ⁹⁰ , Leadership ⁹¹
Values	Spiritual Quotient ⁹² (SQ), Social ⁹³ , Cultural ⁹⁴ , Morality/ Ethics ⁹⁵ , Integrity ⁹⁶ , Patience ⁹⁷ , Humble ⁹⁸
Passion	Walk-the-Motivation ⁹⁹ , Positive Attitude ¹⁰⁰ , Non-Complacent ¹⁰¹ , To-Do-Will ¹⁰²
Endurance	Physical Fitness ¹⁰³ , Mental Fitness ¹⁰⁴ , Mobility ¹⁰⁵ , Tenacity ¹⁰⁶ , Self-Support ¹⁰⁷ , Adaptability ¹⁰⁸ , Survival-Ability ¹⁰⁹

Source: Author

Table 3: Nature (Ecosystem)

Sub-Entity	Attributes	Vulnerability (V) forms
Abiotic	Water ¹¹⁰ , Sunlight ¹¹¹ , Radiation ¹¹² , Temperature ¹¹³ , Humidity ¹¹⁴ , Atmosphere ¹¹⁵ , Soil ¹¹⁶ (earth)	Flood, Soil erosion, Water table depletion, Drought, Climate-change, Cyclones, earthquake, landslide, global-warming, Sea level rise, Afforestation, Hazardous waste, pH of water, pH of the soil, Fossil fuel depletion, Greenhouse gases, pollutants (air, water, and soil), UV radiation, etc.
Biotic	Plants ¹¹⁷ , Animals ¹¹⁸ , Fungi ¹¹⁹ , Bacteria ¹²⁰	Marine biodiversity depletion, coastal and other terrestrial biodiversity depletion, Habitat diversity disruption, migration, endangered species, diseases, epidemics, food-chain disruptions, Poverty, Gender justice, living world relationships (Human-Human, Human-Plant, Human-Animal, Human-Wilderness) conflict with laws of nature, Profit above people and planet, unnatural bio-techniques, etc.

Source: Author

Table 4: Evolution (Societal)

Sub-Entity	Attributes
Empowerment	Values & Ethics ¹²¹ , Education ¹²² , Self-help ¹²³ , Tolerance ¹²⁴ , Arts ¹²⁵ , Entertainment ¹²⁶ , Decision ¹²⁷ ,
	Choice ¹²⁸ , Family Planning ¹²⁹ , Gender Equity ¹³⁰ , Rights & Duties ¹³¹ , Control ¹³² , Advocacy ¹³³ ,
	Creativity & Innovation ¹³⁴ , Communication ¹³⁵ , Correction ¹³⁶ , Governance ¹³⁷
Economy	Information ¹³⁸ , Knowledge ¹³⁹ , Land-use ¹⁴⁰ , Marine-use ¹⁴¹ , Income ¹⁴² , Expenditure ¹⁴³ , Gross
	Domestic Product Growth ¹⁴⁴ , National Debt Control ¹⁴⁵ , Housing ¹⁴⁶ , Banking ¹⁴⁷ , Insurance ¹⁴⁸ ,
	Finance ¹⁴⁹ , Markets ¹⁵⁰ , Trade ¹⁵¹ , Infrastructure ¹⁵² , Migration Control ¹⁵³ , Waste Management ¹⁵⁴ ,
	Regulatory Figureworks ¹⁵⁵
Security	Territorial ¹⁵⁶ , Social ¹⁵⁷ , Political ¹⁵⁸ , Cultural ¹⁵⁹ , Legal ¹⁶⁰ , Food ¹⁶¹ , Water ¹⁶² , Soil ¹⁶³ , Air ¹⁶⁴ ,
	Energy ¹⁶⁵ , Livelihood ¹⁶⁶ , Health ¹⁶⁷ , Environment ¹⁶⁸ , Cyber-physical ¹⁶⁹ , Technological ¹⁷⁰
Transfer	Peace ¹⁷¹ , Happiness ¹⁷² , Quality of Life ¹⁷³ , Disaster Control ¹⁷⁴ , Greener Mechanisms ¹⁷⁵ , Leaner
(to Gen.Next)	Mechanisms ¹⁷⁶ , Cleaner Mechanisms ¹⁷⁷

Source: Author

Table 5: Geo-Cell Classification

	Geo-Cell Status (on the scale of 0-4)	Criterion
Status	UNDERDEVELOPED	Net Aspects Score (NAS) = >0 and < 2
D	Highly Unsatisfactory	0.01 - 0.99
C	Unsatisfactory	1.00 - 1.99
Status	DEVELOPING	NAS = >= 2 and < 3
В	Preparatory	2.00 - 2.30
BB	Partly Progressive	2.31 - 2.69
BBB	Overall Progressive	2.70 - 2.99
Status	DEVELOPED	NAS = >=3 and <= 4
A	SD Assurance Level 1 (Moderate)	3.00 - 3.40
AA	SD Assurance Level 2 (High)	3.41 - 3.79
AAA	SD Assurance Level 3 (Highest)	3.80 - 4.00

Source: Author

Source: Author

Table 6: You^S Leadership (Human Aspects) with

	Aspec			
Parameter	Wi	BP (Benchmarked Parameter) with the highest score of 4		
0101: Per-Capita Income	0.18	USD 12500 average income/person/year		
0102:Average Age	0.24	Under 30 years		
0103: Gender Equity	0.18	Equal opportunities for all irrespective of sex, caste, faith, age, etc.		
0104:Literacy	0.25	100% High School Education for all		
0105: Life Expectancy	0.15	75 yrs (average of male and female)		
	Aspect 0	2: ENTERPRISE W _j Enterprise = 0.18		
0201:Agriculture	0.19	0.19 100% organic practices, "maximum crop per drop" approaches, balanced soil nutrients, crop diversity, food for all		
0202:Industry	0.18	100% compliance on a) maximization of livelihoods, b) minimization of pollution, chemicals' risk and waste and c) maximization of resource efficiency		
0203:Housing	0.18	Access to proper and affordable housing for poor and weaker sections of society		
0204:Transport	0.20	100% compliance on GHG (Green House Gas) emission control, safe and affordable		
0205:Land Use	0.25	100% assurance on environment protection in fulfillment of human needs		
	Aspect	03: SOCIETY W_j Society = 0.17		
0301: Habitat Diversity	0.19	100% protection of the natural range of habitats present in the region (land, water)		
0302:Dignity	0.18	Human rights for all		
0303:Vulnerability Control	0.18	Vulnerability audits and remedial mechanisms in place to secure all habitats physical natural, digital		
0304:Energy	0.22	>70% renewable energy sources, energy conservation and efficiency maximization		
0305:Ecology 0.23 Quantifiable evidence on sustainable restoration, preservation, and protection of biodiversity in the region				

Wi and Wj values of an XYZ Geo-Cell

Table 7: SD Leadership (Development Aspects) with W_i and W_j values of an XYZ Geo-Cell

Aspect 04 : ECONOMICS		W_j Economics = 0.17				
Parameter	Wi	BP with a highest Grade of 4				
		Sum W _i (Predetermined Weightages of Parameters under Aspect) = 1				
0401:Production	0.15	>70% goods transactions/year in the region are with eco-friendly materials and means and are all of value				
0402:Distribution	0.15	Supply Chain costs per year < 6% of GDP				
0403:Consumption Control	0.25	Waste Generation (kg/capita/day) <1; Population Density <150 people/km² in terrestrial region,				
0404:Wealth Generation	0.20	Rate of Afforestation > Rate of Deforestation, Legislation on Returns on Investment in areas like Wealth from Waste, Sustainable Demand and Supply, Cleaner and Safer Water/Air/Soil, Social Entrepreneurship, Corporate Social Responsibility, Linear to Cyclic Industrial Activities, etc.				
0405:Policy	0.25	100% Financial Inclusion, Corruption-Free Perception > 80%, Health, Education and Social Security for All				
Aspect 05: COMMO	N GOA	LS W _j Common Goals = 0.15				
0501:Combat Climate Change	0.35	Strong evidence towards 70% renewable energy by 2030 and 100% by 2050, CO ₂ per capita emission < 1.5 t CO ₂ by 2030				
0502: Peace, Justice, Accountability	0.25	Access for All to Justice, Effective and Accountable Institutions at all levels, Zero tolerance to Conflicts, 100% tolerance to all faiths and festivities, above par HDI scores				
0503:Global Partnerships	0.15	Participation in Inter-Governmental Data Analytics for alignment on Strategic Priorities; Deliver on Sustainable Development Goals				
0504: Foster Innovation	0.25	Green-Lean-Clean Development as the main driver for Innovation in the region and its transfer for wider sustainable development				
Aspect 06: EVOLUT	ION	$W_i Self = 0.14$				
0601:Empowerment	0.20	Decentralized planning and devolution of funds, community-based resources management, local governance institutions, legal reforms entitlements to the means of production, political and social organization and satisfaction of basic needs				
0602:Ethics	0.20	Rich History of Indigenous Values & Ethics, Rick Folklores, Human-Nature Organic-Relationships, 'Global Responsibility-Local Accountability' based 'better tomorrow' actions for future citizens				
0603:Security	0.20	Total assurance (Government to Business, Government to Citizen, Business to Business, Business to Customer) on Cyber Security, Physical Security, Social Security, Territorial Security, Environment Security, etc.				
Security, Territorial Security, Environment Security, etc. Inter-Governmental and Inter-Regional Best Practices (You ^S and S ^N) 0604:Transfer 0.40 transferred and Global-Local Partnerships in convergent action for th transformation of Geo-Cells to its developed status						

Source: Author

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WEB RESOURCES

www.hsph.harvard.edu/ www.ipcc.ch/ www.stockholmresilience.org/ www.un.org www.unfccc.int/ www.un.org/sustainabledevelopment/

A Study on Investors Perception and Awareness towards Sovereign Gold Bond in Mumbai

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ABSTRACT

SGB are government securities denominated in grams of gold and are substitutes for holding physical gold. Gold has indeed proven itself as an effective hedge against any downside risk. Due to pandemic buying gold in a physical form may not be possible amidst the COVID-19 restrictions; hence SGB would be a smart and unconventional way of investing in Gold. The purpose of the study is to understand the perception and awareness of investors towards SGBs in Mumbai. Also, study the reasons for non-investment in SGB. Investor here is regarded as anyone who purchases gold in any form. Perception is understood by preference towards Physical Gold and SGB. Awareness is studied through asking questions related to SGB, tenure, interest rate, etc. The methodology used is primary and secondary research. The study was analyzed and executed with statistical tools like Spearman Rank Correlation, Two -Way ANOVA and Chi-Square Test. The findings analyzed were that there is no relationship between age, income, and awareness of investors related to SGB and towards preference of investment. It shows there is a significant relationship between income and perception of investors towards non-investment in SGBs. The study suffers from limitations like it is restricted to the responses of 160 investors in Mumbai only. It is suggested that awareness regarding SGB should be increased by conducting workshops through banks. In the present era, investment in SGB is more efficient form rather than investment in physical gold yet, the awareness level about investment in SGBS is still moderate.

Keywords: Investor, Awareness, Perception, Sovereign Gold Bond (SGB), Physical Gold

1. INTRODUCTION

Sovereign gold bonds are tradable government securities with prices linked to the value of the underlying asset—that is gold. They are issued by the Reserve Bank of India on behalf of the government and are denominated in grams of gold (1 unit = 1 gram). The scheme came into the limelight in the Union Budget 2015-16 and was formally launched by the Prime Minister of India Shri Narendra Modi on 5 November 2015. From June 2016 onwards SGB started trading on the NSE and BSE. SGB intends to target that investor who wants to purchase gold for investment purpose.

