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Demystifying the ERP Adoption Code Through the Lens of Personality

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Abstract

This paper aims to examine the role of personal dispositions in ERP (Enterprise Resource Planning) software adoption among employees, investigate how distinct personality traits influence the intention to adopt ERP software, and then discuss how individual personality is of critical importance when implementing novel technologies and managing organizational efficiency. Theoretical contributions augment the extant literature and open new avenues for future research; practical implications help managers and policy-makers to incorporate individual lens while introducing new technologies and optimize resource allocation.

Keywords: Personality traits, ERP, technology adoption, behavioral intention.

Introduction

The advent of information and communication technologies (ICTs) has significantly transformed operational practices throughout organizations. Given the established importance and practicality of contemporary technical developments, both public and private businesses have implemented various information and communication technologies (ICTs) to meet their specific operational requirements (Lakhwani et al., 2020; Meyer, 2011). To enhance productivity, optimize resource allocation, maintain transparency and avoid excessive investments in recordkeeping, the Indian IT industry has introduced and incorporated Enterprise Resource Planning (ERP) software (Amoako-Gyampah & Salam, 2004). According to recent industry reports, the revenue of the ERP industry is projected to reach US\$0.63billion in 2023 and likely to reach a market volume of US\$1.04billion by 2028. Despite the widespread adoption of ERP, individual adoption of ERP remains a significant roadblock to fully harness the potential of ERP software in companies. However, there is a scarcity of research that delves into the role of individuality in the adoption of ERP (Benlian & Hess, 2010).

Existing research has emphasized the role of various individual attributes that play a pivotal role in the individual technology adoption decision making process (Mendonca, 2016). The existing body of research provides robust evidence that an individual personality seamlessly integrates with all aspects of human existence, including daily experiences, challenges and decision-making processes (McCrae et al., 2008). Personality encompasses an individual's behavioural patterns and social interactions with the external world and other individuals (McCrae et al., 2008). An individual with a distinct deposition exhibits a distinct pattern of adoption while engaging with Information and Communication Technologies (ICTs). For example, individuals who exhibit conscientious traits are more inclined to use information and communication technologies (ICTs) that are directly connected to work or productivity. Conversely, extroverted individuals tend to gravitate towards ICTs that facilitate interpersonal interactions (Vaid & Harari, 2021). Thus, considering the fast growth of ICTs, specifically ERP

software, it is crucial to explore and understand how individual personality traits interact with the ERP adoption.

Relevant Literature

ERP refers to an information technology system that assists companies in implementing business functions aimed at achieving competitive advantages and fostering opportunities for growth (Park, 2018). Studies have suggested that personality traits impact the degree of technology acceptance among employees, as cognitive factors have been shown to influence how employees adopt and use technology (Joshi et al, 2023; Ozbek et al, 2014; Sriyabhand & John, 2014). Previous research examined how individual aspects influence the acceptance of technology, particularly in the context of smartphone usage. The results revealed that personal dispositions play a critical role in developing users' perceptions of a product's utility and user-friendliness. These perceptions, in turn, have a substantial impact on their willingness to use the product.

A study conducted by Sriyabhand & John (2014) examined the link bridging individual dispositions and the of Information Technology (IT) adoption and use. The findings revealed that extraversion and agreeableness have positive and significant influences on social networking behavior, while neuroticism and conscientiousness exhibit negative associations. Joshi et al. (2023) conducted a comprehensive meta-analysis encompassing 48 studies to consolidate the existing body of research regarding the relationship between the "Big Five" personality traits and the utilization of various ICTs. They also highlighted that the Big Five personality traits are significant factors in the adoption of ICT technologies, particularly within workplace environments.

Within the context of ERP adoption, previous research has indicated that when confronted with the implementation of technology, especially ERP systems, they should take individual traits into account for an efficient ERP adoption process (Benlian & Hess, 2010). In a recent study by Lea et al. (2020), the authors explored how various personality types affect the learning performance of ERP systems in a university environment. Utilizing the Big-Five Personality Model, the authors identified four distinct personality types through cluster analysis of 176 survey participants. They concluded that these four personality types, along with moderating variables such as user affect, demographic factors, environmental factors, and prior experience, were significantly linked to ERP system learning performance.