1.1. Sovereign Gold Bonds Are A Good Investment in This Pandemic, Covid-19. This can be explained with help of an article - Why It Makes Sense to Invest in Sovereign Gold Bonds as Covid-19 Plays Havoc¹

Gold has indeed proven itself as an effective hedge against any downside risk. It has seen a sharp rise in the price rally since the first case of Novel Coronavirus was reported in November 2019. The current situation considers allocating some portion of our investment portfolio to gold and its equivalents. In the pandemic year buying gold in a physical form from preferred jeweller or gold merchant may not be possible amidst the COVID-19. But one can consider Gold Exchange Traded Funds, Sovereign Gold Bonds, and/or Digital Gold, which are smart and unconventional ways of investing in gold.

In India, Gold is considered as a "sacred" investment and hence buying physical gold in the form of gold coins and jewellery has been the most popular and traditional exercise during this festival due to its symbolic significance. Due to the pandemic, SGBs are considered to be a good substitute for physical gold since it has numerous advantages like no purity & storage concerns, higher returns, tax efficiency, etc. [2]

2. LITERATURE REVIEW

(Sudindra & Naidu, 2019) - Is Sovereign Gold Bond Better Than Other Gold Investment? The main objective of the study is to find out how Sovereign Gold Bond is superior to other forms of Gold Investment. The methodology used was secondary data. It concluded that SGBs are superior to other forms of Gold Investment as SGB are better in terms of purchase price and benefit of no TDS and can be used as security/collateral for availing loan.

(Shenoy & Ashwitha, 2019) - Investors Perception and Satisfaction Level on Sovereign Gold Bond Scheme a Study at Belthangady Taluk (D.K): The objectives of this research paper are to study the factors considered by investors on investments in SGBs and the perception and satisfaction level of investors. The study was limited to 30 respondents only. The findings were 67% of respondents were satisfied with their investments and 66% prefer to invest in this scheme in paper form and the rest 34% prefer DEMAT form. It suggested that since the scheme is authorized it is safe and secure it is suitable for investor.

(Ninan, 2018) - Sovereign Gold Bond Scheme - An Alternative to Physical Gold Investment in Kerala: This research highlights the objective about physical, paper and SGB and awareness. The research methodology used was explorative in nature and based on primary data. The findings were 75.3% lack awareness about SGB, majority that is 90.7% have investments in physical gold only. The conclusion explained SGBS is a preferred option for investment.

¹ Murkute Aditi, 6th December, 2020. Personal Finance. Why It Makes Sense to Invest in Sovereign Gold Bonds As COVID-19 Plays Havoc. (https://www.personalfn.com/dwl/why-it-makes-sense-to-invest-in-sovereign-gold-bonds-as-covid-19-plays-havoc)

(Satijani & Gidwani, 2018) - Gold Saving Scheme: An unusual way of investing in Gold thrust on Sovereign Gold Bond Scheme (SGBs): The main objective is to study the SGB scheme and to compare the performance of Physical gold, Gold ETF and to provide an alternative to buying physical gold. The research methodology adopted for this study is secondary research. It suggested and recommended that Government should formulate and implement policy for gold. The conclusion showed that the study revealed that gold loans were primarily being used for smoothening household consumption and for repaying debts.

(Rathore, 2017) - Investor's Attitude towards Physical Gold and Sovereign Gold *Bonds:* The objective is to study the influence of different factors while investing in physical gold

and SGB and to study the investor's preference. Research methodology used is quantitative method and data is collected through primary sources. The findings are that investment in SGB, the investor needs not to pay any transaction cost which makes the scheme more attractive. It suggested and recommended to have awareness workshops for SGBs. Conclusion explained safety, purity and liquidity are the major factors to which investors give importance.

(Rishsab, 2018) - A Financial Innovation in India: The objective of this paper to study the background of Sovereign Gold Bond scheme, to understand the difference between SGB and physical gold and explained revenue generated from SGB are higher. The research methodology used is based upon the secondary data analysis. It has also explained and highlighted the advantages to SGB that it is considered the safest investment. Some major points of conclusions are the awareness of Sovereign Gold Bond scheme among the investors is moderate. Many investors still believe physical gold as a safer option.

3. PROBLEM STATEMENT

Diversion of investment from the physical form of gold to the non-physical form is the need of the hour. As a result, GOI and RBI have come up with various alternatives like gold ETF, SGB scheme, etc.

The GOI introduced SGBS as a measure for curbing the gold imports, the investment under the scheme proves to be low all over India, especially in Mumbai due to its low awareness among the investors and their sentimental attachment towards holding gold in physical form. Even though it has many benefits, SGB has low investment compared to other financial instruments.

² Shetty Adhil, 26th April, 2020. Financial Express. Why Sovereign Gold Bond may be your best gold buying option this Akshay Tritiya amid COVID-19 crisis

(https://www.financialexpress.com/money/why-sovereign-gold-bond-may-be-your-best-gold-buying-option-this-akshay-tritiya-amid-covid-19-crisis/1939887/)

4. OBJECTIVES OF THE STUDY

In order to understand the Investors' perception and awareness towards SGBs, the following objectives were framed:

- The purpose of the study is to know the awareness level towards SGB.
- To study the investor's perception through preference between physical gold and SGBs.
- · To study the reasons for non-investment in SGBs by investors.
- To study the factors, reasons considered by investors on preference in SGBs schemes.

5. SCOPE AND SIGNIFICANCE OF STUDY

This study attempts to understand investors perception though their preference towards Physical Gold and SGBs. Also, investors awareness towards SGBs in Mumbai. The scope of the study includes background, introduction of SGBs, features and merits. It also covers the statistical test conducted to analyse and interpret the results and arrive at a conclusion.

6. HYPOTHESIS OF THE STUDY

Hypothesis 1: The age, income of the investor and awareness related to SGB are independent.

H0: There is no significant difference between the awareness of SGBs among investors based on their age and income.

H1: There is a significant difference between the awareness of SGBs among investors based on their age and income.

<u>Hypothesis 2:</u> The age, income of the investor and the Preference of Investment in Physical Gold and SGB are independent.

H0: There is no close association between the age, income of investor and preference of investment.

H1: There is a close association between the age. income of investor and preference of investment.

<u>Hypothesis 3:</u> The annual income of the investor and the reason for non-investment in non-conventional forms of Gold are independent. (Here, it is referred to as SGBs)

H0: There is no significant difference in the income and perception of investors for non-investment in SGB.

H1: There is a significant difference in the income and perception of investors for non-investment in SGB.

<u>Hypothesis 4:</u> The annual income and perception on preference of investors towards SGB is independent.

H0: There is no influence of annual income on perception of investors towards preference of SGB.

H1: There is influence of income on perception of investors towards preference of SGB.

7. FEATURES OF SGB2-

The main features of SGB as per RBI are -

Eligibility to invest in SGB – Persons resident in India as defined under Foreign Exchange Management Act, 1999 are eligible to invest in SGB. Eligible investors include individuals, HUFs, trusts, universities and charitable institutions.

Minimum and Maximum Limit for investment –Minimum investment in the Bond shall be one gram of gold, where one unit of the bond is equal to one gram of gold with a maximum limit of subscription of 4 kg for individuals.

Interest Rate – The Bonds bear interest at the rate of 2.50% (fixed rate) per annum on the amount of initial investment.

Redemption and Tenure for SGB – On maturity, the Gold Bonds shall be redeemed in Indian Rupees and the redemption price shall be based on simple average of closing price of gold of 999 purity of previous 3 business days from the date of repayment, published by the India Bullion and Jewellers Association Limited (IBJA).

Though the tenor of the bond is 8 years, it offers an exit option, early encashment/redemption of the bond is allowed after fifth year from the date of issue on coupon payment dates. On maturity—after eight years—investors can redeem the bond at the average price of gold in the three preceding days. The interest payments, however, will be made on the face value.

DEMAT Account – The Bonds can be held in DEMAT account and a specific request for the same must be made in the application form itself.

8. ADVANTAGES OF SGBS

It is considered the safest form of investment as zero risk of handling physical gold. One can earn 2.50% assured interest per annum on the issue price. Also, it an assurance of purity: gold bond prices are linked to price of gold of 999 purity (24 carat) published by IBJA. It has an easy exit option that is the tenor of the bond is for 8 years with an option to redeem from 5th year onwards on the date on which interest is payable. And it is easily traded on Exchange and there is an ease of borrowing loan, can be used as collateral for loans. A key benefit is the issue price of the Gold

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² https://m.rbi.org.in/Scripts/FAQView.aspx?ld=109

Bonds will be ₹ 50 per gram less than the nominal value to those investors applying online and the payment against the application is made through digital mode.

9. RESEARCH METHODOLOGY

Sample Size - In this study, 160 investors had been considered from Mumbai. The investors (respondents) were targeted by using Snowball Sampling Technique.

Data Collection - The study included Primary and Secondary sources of data. Secondary sources included data from research reports, newspaper articles have been analyzed while Primary data was by way of Questionnaires which was circulated through google forms. The duration was one month only, that is January – 2021.

Statistical Tools - In this study, the hypothesis was made and then analysed with the help of statistical techniques. of Chi-Square Test and 2 Way ANOVA using Excel, and Spearman Rank Correlation using IBM Statistical Packages for Social Sciences (SPSS) software. The hypotheses were tested with 95 percent confidence level i.e., at 5 percent significant level.

Quantitative data was presented in tables, Charts and graphs were also used for representation of data and interpretation for the same were analysed and written.

10. DATA ANALYSIS AND INTERPRETATION

10.1. DEMOGRAPHIC PROFILE OF INVESTORS

Demographic factors like educational status and family income play an important role in investment decision at the time of investment in gold. Safety, purity and liquidity are the major factors to which investors give more weights.

Table 1 shows the demographic profile of investors. It depicts that that 37.5% investors are male, and 62.5% investors are female. The table further shows that 28.13% of the investors were aged between 18 -24, 18.75% between 25 - 34, 29.38% were between 35 - 44, 16.88% were between 45 - 54, whereas the least were from 55-64 and above 65 age group that is 6.25% and 0.63% respectively.

The table further shows the employment and occupation of the investor. It shows maximum investors are employed that is 57.5% that contributes to 92 respondents. Student and self-employed follows the next by 23.75% and 10.63% respectively. Homemaker and retired are the least with 5.63% and 2.5% respectively. The annual income in table shows the maximum investors income fall under 600,000 – 10,00,000 brackets amounting to 33.75%, followed by 25% and 17.50% of Not Earning Currently and 300,000 – 600,000 income brackets respectively. The least amounted to Above 10 Lacs and Below 3 Lacs which were 15% and 8.75% respectively.

10.2. PREFERENCE OF INVESTOR

Figure 1 shows that the majority that is 86.25% prefer Physical Gold, whereas only 13.75% Sovereign Gold Bonds. It explains, further 138 investors prefer physical gold and 22 prefer SGB. This shows that they are not aware of the SGB as an investment.

10.3. AWARENESS TOWARDS SGB

Figure 2 depicts that the majority that is 57.50%, 92 investors are not aware of SGBs, whereas 42.50% that is 68 investors are aware. It is analysed that the majority that is 86 investors are not aware of the minimum requirement in SGBs, 47 answered May be which shows that are not sure, whereas 27 said they are aware of the minimum requirement. It is analysed that only 32 investors are aware of the interest rate in SGB, whereas the majority that is 80% are not aware. It can be analysed that due to lack of awareness, investors are not aware of the tenure of SGBs that is 80.63%, that is 129 investors.

10.4. REASON FOR PREFERENCE IN SOVEREIGN GOLD BONDS

Table 2 along with Figure 3 explains the ranking of preference; that is which reason or factor the investor prefers, gives first ranking and so on. 5th is the highest rank that is very important and 1 is the lowest that is unimportant. It can be analyzed that the highest among all factors have been given to Popular form of investment that is 62.32% which is very important.

For confidentiality of possession, the highest is 31.88% that is ranked as Important. Easier to invest or purchase is ranked Very Important with highest percentage of 48.55%. Low Risk is ranked important with 35.15% being the highest. Liquidity is ranked moderately important with 31.6%.

10.5. REASON FOR PREFERENCE IN PHYSICAL BONDS

Table 3 along with Figure 4 explains the ranking of preference; that is which reason or factor the investor prefers, gives first ranking and so on. 5th is the highest rank that is very important and 1 is the lowest that is unimportant. It can be analysed that the highest among all factors have been given to Easier to Invest that is 59.09% which is ranked Important, along with Ease of Borrowing Loan that is 59.09% ranked Moderately Important, followed by Safe form of investment that is 50% which is very important. It is further followed Earn Interest with 50%, ranked as Moderately Important and Tax Benefits with 45.45% ranked Important.

10.6. REASONS FOR NON- INVESTMENT IN NON-CONVENTIONAL FORMS OF GOLD

Figure 5 depicts the reason for non – investment in SGBS. Investors selected the maximum reason towards lack of awareness and no physical existence that is 24.18% and 19.54% respectively. Lack of trust is 18.96%, formalities involved is 13.93% and not popular as a reason is 12.96%. The lowest were cost involved and difficulty in maintaining secrecy amounting to 4.06% and 6.38% respectively.

10.7. INVESTMENT IN SGB

Figure 6 can be analysed that the majority that is 147 investors amounting to 91.88% don't invest in SGB, whereas only a few 13 investors amounting to 8.13% invest in SGBs.

10.8. CHI – SQUARE TEST BETWEEN AGE, INCOME AND AWARENESS OF SGB AND TOWARDS PREFERENCE OF INVESTMENT ANALYSIS

Chi-Square Test is conducted and then analyzed for the **Hypothesis 1 and 2**: The age, income of the investor and awareness related to SGB are independent. The age, income of the investor and the Preference of Investment in Physical Gold and SGB are independent.

Analysis of data using Chi-Square Test is depicted in **Table 4** - 8 in detail. This test is employed to test the significance of influence of one factor over the other. In this study, age and income are tested with awareness of SGBs and Preference of Investment.

The **Table 4** gives an overview of analysis and shows that at 95% confidence interval, the calculated value that is the observed value is less than the critical value obtained from the chi-square table at X^2 0.05,5 and falls in the acceptance region in all cases. Also, the P value is more than alpha in all four scenarios, thus the null hypothesis is failed to be rejected.

Hence, the null hypothesis is accepted (Not Significant) in all the case, and the alternate hypothesis is rejected. Thus, we can state that there is no relationship between age, income and awareness of investors related to SGB and towards preference of investment.

10.9. TWO-WAY ANOVA – NON – INVESTMENT IN SGB BASED ON INCOME ANALYSIS It is conducted for Hypothesis 3 - The annual income of the investor and the reason for non-investment in non-conventional forms of Gold are independent. (Here, it is referred to as SGBs) The Table 9 shows that at 95% confidence interval, the F Value calculated is more than the F Critical Value, 11.74 > 2.71 we reject the Null Hypothesis. Also, the P value is less than alpha, 0.0001 < 0.05, so Reject Null Hypothesis.

Hence, the null hypothesis is rejected, and the alternate hypothesis is accepted. Thus, we can state that there is a significant relationship between income and perception of investors for non-investment in SGBs.

10.10. CORREALTION – PREFERNCE IN SGB BASED ON INCOME ANALYSIS

It is analysed for **Hypothesis 4**: The annual income and perception on preference of investors towards SGB is independent.

Table 10 shows the Correlation between Income and Preference of SGB. Preference of SGB is a ranked data. Income and Preference is a type of Ordinal data, so Spearman's rho Correlation is used. If the significant value is less than 0.05, then there is a significant Correlation between the variables.

If the Correlation Coefficient value is closer to 1, it has a strong relationship. To understand the correlation of Income with the Preference of SGB, the respondents were asked to rate their preferences towards SGB on a 5-point scale ranging from Most Preferred to Least Preferred.

The correlation matrix indicates that the Correlation between the Annual Income and Preference of Investors towards SGB. Relationship between Annual Income and Ease of Borrowing is strong negative correlation but not statistically significant, as the p -value 0.256 is more than 0.05. It implies that increase in annual income led to reduction in preference towards ease of borrowing.

However, the correlation between Income and other preferences like Earn Interest, Easier to Invest, Safe and Tax Benefit showed a weak positive correlation but not statistically significant as p-value is more than 0.05, in all cases. From this, it can be concluded that as annual income increases, the preference towards these factors increases in similar way although there is some dispersion. Thus, as 4 out of 5 factors have a positive correlation, we conclude that income does have a positive correlation with Preference towards SGB as shown in **Table 11**.

11. FINDINGS

- The demographic findings show that Majority investors are aged between 35 44 that is 29.38%. The maximum investors are employed that is 57.5%. Also, Maximum investors income falls under 600,000 10,00,000 brackets 33.75%. (**Table 1**)
- It is analysed that the majority that is 86.25% prefer Physical Gold. (Figure 1)
- Awareness of Investors towards various Factors is analysed as the majority that is 57.50%, investors are not aware of SGBs, 53.75% investors are not aware of the minimum requirement in SGBs, 80% are not aware of interest rate and 80.63% are not aware of the tenure of SGBs. (Figure 2)
- It can be analysed that the highest among all factors have been given to Popular form of investment that is 62.32% which is very important for preference in Physical Gold. (**Table 2** and Figure 3)
- It can be analysed that the highest among all factors have been given to Easier to Invest that is 59.09% which is ranked Important, along with Ease of Borrowing Loan that is 59.09% ranked Moderately Important. (Table 3 and Figure 4)
- The reason for non investment in SGBS. Investors selected the maximum reason towards lack of awareness that is 24.18%. (Figure 5)
- It can be analysed that the majority that is 91.88% don't invest in SGB. (Figure 6)

Statistical Findings - The findings derived from the Statistical Test conducted showed the following results -

- The result showed that there is no relationship between age, income of investor and awareness of investors related to SGB and towards preference of investment. (Table 4 8)
- It can be stated that there is a significant relationship between income and perception of investors for non-investment in SGBs. (Table 9)
- It can be concluded that as annual income increases, the preference towards these factors increases in similar way although there is some dispersion. Thus, as 4 out of 5 factors have a

positive correlation, we conclude that income does have a positive correlation with Preference towards SGB. (Table 10 and 11)

12. LIMITATION

The study suffers from certain limitations. The constraints of the study are that only 160 investors are taken in the study. The time duration spent for the study is one month only that is January 2021. There may be biases in the responses given by the Investor, but however it is tried to the level best to minimize bias responses.

13. RECOMMENDATION AND SUGGESTION

Following recommendations and suggestions are made after analyzing the responses given by investors (respondents) and understanding about SGB. They are as follows:

- It is observed that still majority of investors prefer to invest in Physical Gold, so it is recommended that awareness regarding SGB should be made.
- Awareness can be increased through conducting workshops, seminars regarding SGB's and
 explaining them to invest in SGB, educating people about the benefits for the same. This can be
 done by Banks and social media networks advising the investors to invest in SGBs.
- The mode of investment in SGB is easier and fast compared to Physical Gold, hence SGB should be preferred.

14. CONCLUSION

The SGB scheme was launched in November 2015 with an objective to reduce the demand for physical gold and shift a part of the domestic savings — used for the purchase of gold — into financial savings. From the analysis it is found that investors still prefer physical gold and are not aware of SGBs.

Therefore, necessary steps are required to be taken to educate the investors about benefits of investment in sovereign gold bonds, which will help to strengthen financial sector of our country and will bring more benefits to the investors. In present era, investment in sovereign gold bond is the more efficient form rather than investment in physical gold yet, the awareness level about investment in sovereign gold bonds is still very moderate. Hence, investment in SGBs is not at par with physical gold.

15. FURTHER RESEARCH

This study will help enhance further research on the subject by researchers and academicians. The further research can be carried on: A survey can be conducted on a larger scale, at different

geographical area since greater number of populations, more investors can be taken into consideration to understand the perception and awareness regarding SGBs. The duration of the study can be extended. This will give the next researcher an in-depth idea and will help him or her for the next research project.

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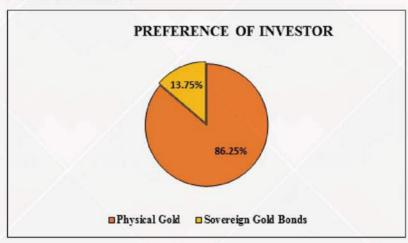
ANNEXURE

A. Table 1: Demographic Profile of Investors

Variables	Category	No. of Respondents	Percentage
	Male	60	37.50%
Gender	Female	100	62.50%
	Total	160	100%
	18 - 24	45	28.13%
	25-34	30	18.75%
	35-44	47	29.38%
Age (in years)	45-54	27	16.88%
S COMP OF SECURIOR STATE OF SE	55-64	10	6.25%
	Above 65	1	0.63%
	Total	160	100%
- A	A Homemaker	9	5.63%
	A Student	38	23.75%
Professional or	Employed	92	57.50%
Employment Status	Retired	4	2.50%
	Self - Employed	17	10.63%
	Total	160	100%
	3,00,000 - 6,00,000	28	17.50%
	6,00,000 - 10,00,000	54	33.75%
	Above 10,00,000	24	15.00%
Annual Income	Below 3,00,000	14	8.75%
	Not Earning Currently	40	25.00%
	Total	160	100%

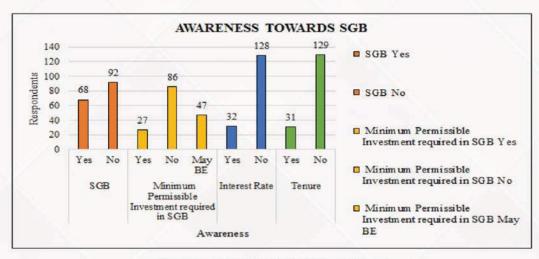
Source: Primary Data Using Excel

B. Figure 1: Preference of Investors



Source: Primary Data Using Excel

Figure 2: Awareness Towards SGB



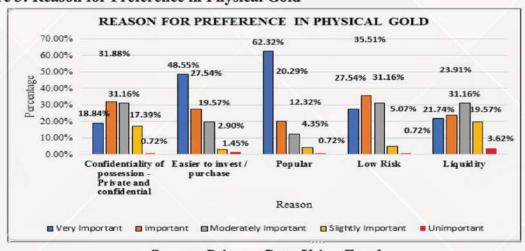
Source: Primary Data Using Excel

Table 2: Reason for Preference in Physical Gold

Ranked (5 - Highest, 1 - Lowest)	5	4	3	2	1
Reason for Preference in Physical Gold	Very Important	Important	Moderately Important	Slightly Important	Unimportant
Confidentiality of possession - Private and confidential	18.84%	31.88%	31.16%	17.39%	Legend Entry 5 0.72%
Easier to invest / purchase	48.55%	27.54%	19.57%	2.90%	1.45%
Popular	62.32%	20.29%	12.32%	4.35%	0.72%
Low Risk	27.54%	35.51%	31.16%	5.07%	0.72%
Liquidity	21.74%	23.91%	31.16%	19.57%	3.62%

Source: Primary Data Using Excel

C. Figure 3: Reason for Preference in Physical Gold



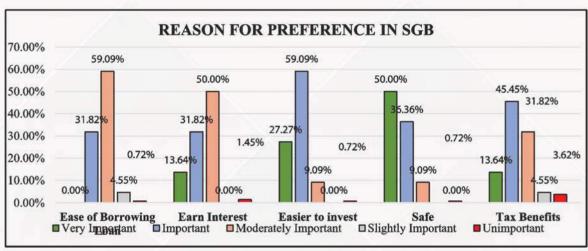
Source: Primary Data Using Excel

D. Table 3: Reason for Preference in SGB

Ranked (5 - Highest, 1 - Lowest)	5	4	3	2	1
Reason for Preference in SGB	Very Important	Important	Moderately Important	Slightly Important	Unimportant
Ease of Borrowing Loan	0.00%	31.82%	59.09%	4.55%	4.55%
Earn Interest	13.64%	31.82%	50.00%	0.00%	4.55%
Easier to invest	27.27%	59.09%	9.09%	0.00%	4.55%
Safe	50.00%	36.36%	9.09%	0.00%	4.55%
Tax Benefits	13.64%	45.45%	31.82%	4.55%	4.55%