This research makes a valuable contribution to addressing a void in the existing literature. It proposes that the implementation of ERP systems can be customized to suit various user categories based on their personality profiles. Given that IT employees extensively utilize ERP systems in their day-to-day tasks, comprehending the factors that influence and inspire individuals becomes crucial for fostering their success and well-being in the workplace.

Objective

This paper aims to solve the puzzle of 'Who doesn't use ERP and WHY', despite the widespread availability and adoption of ERP and its proven benefits. The main objective of this study is to examine the impact of individual personality characteristics, as conceptualised by the Big-Five personality trait model (BFM), on the acceptance and utilisation of Enterprise Resource Planning (ERP) systems within the Information Technology (IT) workforce. Furthermore, this paper examines how personality intervenes at the cognitive level (behavioral intention to use ERP) (Abe, 2018), leading to the behavioral level (actual use of ERP).

Theoretical Framework

The Big Five model, as introduced by McCrae and Costa (1987), is a highly prevalent and extensively validated framework for defining personality traits. This taxonomy comprises five distinct dimensions, namely Extroversion, Agreeableness, Openness, Conscientiousness, and Neuroticism. In contrast to other personality taxonomies that dichotomize individuals into two distinct categories, the Big Five Model (BFM) allows individuals to exhibit a range of positions along each dimension. The Big Five dimensions have been empirically shown to account for a substantial portion of the variability in personality traits, which is why they are referred to as "Big" (Oliver & Srivastava, 1999). It is widely agreed among researchers that the domain of personality may be classified into five overarching categories, as proposed by Digman (1990). The theoretical framework referred to as the Five-Factor Model (FFM) has been acknowledged as a notable approach, with the dimensions sometimes referred to as the Big Five. The Five-Factor Model (FFM) is often regarded as the most thorough, concise, and valuable classification system in the field of personality study (McCrae & Costa, 1987). Numerous studies in the existing body of literature have employed the Five-Factor Model (FFM) as a framework for comprehending the adoption of various Information and Communication Technologies (ICTs) (Ramírez-Correa et al., 2019). The existing body of evidence indicates that personnel who use information and communication technologies (ICTs) demonstrate superior performance compared to those who do not (Lakhwani et al., 2020). Therefore, it would be prudent to investigate the connection between personality and ERP adoption within the IT industry.
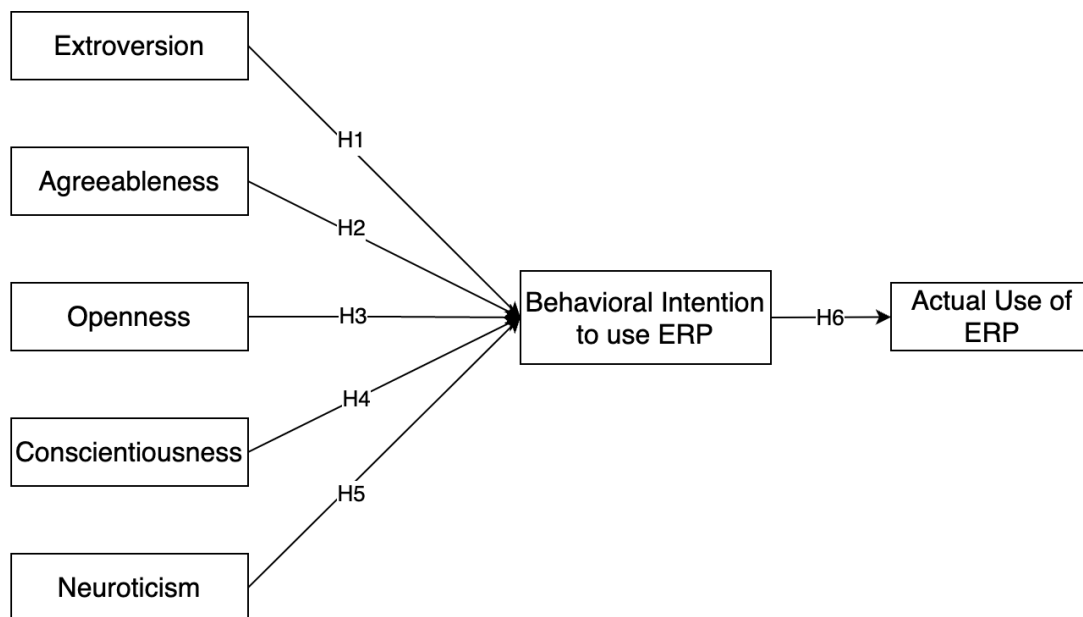
Fig.1. Conceptual framework