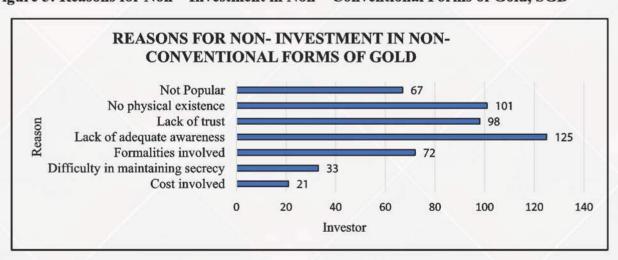
Source: Primary Data Using Excel

E. Figure 4: Reason for Preference in SGB



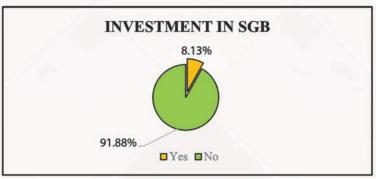
Source: Primary Data Using Excel

Figure 5: Reasons for Non - Investment in Non - Conventional Forms of Gold, SGB



Source: Primary Data Using Excel

F. Figure 6: Investment in SGB



Source: Primary Data Using Excel

G. Table 4: Chi-Square Analysis Overview

Personal Factor	Chi-Square Values	P Values	Observed Value	Significant / Not Significant
Age	11.07	0.785	7.168	NS - Fail to Reject Null Hypothesis
Income	9.48	0.998	1.349	NS - Fail to Reject Null Hypothesis
Personal Factor	Chi-Square Values	P Values	Observed Value	Significant / Not Significant
207 (200) (1	quare Analysis - Personal F	AND DESCRIPTION OF THE PARTY OF	ALL PROPERTY OF THE PARTY OF TH	22 20 20 20 20 20 20 20 20 20 20 20 20 2
Age	11.07	0.623	9.923	NS - Fail to Reject Null
Age	11.07	0.023	7.723	Hypothesis
Income	9.488	0.9833	2.41	NS - Fail to Reject Null Hypothesis
95% Confidence Interval				
Significant (p value ≤ 0.05); NS 05)	-Not Significant (p value >			

Source: Primary Data using Excel

H. Table 5: Chi-Square Test Between Age and Awareness of SGB Result Analysis

		AGE AND AWARENESS OF	SGB			
OBSERV FREQUEN				FO	FE	(FO - FE)^2/FE
		Awareness of SGB		22	19.13	0.432
Age	YES	NO	Row Total	14	12.75	0.123
18-24	22	23	45	22	19.98	0.205
25-34	14	16	30	7	11.48	1.745
35-44	23	24	47	2	4.25	1.191
45-54	7	20	27	0	0.43	0.425
55-64	2	8	10	23	25.88	0.319
Above 65	0	1	1	16	17.25	0.091
Column Total	68	92	160	25	27.03	0.152
	4.		**	20	15.53	1.290
				8	5.75	0.880
				1	0.58	0.314
					160.00	7.17
		Expected frequency =	(RT*CT)/N			
		Alpha =	0.05			
		DF = (Number of rows - 1) * (Number of columns - 1)	5			
		Critical X^2 value is X^2 0.05,5 >>	11.07			
		Critical Value =	11.070			
		P Value =	0.785			
		Observed Value =	7.168			

Source: Primary Data using Excel

Table 6: Chi-Square Test between Income and Awareness of SGB Result Analysis

ODGEDIUM		INCOME AND AWAREN	LOS OF SGD	4	·	
OBSERVEI FREQUENC		<i>X</i>	<u> </u>	FO	FE	(FO - FE)^2/FE
		Awareness of SGB	Row Total	5	5.950	0.152
Income	YES	NO		13	11.900	0.102
Below 3,00,000	5	9	14	24	22.950	0.048
3,00,000 - 6,00,000	13	15	28	8	10.200	0.475
6,00,000 - 10,00,000	24	30	54	17	17.000	0.000
Above 10,00,000	9	15	24	9	8.050	0.112
Not Earning Currently	17	23	40	15	16.100	0.075
Column Total	68	92	160	30	31.050	0.036
				16	13.800	0.351
				23	23.000	0.000
					160.000	1.349
		<u> </u>				
		Expected frequency =	(RT*CT)/N			
		Alpha =	0.05			
		DF = (Number of rows - 1) * (Number of columns - 1)	4			
		Critical X^2 value is X^2 0.05,4	9.48			
		Critical Value =	9.488			
		P Value =	0.998			
		Observed Value =	1.349			

Source: Primary Data using Excel

I. Table 7: Chi-Square Test Between Age and Preference of Investment Result Analysis

		AGE AND PREFERENCE OF INV	ESTMENT			
OBSE FREQU	RVED JENCY	X				(FO -
		Preference of Investment		FO	FE	FE)^2/FI
Age	Physical Gold	SGB	Row Total	34	38.8125	0.597
18-24	34	11	45	29	25.875	0.377
25-34	29	1	30	40	40.5375	0.007
35-44	40	7	47	26	23.2875	0.316
45-54	26	1.00/	27	8	8.625	0.045
55-64	8	2	10	1	0.8625	0.022
Above 65	1	0	1	11	6.1875	3.743
Column Total	138	22	160	1	4.125	2.367
		*		7	6.4625	0.045
				1	3.7125	1.982
				2	1.375	0.284
				0	0.1375	0.138
		***			160	9.923
		Expected frequency = Alpha =	(RT*CT)/N 0.05			
		DF = (Number of rows - 1) * (Number of columns - 1)	5			
		Critical X^2 value is X^2 0.05,5 >>	11.07			
		Critical Value =	11.07			
		P Value =	0.537			
		Observed Value =	9.923			

Source: Primary Data using Excel

J. Table 8: Chi-Square Test Between Income and Preference of Investment Result Analysis

OBSERVED FREQU		NCOME AND PREFERENCE OF				
	FO	FE	(FO - FE)^2/FI			
Annual Income	Physical Gold	SGB	Row Total	12	12.075	0.000
Below 3,00,000	12	2	14	26	24.15	0.142
3,00,000 - 6,00,000	26	2	28	47	46.575	0.004
6,00,000 - 10,00,000	47	7	54	21	20.7	0.004
Above 10,00,000	21	3	24	32	34.5	0.181
Not Earning Currently	32	8	40	2	1.925	0.003
Column Total	138	22	160	2	3.85	0.889
				7	7.425	0.024
				3	3.3	0.027
				8	5.5	1.136
					160	2.41
		Expected frequency =	(RT*CT)/N			
		Alpha=	0.05			
		DF = (Number of rows - 1) * (Number of columns - 1)	4			
		Critical X^2 value is X^2 0.05,4 >>	9.48			
		Critical Value =	9.488			
		P Value =	0.983			
		Observed Value =	2.41			

Source: Primary Data using Excel

K. Table 9: Two - way ANOVA for Non-Investment in SGB based on Income Analysis

ANOVA Two-Factor Without Replication						
SUMMARY	Count	Sum	Average	Variance		
Below 3,00,000	8	26	3.25	5.642857		
3,00,000 - 6,00,000	8	91	11.375	68.55357		
6,00,000 - 10,00,000	8	207	25.875	358.4107		
Above 10,00,000	8	92	11.5	67.71429		
Not Earning Currently	8	101	12.625	58.55357		
Cost involved	5	21	4.2	21.7		
Difficulty in maintaining secrecy	5	33	6.6	13.3		
Formalities involved	5 5	72	14.4	96.8		
Lack of trust	5	98	19.6	192.3		
Lack of adequate awareness	5	125	25	231.5		
No physical existence	5	101	20.2	205.2		
Not Popular	5	67	13.4	87.8		
Other *	5	0	0	0		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	Fcrit
Rows	2126.65	4	531.6625	11.7425	1.004E-05 1.6943E-	2.714076
Columns	2644.375	7	377.7678571	8.343522	05	2.35926
Error	1267.75	28	45.27678571			
Total	6038.775	39				

Source: Primary Data using Excel

L. Table 10: Correlation - Coefficient between Income and Preference towards SGB

Spearman's rho		Annual Income	Ease of Borrowing Loan	Earn Interest	Easier to invest	Safe	Tax Benefit
	Correlation Coefficient	1	-0.253	0.015	0.217	0.219	0.08
Annual Income	Sig. (2-tailed)		0.256	0.948	0.333	0.328	0.724
	N	22	22	22	22	22	22
Ease of Borrowing	Correlation Coefficient	-0.253	1	0.24	0.264	-0.087	.558**
Loan	Sig. (2-tailed)	0.256		0.281	0.236	0.701	0.007
	N	22	22	22	22	22	22
Earn Interest	Correlation Coefficient	0.015	0.24	1	.438*	0.39	.508*
	Sig. (2-tailed)	0.948	0.281		0.042	0.073	0.016
	N	22	22	22	22	22	22
	Correlation Coefficient	0.217	0.264	.438*	1	.457*	0.382
Easier to invest	Sig. (2-tailed)	0.333	0.236	0.042	4	0.032	0.079
Ì	N	22	22	22	22	22	22
0.4	Correlation Coefficient	0.219	-0.087	0.39	.457*	1	0.234
Safe	Sig. (2-tailed)	0.328	0.701	0.073	0.032	- 2	0.294
	N	22	22	22	22	22	22
T D 54-	Correlation Coefficient	0.08	.558**	.508*	0.382	0.234	1
Tax Benefits	Sig. (2-tailed)	0.724	0.007	0.016	0.079	0.294	1
	N	22	22	22	22	22	22

Source: Primary Data using SPSS

M. Table 11: Correlation - Coefficient between Income and Preference towards SGB Result Analysis

Correlation Coefficient								
Parameters	Result - Strength	Relationship	Result - Analysis					
Correlation Coefficient between Income & Ease of Borrowing	-0.253	Strong Negative Correlation	There is a negatively strong relationship between income and ease of borrowing					
Correlation Coefficient between Income & Earn Interest	0.015	Weak Positive Correlation	There is a positively weak relationship between income and earn interest					
Correlation Coefficient between Income & Easier to Invest	0.217	Weak Positive Correlation	There is a positively weak relationship between income and easier to invest					
Correlation Coefficient between Income & Safe	0.219	Weak Positive Correlation	There is a positively weak relationship between income and safe					
Correlation Coefficient between Income & Tax Benefit	0.08	Weak Positive Correlation	There is a positively weak relationship between income and tax benefit					

Source: Primary Data using SPSS

Equity Crowd Funding – Initiating Resilient Business Operations!

Elmo Gul Kripalani

B.K. Birla College of Arts, Science & Commerce (Autonomous), Kalyan

1: INTRODUCTION

Over the years, businesses have evolved in each and every way. Starting from the barter system transactions to modern way of investments, the methods of transactions used had a positive impact on the business and its sustainable growth. Such an impact is made by equity-based crowd funding method. But in India, Equity Crowd Funding is categorized as 'Illegal' by Securities Exchange Board of India (SEBI). (Ntiedo Ekpo, Jan, 2017) (SEBI, 2016)

Meaning & Definition

As for a human body, blood is its life, similarly for a business entity finance is its lifeline. (Ntiedo Ekpo, Jan, 2017) Finance is the foundation of a business which is essential for any entity. Finance being a broad concept is defined by many scholars, According to Reader's Digest, "the management of money, especially public money." Webster's II – New Riverside University Dictionary defines: "The Science of money mana gement – Management of money, banking, investments & credit." (Websters Dictionary, 2004)

Use of Equity Crowd Funding:

But, for a small business or just a mere startup by an individual requires a huge number of ideas, innovation which involves a huge amount of risk, these risks are subjective to the ideas and innovation. But to captivate it, and to run it, it requires a bundle of investments which are long term and does not have any guarantee. (Ajay Agrawal, June 20, 2020)

Problems for Equity Crowdfunding to operate in Indian Scenario

- 1. Pre Requisites to whether Equity Crowd Funding is really necessary?
- 2. The Risk Factor: Pertaining to Securities & Corruption
- 3. Parameters to legalize Equity Crowd Funding in India
- 4. Regulatory Compliances & Government Aid
- 5. A new Managing Department or Ministry

Research Objectives:

- 1. To study the Indian finance market, and its adaptiveness to adopt a new finance stream.
- 2. To study equity crowd funding ideas applicability in Indian setting.
- 3. To visualize how equity crowdfunding can contribute to a new normal state where a completely new business operation needs a jumpstart.
- 4. To have an aptness on how resilient and reliable equity crowdfunding in India, where corruption free trades are low.

2. REVIEW OF LITERATURE

Every innovative method of finance has initially been vibrant and difficult to imply replacing traditional methods. In the current scenario it is very hard to imply a new innovative step which who knows its survival. Also, the external factors that affect the implementation in Indian Financial Stand. But there may be many problems which are associated in inviting and legalizing Equity Crowd Funding in India. Some of the Problems are herewith mentioned:

Pre - Requisites to whether Equity Crowd Funding is really necessary?

The major question that arises is that, an investment where the risk is high, a newly introduced finance which will be only operated using internet on board, is it really necessary? There are substitutes against modern equity Crowd Funding in form of Seed and Venture capital why can't we use them as fund sources? Just not considering the need, but also a new form of regulation has to be done which needs planning and how can it be done is the main question of the hour. Geographical Influence is also a matter of fact as in a diverse cultural environment, and before financing these things has to be taken care of! (Tripathy, October, 2016)

The Risk Factor:

Investments are always subjected to market risks as we can hear it very often. Same is in case of Equity Crowd Funding. Here Money Laundering cases may happen very often and easily. Indian investors are well aware of money laundering case of Sahara Company. Also, interest in investments by investors also are a matter of question. India is also not a secure hub for online transactions and investment. Internet Infrastructure is also quite very low in Indian Setting. (Sarkar, 2015) The risk associated with returns on investments and the business capabilities is also a question. Here this study also studies the success failure segment within businesses where, who helps the budding businesses in successive operations is a matter of question. How risky Equity Crowd Funding can prove in relation to the success of market/ business in India is a required parameter. (Ajay Agrawal, June 20, 2020)

Parameters to legalize Equity Crowd Funding in India:

To legalize Equity Crowd Funding in India, the primary rules and regulations needs to be changed which includes Accounting and Auditing norms. How are funds raised through the equity crowd funding method be accountable? A nation whose investment market is investor friendly is the most successful market. But in India, people who invest are in less proportion, the reason varies from locality to locality. Major being the historical fraudulent events that happened in case of equity investments. Many people invest just in no risk or minimal risk investments. Some figures from United States indicate that 95% total earning capita there invest out of which 50% invest in Equities. Whereas, in India, the Gross National Income (GNI) of India is 10.39 lakh crores PPP dollars. Now if only 10% of the total income generated are invested in equities, particularly Equity Crowd

Funding, the sum around funds available for business may be a wonder, i.e., 1.039 lakh crores PPP dollars will be available for businesses in a financial year. Out of which only 1% who invest in equities, invest in Equity based Crowd Funding amounts to 0.1039 lakh crores are available for businesses in India. (As per the researchers' calculations).

Indian constitution is an artwork of learnings from international framework of constitutions of over a bunch of nations. Why not India can chalk beneficiary points from international standards. Internet the core master to manage this platform is very much unsecured in the very own nation, which pulls the reach of Equity Crowd Funding in India.

Regulatory Compliances & Government Aid:

Equity Crowd Funding requires an aid from the government in form of legal compliances, regulatory board, marketing aids and a sustainable platform offering a secure network to encourage Equity Crowd Funding in India. Government has played an important role in promoting mutual funds and helping investors find ease in investing in it. Also, government has added an important role in adding security to some extent in Mutual Funds. So, Government plays an important role in adding security to Equity Crowd Funding and promote it too. (Tripathy, October, 2016)

A new Managing Department or Ministry:

Equity Crowd Funding is an emerging concept which requires statutory attention. This attention has to be specific in terms of managing and operational activities. The question arises is that, in the event of legalizing Equity Crowd Funding in India, we need a new regulatory act which requires to set rules abiding for operation of equity crowd funding in India. There are many complicated procedures to fulfill the demanding need for Equity Crowd Funding. A new managing committee is needed to run the daily needs. (Sarkar, 2015)

3. RESEARCH METHODOLOGY

Introduction:

This research is supported by Primary & Secondary data. As a result of qualitative approach, this study was validated with data analysis.

Data Sample:

A well framed questionnaire was drafted consisting 36 questions on different parameters, and was sent to 700 contacts, which includes 50% of Students, 30% Business class, 15% consisted finance background sources and 5% others. Out of which 220 people shared their responses and views regarding crowdfunding. Sample size being 220 the questionnaire for further tested for validation.

Data Analysis Techniques:

Firstly, the questionnaire was validated using Cronbach's Alpha Test and later ANOVA was used to check how significant that problem or statement is. Further, Reliability Analysis, Correlation Analysis, Kruskal Wallis, Descriptive Statistics, etc. were used to find the real core problem of equity crowdfunding pertaining to the new normal concept in businesses.

Data Measures:

Primary data collected was using under the rules of 5-point lickert scale. The study had a duration of 1.5 months ranging from January 9, 2021 to February 28, 2021. This study was used as a implementation technique.

Limitations:

This study was limited to time, scope and cost in analyzing the data. The major drawback was related to the less availability of information in case of equity crowd funding and its resilient impact on businesses.

4. DATA ANALYSIS

Reliability Analysis:

Reliability analysis was done using the reliability calculator developed by del siege. The data interpreted showed that the questions according to the sample has substantial agreement toward the respondent's perception.

Table 1: Cronbach's Alpha Test

Reliability	Interpretation	Cronbach's Alpha	0.78348973
< 0	Poor agreement	Split-Half (odd-even) Correlation	0.69454963
0.0 - 0.20	Slight agreement	Spearman-Brown Prophecy	0.8197454
0.21 - 0.40	Fair agreement	Mean for Test	51.87
The state of the s	Moderate agreement	Standard Deviation for Test	8.84833883
	Substantial agreement	KR21	2.07258494
	Almost perfect agreement	KR20	2.08195665

From the above table the reliability calculated on Cronbach's Alpha is 0.78. Based on reliability test it can be proved that the questionnaire drafted were or of *Substantial agreement* and is reliable to carry further test.

ANOVA-

Analysis of Variance (ANOVA) is a statistical technique that is used to check if the means of two or more grp are significantly different from each other. ANOVA (Analysis of Variance) is a method of assessing the contribution of an independent variable or the controllable factor of the observed variation in an observed dependent variable.

· Purpose of the study: -

The main purpose of ANOVA (Analysis of variance) is to understand the suitable hypothesis with the relevant interpretations and also know that the p value is significant or not.

4.2.1 Variable 3: Indian startups may have impact if crowdfunding is introduced.

 H^0 = Indian startups won't be affected if crowdfunding is introduced.

H¹ = Indian startups will have affect if crowdfunding is introduced.

Table 2: ANOVA - Indian Startups may have an impact if crowdfunding is introduced

		ANO	VA			
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	156.009	1	156.009	317.287	8.8E-54	3.86278
Within Groups	215.364	438	0.4917			
Total	371.373	439				

Findings:

Above statement is validated clearly by this analysis and alternate hypothesis has been accepted stating that for resilient business operations equity crowdfunding is essential.

4.2.2 Variable 5: Risk of default in payment of returns on investment (RoI), Capability of platform in conducting secured transactions can be undermined and neglected.

 H^0 = Market Risks can be under mined and neglected.

H¹ = Market Risks cannot be undermined and neglected and sustainable solutions needs to be drafted.

Table 3: ANOVA - Risk of default in payment of returns on investment (RoI), Capability of platform in conducting secured transactions can be undermined and neglected.

ANOVA										
Source of Variation	SS	df	MS	F	P-value	F crit				
Between Groups	166.911	1	166.911	280.461	5.2E-49	3.86278				
Within Groups	260.668	438	0.59513							
Total	427.58	439								

Findings:

Above statement is validated clearly by this analysis and alternate hypothesis has been accepted stating that even in new normal conditions, the risks cannot be undermined, but the chances and probability of risk is too high in upcoming conditions.

4.2.3 Variable 11: Equity Crowd Funding can be allowed to enter Secondary Market, i.e., can it be transferred from one to another?

 H^0 = Equity Crowdfunding can be transferred and trading can be allowed in secondary market. H^1 = Equity Crowdfunding cannot be transferred and trading can be allowed in secondary market.

Table 4: ANOVA - Equity Crowd Funding can be allowed to enter Secondary Market, i.e., can it be transferred from one to another?

	da da	ANO	VA			
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	122.327	1	122.327	221.07	9E-41	3.86278
Within Groups	242.364	438	0.55334			
Total	364.691	439				

Findings:

Above statement is validated clearly by this analysis and alternate hypothesis has been accepted stating that even though the challenges before equity crowdfunding is nominal, but allowing its trade in secondary market and also giving it a transferrable right is a risk to the capital seeker and also the investor. This may lead in money laundering cases at a huge risk.

Percentage Analysis:

Percentage analysis is the method of representing the raw streams of data as a percentage (a part in 100-percent) for better understanding of collected data. Percentage analysis is applied to create a contingency table from the frequency distribution and to represent the collected data for better understanding.

Purpose of the study: -

The main purpose of percentage analysis is to describe the distribution of the respondents in each classification and it is to be expressed in percentage as it facilitates the comparison between the variables.

a. Corruption tragedies:

Learnings: Scams and financial risks in connection to many tragedies and corruption have led the Indian market to bar their earnings into profits.

108 people out of 220 respondents feel uncomfortable just because of the past tragedies of corruption.

Also, many questions were studied, which results are shown here:

Table 5: Percentage analysis Impact of Past Corruption

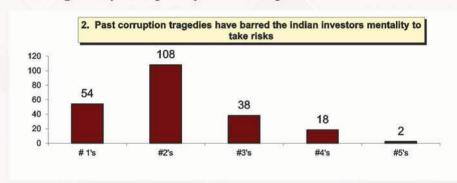
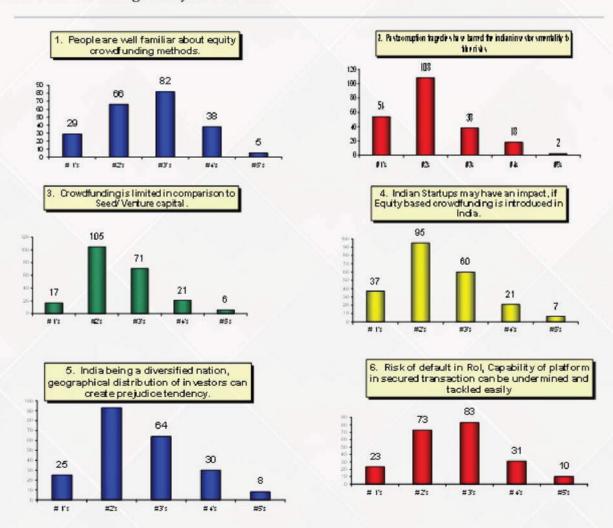
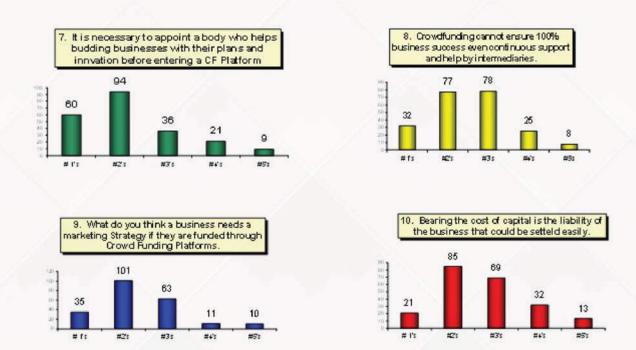


Table 6-15: Percentage Analysis Overview





Descriptive Statistics & Correlation:

A descriptive statistic is a summary of statistics that is quantitatively describes or summarize as a feature of a collection of information while the descriptive statistics are also defined as the process of using and analysing the statistics. Descriptive statistics can also be distinguished as an inferential statistic or an inductive statistics), in that descriptive statistics aims to summarize a sample. When a data analysis draws its main conclusions then the inferential statistics or inductive statistics, descriptive statistics are presented. Measures of central tendency include the mean, median and mode whereas the Measures of variability include the standard deviation, the minimum and maximum values of the variables.