Methods

The data were collected from employees who are working in IT companies and who have an understanding, exposure, and experience in using ERP as a part of their job. The sample for this study comprises 221 in-service IT company employees ranging from trainee to senior software engineers. This paper employs structural equation modeling (SEM) using SmartPLS 4.0 software to perform the data analysis.

Major Findings

The results highlight the importance of individual dispositions (BFM) in predicting the behavioural intention to use ERP systems. This research has specifically determined that the Big-Five traits, with the exception of Agreeableness, exert considerable influence on the intention to utilize ERP systems. Empirically, Openness was shown to have the greatest influence on the usage of CCTNS, followed by Conscientiousness, Neuroticism, and Extraversion, in that order. Furthermore, employee behavioural intention to use ERP has a substantial impact on the effective implementation and utilisation of ERP systems. The findings of this research provide valuable insights and consequences for both ERP service providers and organisations considering or currently employing ERP systems.

Potential Contributions

The study's findings contribute significantly to the existing literature in several ways concerning how the individual personality traits affect employees' acceptance of ERP systems in the IT sector. First, prior studies have primarily focused on explaining behavior through individual beliefs, while disregarding the role of individual personality traits. Second, this study furnishes empirical evidence to substantiate the assertion that the Big-Five personality traits can predict the behavioral intention to use ERP systems. This is a noteworthy finding, implying that ERP service providers and organizations can utilize personality assessments to identify employees with a higher likelihood of achieving success in utilizing ERP systems. Third, this study identifies the specific Big-Five traits with paramount importance in predicting the intention to utilize ERP systems. Notably, Openness emerges as the most influential, succeeded by Conscientiousness, Neuroticism, and Extraversion. These findings suggest that organizations and ERP service providers would benefit from focusing their efforts on recruiting and training individuals exhibiting high levels of these traits (Saade and Nijher, 2016).

Originality/Value

This paper lays the groundwork for future exploration of the proposed framework across diverse organizational settings and introduces the integration of personality within the current technology adoption models.

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Hybrid Workplace And HR Practices - Effect of Moonlighting and Work Engagement on Employee Performance of Indian Medium-sized IT Companies

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Abstract

Purpose: This study aims to analyse how Employee Performance is influenced by the Hybrid Workplace arrangement that changed the perception of HR practices for post pandemic.

Design/Methodology/Approach: A survey has been carried out by targeting medium-sized IT employees of South India. A total of 500 responses were collected and analysed using Structural Equation Model (SEM).

Findings: Hybrid Workplace has to be implemented by medium-sized IT companies for better Employee Performance and Work Engagement. Moonlighting is independent of Hybrid Workplace and does not significantly influence the Employee Performance.

Research Limitations/Implications: Hybrid Workplace with physical presence of employee in office for only a limited number of days in a week has gained greater implementation at IT companies. Manufacturing sector and Front line workers such as delivery, security services and hospitality cannot choose hybrid working due to their presence is needed at onsite.

Originality/Value: The proposed model postulates and evinces that Employee Performance in medium-sized IT companies is positively influenced by hybrid workplace.