									Coorelat	ion Analy	sis (Excel	Add-Ins)									
	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21
V1																					
V2	0.051																				
V3	0.0814	-0.003		1	13	. 1			- 1									ā .	i e	ii .	-
V4	0.0788	-0.104	0.0984																		
V5	0.0586	0.3462	0.0758	0.2173	- 1	-															
V6	-0.044	0.0869	0.1596	0.2096	0.0609																
V7	-0.06	0.0786	0.2716	0.2755	0.2416	0.0082															
V8	0.1973	0.3344	0.0148	0.0145	0.2048	0.1812	0.0576											Ť.	7		-
V9	0.0463	-0.023	0.2529	0.1487	0.2423	0.2381	0.2638	0.0542													
V10	0.0952	0.0647	0.1107	0.1495	0.0974	0.2451	-0.053	0.1994	0.005												
V11	0.1966	0.1507	0.0693	-0.039	0.3403	0.0978	0.1711	0.2888	0.2291	0.1197								6	0	()	
V12	0.1408	0.041	-0.126	0.4393	0.1304	0.218	0.0843	0.1335	0.0998	0.0572	0.0311										
V13	0.0482	0.238	0.0829	0.0678	0.215	0.2142	0.3259	0.4686	0.0258	-0.005	0.3298	0.1376									
V14	-0.102	0.2582	0,261	0.1544	0.1724	0.3765	0.15	-0.017	0.1624	0.0244	0.156	0.1457	0.1336	Š.		1	Į.	1	2	1	9
V15	0.0033	0.2098	0.0584	0.2716	0.2806	0.0874	0.3475	0.1119	0.1125	0.0187	0.283	0.2014	0.3778	0.1478	E .						
V16	-0.059	0.148	0.105	0.1756	0.3132	0.1307	0.2939	0.1433	0.199	0.1662	0.168	0.1898	0.153	0.143	0.2401	1					1 3
V17	0.1636	0.0688	0.1127	0.202	0.2177	0.2728	0.242	0.245	0.2185	-0.087	0.2542	0.1362	0.2125	0.2652	0.2698	-0.101				V.	3
V18	-0.048	0.0028	0.0039	0.0503	0.247	0.0999	0.1303	0.2694	0.2112	0.0138	0.3493	0.0336	0.2215	-0.06	0.2438	0.1787	0.1977	1			
V19	0.1351	0.1413	-0.089	0.029	-0.081	0.0754	-0.222	0.2362	0.0126	0.1356	0.0658	0.1192	0.071	-0.017	0.1081	0.0733	0.0197	0.0093	1	1	2
V20	0.0736	0.0031	0.1536	0.2245	0.0374	0.0486	0.044	-0.019	0.2649	0.0211	-0.043	0.3114	0.001	0.2088	0.0779	0.1153	0.0086	-0.026	0.3999		
v21	0.0232	0.2689	-0.103	0.1468	0.189	0.2144	0.1331	0.0647	0.0353	0.2004	0.2906	0.3289	0.1392	0.2846	0.1174	0.1483	0.211	0.2267	0.172	0.1713	

Purpose of the study: -

The main purpose of the descriptive statistics is to understand the mean, average, sample variance, count, etc. Descriptive statistics are used to describe the basic feature of data in a study.

Descriptive statistics provides a simple summary about the sample and the measure of central tendency and the measure of variability or dispersion.

Corelation:

Corelation analysis is a tool and formula which measures how two variables are related to each other. In our case, the list of variables with red flag indicates that both the variables are highly co-related with each other.

Table 15: Descriptive Analysis

	٧ı	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21
Mean	2.65	2.12	2.52	2.39	2.56	2.69	2.20	2.55	2.36	2.69	2.38	2.65	2.1	2.51	2.51	2.40	2,45	2.55	2.51	2.40	2.5
Standard Error	0.07	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.06	0.07	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.0
Median	3	2	2	2	2	3	2	3	2	3	2	3	2	2	2	2	2	2	2	2	
Mode	3	2	2	2	2	3	2	3	2	2	2	3	2	2	2	2	2	2	2	2	1
Standard Deviation	0.99	0.90	0.87	0.98	0.98	0.99	1.07	0.99	0.96	1.03	0.94	1.00	0.92	0.99	0.98	1.04	0.98	1.05	1.10	0.97	1.0
Sample Variance	0.98	0.82	0.76	0.96	0.97	0.98	1.15	0.99	0.93	1.06	0.89	1.00	0.85	0.98	0.96	1.08	0.97	1.10	1.20	0.94	1.0
Kurtosis	-0.55	0.27	0.44	0.08	-0.18	-0.21	0.18	-0.19	0.76	-0.28	0.30	-0.27	0.89	-0.57	-0.76	0.00	-0.17	-0.27	-0.55	0.25	-0.2
Skewness	0.05	0.74	0.65	0.59	0.49	0.28	0.86	0.34	0.80	0.46	0.73	0.28	0.97	0.19	0.15	0.63	0.57	0.49	0.47	0.50	0.4
Range	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	i
Minimum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Maximum	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Sum	584	466	554	526	563	592	485	560	520	591	524	583	462	553	552	529	538	562	553	528	56
Count	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	220	22
Confidence Level(95.0%)	0.13	0.12	0.12	0.13	0.13	0.13	0.14	0.13	0.13	0.14	0.13	0.13	0.12	0.13	0.13	0.14	0.13	0.14	0.15	0.13	0.1

									Coorelat	ion Analy	sis (Excel	Add-ins)									
	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	v21
V1																					
V2	0.051										Į.					Į.					
V3	0.0814	-0.003																			
V4	0.0788	-0.104	0.0984																		
V5	0.0586	0.3462	0.0758	0.2173																	
V6	-0.044	0.0869	0.1596	0.2096	0.0609																
V7	-0.08	0.0786	BOOT POSTS		-																
V8	0.1973																				
V9	0.0463	-0.023		0.1487	0.2423			0.0542													
V10	0.0952			0.1495				0.1994	0.005												
V11	0.1966	0.1507		-0.039	0.3403	-		0.2888	0.2291	0.1197											
V12	0.1408	0.041		0.4393	0.1304	_	100	0.1335	0.0998	0.0572	0.0311										
V13	0.0482	0.238	-	0.0678	0.215	116	0.3259	0.4686	0.0258	1 00000000	0.3298	0.1376									
V14	-0.102		10.	0.1544	0.1724	-		-0.017	0.1624	0.0244	0.156		0.1336	No.							
V15	0.0033		14	0.2716	-		0.3475	0.1119	0.1125	0.0187	0.283	0.2014									
V16	-0.059	1	-	0.1756	-	-	0.2939	0.1433	_	_	0.168	_	0.153	0.143	0.2401						
V17	0.1636	14.	rie-	-		0.2728		-	_	-	0.2542	100	100	-	-	-0.101	10				
V18	-0.048	10.11.00		0.0503	_			0.2694	0.2112	-				-0.06	0.2438	0.1787		100			
V19	0.1351	0.1413	1	0.029	-0.081	100	-0.222	0.2362	0.0126	-		0.1192	0.071	-0.017	0.1081	0.0733	I Bernard	0.0093	10.		
V20	0.0736	0.0031	The Control of the Co	0.2245	0.0374	(Ib-		-0.019		0.0211	-0.043		0.001	0.2088	0.0779	0.1153	10.		rin.	15.	
v21	0.0232	0.2689	-0.103	0.1468	0.189	0.2144	0.1331	0.0647	0.0353	0.2004	0.2906	0.3289	0.1392	0.2846	0.1174	0.1483	0.211	0.2267	0.172	0.1713	

5. SUMMARY OF FINDINGS & CONCLUSION

With the analysis taken above, we can conclude is that equity crowd funding is a solid jumpstart idea for next gen businesses, but Indian setting is quite unfirmed to start a completely new way of finance.

Thus, we suggest below four mentioned suggestions:

- a) Creating a virtual statutory platform: Starting from a minimal amount of initial finance to new ventures, based on the evaluation criterion developed by government and other independent bodies, these finances can be traced by the body automated by government. This platform will enable all users to apply for online funds and use it accordingly. And sooner or later, these startups with help of business coaches can ponder the effects of the new startup, and can pay the principal amount.
- b) ROI: Every finance ever invested has some returns and the return involved in this type of finance shall be dividend as in shares. These equities will be same only in case of payment of returns and no other features of equity shares. No voting rights will be provided, but suggestions can be provided by the investors, but the final decision lays on the capital seeker.

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Digital Transformation and Work from Home -The New Normal in Business

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ABSTRACT

The COVID-19 pandemic has presented the world with one of the most challenging situations in recent times. it has not only affected human lives and the healthcare system but also cost the global economy with the loss of millions of dollars and jobs. Governments have struggled to control the spreading of the virus, even while grappling with the crucial question of kick-starting economic activity. As governments, businesses and, communities navigate are focusing on recovery and reopening, and eventually returning to the next normal. This study aims to examine the post-COVID-19 future of work through these two pillars that are key to ensuring a smooth recovery, and the attendant opportunities and challenges. First, digital transformation with affordable connectivity, cross-border collaboration(s), government policies that support working in a remote economy. Second, work from home is the new norm that has emerged since the pandemic which has changed the business world. Digital transformation and work from home together have started many new norms in the business. This study has revealed that how digital transformation and work from home have impacted the business world.

Keywords: Adaptation of new norm, challenges, Performance Expectancy, Effort Expectancy, Facilitating growth.

INTRODUCTION

The COVID-19 pandemic has presented the world with one of the most challenging situations in recent times. As the strict lockdown was announced new norms such as digital transformation emerged. Digital transformation has brought in the era of digital technology into all the areas of the business fundamentally changing methodology of operating and delivering value to the users. It is adaptation of digital technology which has led to the ease to create and modify the existing business, culture, and customer experiences to meet changing business and market demands. This rebuilding of business in the digital age is digital transformation.

It outmatches traditional roles like sales, customer service and marketing. Instead, the digital transformation revolves around how you think about, and engage with, customers. As we move from paper to Ms Excel spreadsheet to smart business applications for managing our business, we

have the chance to re-conceptualize how we do business, how we engage our customers, with the help of digital technology.

For small businesses just getting started, there's no need to set up your business processes and transform them later. You can future-proof your organization from the word goes. Building a 21st-century business on stickies and handwritten ledgers just isn't sustainable.

Work from home is one of the new norms that has been emerging during this pandemic. Has strict lockdown was announced, the organization started operating remotely to stop the spreading of the Covid-19. Working from home is known as a form of flexible working since it provides employees with an opportunity to work flexibly to carry out their job roles within their working environment, this can include when they work, such as the working hours and also where they work such as the work environment.

In the past few years, digital transformation has been among the most discussed topics of business leaders and management gurus. All the well-versed organizations are beginning to understand the importance of digital transformation and are giving thought to this new trend, which has been slow on the uptake to change the status quo, cause potential disruption, and adopt inevitable transformation. An effort has been placed on smaller projects, minor changes, learning from others, and waiting for a more suitable time to make a radical change. With the onset of 2020 and the outbreak of COVID-19, organizations found themselves caught off guard and ill-prepared for the new normal brought about by the coronavirus reality.

Digital transformation is the modern phenomenon of enabling users to work from anywhere but with access to all the same resources as if they were working in the office. It often refers to the concept of using cloud resources. Perhaps this transformation was something organizations were putting off; however, in the end, it happened with a sudden crush of additional work. But it happened. Thank you, global pandemic.

The forced digital transformation was done in such a way that IT departments worked like mad to make the changes that no longer could wait for tomorrow. To keep businesses running, things were done as rapidly as possible, not as securely as possible; not as automated as possible. Changes were done because they had to be.

During any digital transformation, there are four areas on which to focus. Namely:

- Remote access getting users working remotely
- Managing entitlements giving users the right to do things that they need to
- Securing endpoints
- Controlling costs

Let's look at the four focus categories in more detail as it applies to dealing with the changes of today and in the future.

Remote Access:

To keep business functional, users need to have access. Remote access, is not just about giving somebody a VPN client, they will also need to have all the tools they need to access their workloads. That could be a multifactor authentication (MFA) system or a privileged access system for getting into admin tools or securing a remote access gateway of some form. It could also be tools to get into Azure, AWS, or Google Cloud, and maybe even work directly on a database. It could be moving critical resources into the cloud so they can be accessed remotely.

The VPN client only goes so far. Not very long ago, the T and E series Internet connections were common. These included the T1, E1, and T3 for example. The problem is some organizations still hold them. Others go for bargain-basement Internet connections because all their workloads are on-prem. So remote access may not work with the VPN if a company has 500 users trying to connect into something that looks more like a coffee straw than a fast, wide pipe to the Internet. And that's a normal reality.

Remote access needs to focus on giving workers the facilities to work efficiently such as laptop, internet access. Sometimes this is moving the workloads to remote physical locations, and sometimes this is moving the workload to remote services or infrastructure (i.e. cloud). Don't focus on one over the other. Today, we have to deal with managing it the way that an organization can most easily maintain it.

However, remember that change is constant and will always occur not matter what . Many of these remote workers will be getting back to working physically in offices. Some will return to factories. Others, who didn't have access because they were furloughed, will also return, and some of those might end up being remote workers. So, remember, when moving workloads, employees may need the ability and facilities to work on these workloads from the office as well. Plan for both.

Managing entitlements:

Managing entitlements is a complicated concept. Many cut security out of it entirely. The goal before pandemic was to be flexible and fast but now things have changed. Now there is a distributed workforce using distributed technology. They're trying to be resilient and flexible, but the lines of distinction between internal/external rights and security have chaotically blurred.

The entitlements that give users rights to do things need to be managed. And that means they need to be put into a format – such as true identity management or account management. Additionally, we have to automate processes.

Why is automation such a big piece of importance here? This dynamic environment that we are in today will change again. Furloughs will cease and users will return. When you have 5,000 users move to remote access in one day and another 5,000 have their accounts disabled on the same day – that's a lot of work for IT. Also, if you're using traditional or manual processes to make these changes, this work is going to happen in a day. Most likely, it will take weeks.

Now think about what happens when you have to undo that. Inevitably, it will be even more complicated than doing it in the first place.

Controlling entitlements is key, but it also has to be methodical and has to use automation. People make mistakes and they take shortcuts. If a person doesn't have enough time to do a task and it was completed quickly, it means shortcuts were taken. When it comes to entitlements – particularly elevated rights that control applications and access or can access personal data or vital company assets – shortcuts are not an option if you want to stay truly compliant. So, when a company is returning to normal, automation is required to remove human error from the equation and to accelerate processes.

Secure Endpoints and Identity:

Systems, such as PCs, laptops, and mobile devices, that are issued to employees need to be secured. The problem is security has been neglected by a lot of these machines being distributed, given to employees on a thumb drive as a virtual machine. There has never been a trend to get people remote and operational as we've seen recently. But in the end, organizations must secure the endpoint. Defining an endpoint to include workstations, tablets, and virtual machines running on personal computers is imperative. But this security needs to be extended to include a user's identity and access, and management of cloud applications, because all of that needs to be secured as well.

Start with the physical endpoints, then get those mobile device management systems enrolling laptops and tablets. Deploy desktop-management tools to the desktops. Enable the helpdesk to help users. This is a significant issue right now. Systems are being sent out without a lot of the management tools that IT has been using for years.

The visibility into these endpoints is significantly less than at any time since IT security became the new norm. Visibility into access controls is also low. However, security has to be prioritized and implemented in the quickest and easiest possible. In some cases, that MDM is going to be deployed by email. The MFA is going to be given after a user connects to the VPN without it. Is that the best solution? No. However, if the machines have already been deployed, and users are already logging in, then a company needs to start layering in all the security they can immediately, not in six months.

Controlling Costs:

There are interesting explosions of cost centers today. People are moving technology budgets around at an exceptionally fast pace right now. At the same time, everyone needs to focus on ways to control their cost in this chaotic time

Here are three areas you can focus on to control costs. The first is managing logs and SIEM; the second is managing license agreements, and the third is closely managing your migration to the cloud.

Interestingly logs come before licensing. Right now, there are a lot of new log sources being sent to SIEM. Remote access logs that went from 50 devices to 5,000 overnight. New web applications and services. Dramatically larger utilization of auditing logs, possibly in Microsoft Office 365. And logs have to be taken more seriously today because users and the data needs to be protected. But most SIEMs charge by the gigabyte per day. They often charge for how much data is stored. As security teams try to keep up with all these new streams of log data that organizations worry about a denial of service of their own SIEMs.

Another controllable cost is licensing. Why do so many organizations keep excess licensing? It is not uncommon to learn that an organization has too many licenses for email, service desk systems "to be safe". Those extra accounts should not be provisioned and the license released. For those excess licenses running around, those should be released. Why do so many organizations waste money on licenses that are often purchased on a month-to-month basis? Majority services have gone to this service concept, which allows users to be added back in nearly seamlessly. So, organizations should plan to use this type of licensing when conditions move back to a more normal setting.

Lastly, in the controlling costs category, migrations to the cloud are bound to occur, but it is mandatory to be the right migrations. There are a large number of services to help identify an infrastructure provider or SaaS provider that will be financially beneficial. Today, that should include an interface and ease-of-use. The hack to be used here is to reduce costs by putting the right workloads in the right cloud infrastructure. Use the appropriate services to control those spiraling costs.

For example, escalating costs are those we normally haven't seen in most businesses. In many organizations, IT spend is considered a pain point, and what happens is it's strangled to the point where everything is behind. As an example, how many organizations are still basing their infrastructure on Windows Server 2008 R2 or Windows Server 2012 R2? Very few organizations have converted to either Windows 2016 or 2019 as the backbone of their infrastructure. When you talk to IT admins it's always on the horizon. Just a year ago, it was common to see people switching to 2012 R2. The argument is always about costs. But some of those more up-to-date operating systems provides cloud interconnections. It is easier to move their workloads. So, sometimes controlling the cost means spending the right money, and that could be doing the right upgrades or buying the right tools to migrate, and then doing the migration. Spend wisely, and always look for additional benifits with every purchase.

Digital Transformation:

No one knows what's going to come out of digital transformation. It wasn't controlled. It wasn't planned. It happened. Now, we get to play catch up. When planning the next steps, please remember to keep in mind the following:

Businesses needs to focus on access, managing entitlements, securing endpoints and identities, and controlling costs. These focus areas should not exclude the consequences of what happens next. The

world as it stands and business as it stands are not going to be the world, we work in next year as evident changes are taking place. Plan accordingly.

REVIEW OF LITERATURE

Digitalization is the process of spreading a general-purpose technology. Digitalization of products and services shortens distances between people and things. It increases mobility. It makes network effects decisive. It allows the use of specific data to such an extent that it permits the satisfaction of individual customer needs be it consumers or businesses. It opens up ample opportunities for innovation. investment, and the creation of new businesses and jobs. Going forward it will be one of the main drivers of sustainable growth

(The Economic Times, 2019) Digital technology is playing a vital role in all the sectors of the economy especially business. It contributes significantly in terms of providing benefits to the business world. Ahmad et al. (2018) observed that it has been a widely adopted mode of transforming knowledge due to certain factors such as user-friendliness, the richness of resources, and modern technology.

(Maxwell and Maccain) Digital technology takes information and breaks it down into its smallest components. By transforming an analog signal into discrete pieces, digitalization makes it possible to manipulate information, text, graphics, software code, audio, and video in ways never before thought of, thus its information, transforming capabilities. (Hagberg et al.)

Digitalization is one of the most significant on-going transformations of contemporary society and encompasses many elements of business and everyday life. Digitalization refers both to a transformation from "analog" to "digital" (e.g. a shift from cash to electronic payments) and the facilitation of new forms of value creation.

(Clerck) Digitalization is defined as the use of digital technologies and of data to create revenue, improve business, replace/transform business processes and create an environment for digital business, whereby digital information is at the core

Work from is one of the new norms that has emerged in the business world since the lockdown was announced. Nobody would have ever imagined that working from home will be possible but digital transformation made it possible. Working from home is known as a form of flexible working since it provides employees with an opportunity to work flexibly to carry out their job roles within their working environment, this can include when they work, such as the working hours and also where they work such as the work environment (CIPD, 2016).

According to CIPD (2016) flexible working has been introduced into organizations as a way for employees and employers to have flexibility within their job roles, therefore, allowing them to suit their personal needs. This type of flexible working can be defined as mobile working, allowing employees and employers to work elsewhere outside of the office for either all or part of their working week.

Shorthose (2004) outlines that within the private sector some organizations are falling behind in terms of keeping up with this newer way of working. This chapter aims to firstly identify what flexible working is and how this way of working came about. Following on from this, this chapter will then look at previous research and studies carried out to discuss working from home in terms of employee motivation levels, employee performance levels, work-life balance, and also the impact that this may have on employers.

According to Gov UK (2015), the use of mobile working is seen to be beneficial to an organization, however, there is concern around how to manage employees effectively as this may be extremely challenging for any business. Additionally, ACAS (n.d.) outlines that while working from home may appear to be a positive form of working for many organizations there may be some organizations that this form of working does not suit. Chin (2014) outlines that there appears to be a sense of uncertainty around whether working from home is as beneficial as some other researchers suggest throughout their studies.

Shellenbarger (2012) outlines that there is also uncertainty around how employees are splitting their working week e.g. their working from home days may vary each week.

In addition to this Geurts and Demerouti (2003) outlines that there is a sense of uncertainty surrounding working times and also the impact of this way of working concerning employees well-being which can be extremely scarce as there is a range of positive and negative effects that are yet to be investigated further. This may include the level of positivity surrounding the new and advancing implementation of technologies that may allow more employees to work from home and the negative factor here may involve employees trying to find a suitable work-life balance as organizations are slow at moving towards this newer way of working.