Keywords: Hybrid Workplace, Employee Performance, Work Engagement, Moonlighting

1. Introduction

Hybrid workplace with flexibility in working hours at workplace has been implemented by organizations for better employee benefits but there is no successful implementation of workplace design that suits the Hybrid work environment (Sampat et al., 2022). Deloitte (2021) survey on hybrid workplace explain that 79% of the respondents prefer to work offsite as an option after pandemic. In a global survey conducted in 2021, 21% of employees who quit their jobs mentioned the reason as unavailability of flexible workplace (Ash et al., 2022). Swiggy has implemented work policy to allow employees work for other companies after working hours with specific conditions. Wipro has fired around 300 employees for Moonlighting while being a full-time employee of the company.

The purpose of this research is to have an in-depth understanding on how the pandemic has transformed the IT companies into hybrid workplace that lead to manage physical office space in an efficient manner. This study targets to answer the following research questions:

RQ1: Whether the changes to workplace strategy is associated with employee outcomes (i.e performance and work engagement)?

RQ2: What are the other influential constructs (i.e. moonlighting) impacting work performance at hybrid workplace?

Based on the two research questions, this research derives constructs from literature review and proposes hypotheses in the following sections.

2. Literature Review

Literature review has been carried out by sourcing through key databases such as EBSCO, Emerald, HBS (Harvard Business Review), ELSEIVER, SAGE pub and Springer. Content analysis is used to validate the identified literature review using NVIVO software (Isensee et al., 2020). The validation of articles based on the key words found from the literature review for homogeneity to the related study. Word frequency explain pertinence of literature review by fostering the number of occurrences. The first step is to apply word frequency search on all identified articles (Appendix - Figure I). The next step is to perform content analysis using the relevant key words that are most frequent key words observed in all included articles related to workplace before and during COVID-19 pandemic (Appendix - Figure II). The constructs relevant to this study are derived from literature review as follows.

2.1 Hybrid Workplace and Employee Performance

Hybrid Workplace and Employee Performance are derived from the literature review and defined as follows. Hybrid Workplace is defined as "A workplace that provides autonomy and flexibility to choose work time and work location" (Sampat et al., 2022). The behaviour of employee to accomplish organization's goals is known as Employee Performance (Talukder et al., 2018).

2.2 Moonlighting

Multiple job holdings are initially proven to be for financial reasons (Jamal and Crawford, 1981) but later it was realized that there could be other reasons such as personal fulfilment (Ballou, 1995). Moonlighting is defined by scholarly articles as 'working for more than one job at a time' (Allen et al., 2013) or 'to possess two separate jobs in two different companies at the same time' (Inness et al., 2005).

2.3 Work Engagement

Work Engagement is a psychological state of mind towards long-lasting positive intention at work (Schaufeli et al., 2006; Seppälä et al., 2015). Work Engagement is defined as "A positive satisfied state of mind through physical, cognitive and emotional engagement towards work" (Houle et al., 2022).

3. Conceptual Model

Recent survey by Kotak Institutional Equities from 400 respondents of IT and ITES category in India suggests that 65% of employees prefer moonlighting (Chatterjee and Kanbur, 2015). Identified constructs are related based on the derived hypotheses using social exchange theory for further research (Cropanzano and Mitchell, 2005).
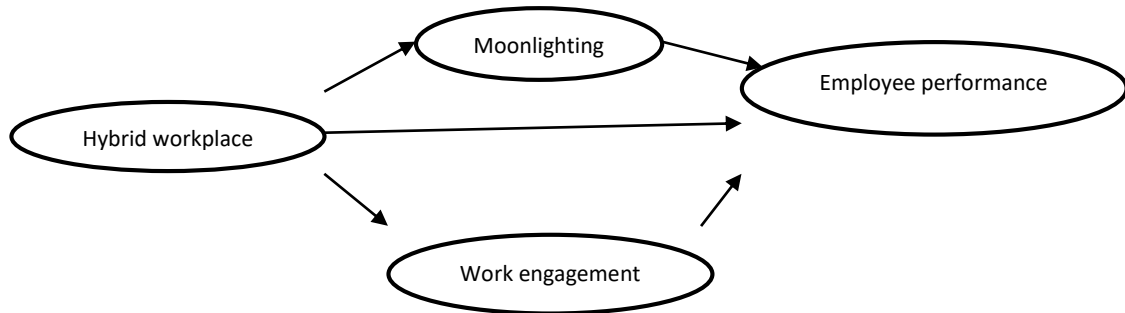
Figure III: Conceptual Model