OBJECTIVES OF THE STUDY

- To reveal the new norm of digital transformation in the business world
- To understand the pattern and changes that took place because of the concept of work from home
- To study how digital transformation and work from home function together to run the business successfully

Method

- · Sampling Procedure: The interview Technique was used for this study
- Sampling Size: Initially sample size was bigger but due to this ongoing Pandemic, we interviewed 40 people

RESULT AND DISCUSSION

While working on our research paper we interviewed a huge number of people out of which we have picked a sample of the top 4 Senior HR Professionals from various fields who have helped us to understand how digital transformation and work from home has become the current trend. They have also discussed the working condition of the employees by enlightening us and giving us insights into the industries. Following are the ones gives below:

1st Interviewee - Byju's HR BP

1. How was the hiring process before and after the pandemic? What is the difference? Before the pandemic, the entire interview process was in person (physical in the office premises). After the pandemic, the complete process was online right from the application, recruitment induction, and training. At Byju's for the interview process, for the 1st and 2nd round the candidates used to come in the companies premises and the interview was conducted in person by the HR Recruiter and then the specific training programs were arranged according to their job profile, this all was done physically before the pandemic. Also, monthly basis meeting between the function heads was done for new joiners. Now the entire process is done online. The onboarding process was online before also so no difference there.

2. Pros and Cons before and after the hiring?

The hiring process did not matter whether online or offline because they see the communication mostly and the efficiency at their job is seen. Role suitability is checked. The hiring process in BYJY'S was increased during the pandemic. In Aditya Birla the hiring process was completely stopped. If there was a job vacancy they would internally move someone from the company, they did not hire externally. The online process was faster as the interview can be conducted as per convenience than the offline process.

3. What is the impact of the pandemic on your company? On the recruitment process?

Recruitment there was no difference. WFH was a little difficult for the new joiners as there is a transition from college to corporate and the physical interaction was not possible in online mode. The training was also different and difficult in online mode as makes a big difference. Interaction with different Department people was not possible in this online mode. Working hours are extended to 12-14 hrs. Therefore, adjusting to this environment was difficult for the fresher.

4. What are the employee engagement activities?

Having a one on one discussion with each employee asking about are facing any problem in terms of their work, do they need special training, policies, do they need any leave which the

manager is not allowing, or any other personal reasons. As the pandemic is going on there is no physical interaction between the employees as it was before the pandemic. Engagement Activities are done weekly such as Bollywood quiz and quizzes related to products. Also, training is conducted weekly based on the inputs provided by the employees and their managers related to soft skills and behavioral skills. Get in touch with the business and understand the problems from the employee's point of view and conduct the training accordingly.

5. How did your company cope up with the pandemic?

Digital transformation has helped a lot for the normal functionality of the company. In a pandemic, the sales were done digitally. The IT team had created a link that was shared with the clients, once the client clicks on the link it takes them to the documentation steps and the details were filled and the payment was also done digitally. Training regarding the process was done for the employees. The marketing team was also trained. According to the situation the transition was done in 1 – 2 weeks. HR and IT had an important role in this, as the IT had to coordinate with all the employees in different zones. People got used to WFH and were not ready to come to the branches to work.

- 6. Did salary reduction take place? Salary reduction did not happen; the fixed salary was given. Appraisal and hike did not happen for the employees during the pandemic.
- 7. About the future of the company will the company hire employees to work from home? For the half-year of 2021, the process will be the same. Even after the pandemic, the interview process's first 2 rounds can be done online and the final round can be done in person.

2nd Interviewee -Senior Talent Acquisition Specialist

- 1. How was the hiring process before and after the pandemic? What is the difference? across all countries.?
 - There was not much difference in the hiring process of hiring. However, in the initial phase of covid-19 (March-June), the pace of hiring had slowed down. The company was taking more actions in firing rather than hiring. Hence there was fear among the people and there were not looking for a change and would rather stick to the organization. If you go to a new organization it takes time to settle. And also, the other companies were not hiring for 5-6 months. However now, the hiring process has speeded up.
 - 2. Pros and Cons before and after the hiring?
 - Few changes that have been observed are that that the job market has gotten wider, the location of the employees is no longer a limitation for hiring them for the organization. A couple of differences in the hiring pattern. There have been no changes in the positions

provided in the company. Companies That have increased their pace in hiring are more trusted in the community to today's date. The budget of many companies has been stuck since the hiring takes place before the commencement of the project. These budgets are invested by foreign companies. So, the hiring is taking place only for active projects and no new project is being generated.

- 3. What is the impact of the pandemic on your company? On the recruitment process?
 - Since we are an IT service organization, digital transformation has helped us to
 overcome all the barriers we were facing due to the pandemic. In the beginning, all the
 projects were stopped but slowly and gradually the work had picked up. But overall, the
 requirement of IT developers was high since they had a huge role to play in running the
 company.
- 4. What are the employee engagement activities?
 - My profile is more of a recruitment one. Employee engagement is not a part of my profile. However, let me give you a gist about what my company does as an employee engagement activity. Since it is a friendly firm, the employees have been given the flexibility to work at their convenience of time as long as their target is met. Giving the liberty to work also has its advantage other than monetary benefits. Other than that, appraisals, rewards, felicitation ceremonies are conducted, learning and training development, etc.
- 5. Did salary reduction take place?
 - Salary reduction did not happen. Though the appraisals were not given in the due time i.e., April, however, it has been given later on in October along with the arrears. I have witnessed such salary cuts in other companies, but my company had no such salary cut.
- 6. Have you started working from the office or still WFH?
 - IT companies are not asking people to come to the office. We are accustomed to the working pattern currently which is why we are still working from home. Also, our productivity is not being tampered with and, in such condition, we don't was to risk our employees' health unnecessarily. The work which cannot be done at home then some of the employees might come to the office.

3rd Interviewee - Senior Executive HR

- 1. How was the hiring process before and after the pandemic? What is the difference?
 - a. Adoption of virtual platforms
 - b. Telephone-based screening or interactions continue.
 - c. Face-to-face interviews are now done through video calls and technology apps.
 - d. The online assessment is now proctored and candidates can take it from their comfortable locations.

- e. To attract talent and create a pull mechanism, career websites and job descriptions have been made more attractive. This also has geared up efforts in the employer branding space.
- f. Offices are made available on alternate days. And the other alternate days are Work from Home.
- g. Virtual recruiting is now the new normal. Virtualization of offices is being adopted for interviews and believes it's an easier method.
- 2. Pros and Cons before and after the hiring?

The hiring process did not matter whether online or offline because they see the communication is going on between the employees.

- 3. What is the impact of the pandemic on your company? On the recruitment process? Recruitment there was no difference.
- 4. What are the employee engagement activities?
 - a) At an engagement level, the focus has shifted to bringing out meaningful interactions with employees
 - b) Apart from the vanilla engagement activities like parties and recognition events and get together, the focus is more on employee well-being, health, and safety
 - c) Integration with families is another space that is seeing a lot of traction
 - d) Linking the overall company purpose to the employee's work is an extension of the employee engagement agenda
 - e) A lot of online connections and engagement programs have also seen the light of the day
- 5. Have you started working from the office or still WFH?

We are still working from home. Thanks to digital transformation, we have been able to carry out our activities smoothly due to which work from home seems to be a good alternative. It has helped us get over all the hurdles of communication and connectivity.

6. Did salary reduction take place?

Salary reduction did not happen; the fixed salary was given. Appraisal and hike also happen for the employees during the pandemic.

4th Interviewee - Senior VP of HDFC

1. How was the hiring process before and after the pandemic? What is the difference?

Digital transformation has altered the process of hiring, due to which we can conduct the following activities while working from home:

- a. Adoption of virtual platforms
- b. Telephone-based screening or interactions continue.
- c. Face-to-face interviews are now done through video calls and technology apps. Many companies have even gone ahead with pre-recorded interviews, but in the Indian context live video-based interviews are common.
- d. The online assessment is now proctored and candidates can take it from their comfortable locations
- e. Dependence on consultants has reduced due to the cost arbitrage. Web-based and portal-based hiring have spiked up.
- f. To attract talent and create a pull mechanism, career websites and job descriptions have been made more attractive. This also has geared up efforts in the employer branding space.
- g. Employee referrals have seen a spike. And research says that this cohort of candidates are generally the ones who are a better value fit to the company culture and stay longer too
- h. Virtual recruiting is now the new normal. Virtualization of offices and hybrid model of working is now an accepted practice.
- i. Dependence on a lot of AI (artificial intelligence) based apps to screen the candidate universe and now many jobs can be handled remotely.
- Amazon hired 1.75 lakhs and Walmart hired 1.5 lakhs employees across all countries.
- 2. Pros and Cons before and after the hiring?

The hiring process did not matter whether online or offline because they see the communication mostly and the efficiency at their job is seen.

- 3. What is the impact of the pandemic on your company? On the recruitment process? Recruitment there was no difference. Not that much in fact during Covid-19 there was a rise in insurances.
- 4. What are the employee engagement activities?
 - a. At an engagement level, the focus has shifted to bringing out meaningful interactions with employees
 - b. Apart from the vanilla engagement activities like parties and recognition events and get together, the focus is more on employee well-being, health, and safety
 - c. Integration with families is another space that is seeing a lot of traction
 - d. Linking the overall company purpose to the employee's work is an extension of the employee engagement agenda
 - e. A lot of online connections and engagement programs have also seen the light of the day
- 5. Have you started working from the office or still WFH?

Office 2 days a week. High sales given organization, so salespeople report accordingly.

6. Did salary reduction take place? Salary reduction did not happen; the fixed salary was given. Appraisal and hike also happen for the employees during the pandemic.

CONCLUSION:

The covid-19 pandemic has affected almost all the sectors of the economy. The significant weaknesses the IT industry is facing now is due to the fall in the economy, as a lot of companies are forced to ask their employees to work from home (remotely) keeping account of the public health concerns. Due to this, there is a massive loss of opportunity for many companies that have international dealers. For example, Apple Inc. is estimated to have at least a 10% fall in its shares because of the lack of availability of iPhones in the market. The parts that are required to build the iPhones are supposed to come from China, and it is facing a major lockdown.

The spread of this deadly virus has caused a lot of conferences to get canceled, which could have been a great partnership opportunity for many companies. But the digital transformation has made it possible to shift the conference virtually and connect with people without worrying about the geographical border and help to expand their horizons.

This pandemic has emerged new norm of work from home. From the interviews we have conducted, we understood that people are liking this norm of work from home as they can manage house and office both smoothly. Major changes took place in hiring, HR recruiters are preferring and liking this online hiring as it saves lots of time. Now there is no restriction of location one can hire a candidate from any location around the world.

Human Resources played a major role in this pandemic has it was their responsibility to manage important things in the organization and also to take care of the mental health of their employee because this pandemic has brought salary reduction, employment, etc.

We all agree that this is a challenging situation for all of us. So let's stay together with help each other. And hope everything will get normal soon.

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Institutions



Kudilal Govindram Seksaria sarvodaya school



Durgadevi Saraf junior college



Durgadevi Saraf global business school LEARN AND INSPIRE



Kunjbihari S. Goyal online academy



Mainadevi Bajaj International playschool YOUNG EVOLVING MINDS



Kudilal Govindram Seksaria english school



Ghanshyamdas Saraf college of arts & commerce



Deviprasad Goenka management institute of media studies



Draupadidevi Sanwarmal women's hostel



Jankidevi Bilasrai Bubna boys hostel



Ramniwas Bajaj english high school



Kirandevi Saraf institute of complete learning WIDENING HORIZONS



Ladhidevi Ramdhar Maheshwari night college of commerce
ENLIGHTENING FUTURE



Pravinchandra D. Shah sports academy



Nalini Shah music academy MUSICAL HARMONY



Mainadevi Bajaj International school



Durgadevi Saraf Institute of management studies WE CREATE I PADERS



Ramdhar Maheshwari career counseling centre



RS CA study centre



Rajasthani Sammelan skill development centre SCULPTING SKILLS

Endowment Funds & Research Chair



Remsons Group management research centre MANAGEMENT RESEARCH



IRB scholarship endowment fund HONOURING EXCELLENCE



BKT endowment freeship fund POSTERING KNOWLEDGE



Jankidavi Bilasrai Bubna endowment freeship fund EMBOLDENING STRENGTHS

Facilities