H_{a1}: Hybrid Workplace has significant association with Employee Performance

H_{a2}: Hybrid Workplace has significant impact on Moonlighting.

H_{a3}: Moonlighting has significant influence on Employee Performance.

H_{a4}: Moonlighting has significant mediating effect on Employee Performance at Hybrid Workplace

H_{a5}: Hybrid Workplace has significant impact on Work Engagement.

H_{a6}: Work Engagement is significantly associated with Employee Performance.

H_{a7}: Work Engagement has significant mediating effect on Employee Performance at Hybrid Workplace

4. Methodology

4.1 Procedure

This study has targeted the medium-sized IT employees of South India and survey participants were from various roles. Expert opinion has been sort through a heterogenous group of 8 participants from the background of academic, human resource management and entrepreneurs (Chowdhury, 2018). To facilitate and strengthen the responses, participants were chosen who has actively involved in the hybrid workplace. The data collection process was carried out through online questionnaire link and also face to face interviews with experts for gathering their opinion on the survey.

4.2 Participants

The medium-sized IT companies with employee strength of 100-500 employees were selected for this study. The 500 responses were received with gender variation of 72% male and 28% female participants. The work experience level of the participants were 14% (less than one year), 38% (between one year and 5 years) and 48% (more than 5 years) respectively. The responses were from full time Executive, Management and Human Resource professionals. The below table (Table I) shows the demographic distribution of the participants.

Table I: Demographic Information (sample (n) = 500)

Variable	N (%)
Gender	
Male	359 (71.8%)
Female	141 (28.2%)
Experience level	
< 1 year	72 (14.4%)
> 1 year and < 5 years	186 (37.2%)
> 5 years	242 (48.4%)
Position	
Executive/Management/HR level	199 (39.8%)
Team member	301 (60.2%)

4.3 Survey Questionnaire

A developed scale of 6 items for Hybrid Workplace has been adopted from (Karasek, 1979). A 12 items scale for Moonlighting (ML) has been adopted from (Asravor, 2021). A developed scale of 9 items for Work Engagement (WE) has been adopted from (Houle et al., 2022). A 10 items scale for Employee Performance (EP) has been adopted from (Lynch et al., 1999; Williams and Anderson, 1991). A total of 37 items for all the 4 constructs have been used to develop a survey questionnaire using five-point Likert scale followed by statistical analysis, discussion and conclusion.

5. Data Analysis

This study used SPSS (Statistical Package for the Social Sciences) for Statistical analysis. Normality test is conducted using Kolmogorov-Smirnov and Shapiro-Wilk tests and all the considered 37 items are having the significance value < 0.05. There are no outliers in the responses with Cronbach's value of 0.939 which is significant with greater than 0.8 to have excellent level of internal consistency. The data validation has been conducted to ensure all data passed required checks with no violation.

Stage 1: Exploratory Factor Analysis

Constructs are validated through factor dimension analysis using Kaiser-Meyer-Olkin (KMO) test for sampling adequacy. The KMO value of 0.933 indicate that the sample is adequate (Byrne, 2016; Chowdhury, 2018). Each variable is checked for its factor loading more than 0.5 and ML1 variable with factor loading of less than 0.5 has been eliminated from further analysis.

Stage 2: Confirmatory Factor Analysis

The Confirmatory Factor Analysis (CFA) is applied on the identified constructs and its variables from Exploratory Factor Analysis (EFA). Each dimension is tested separately to check the good fitness of it. CFA has been applied on the individual constructs and the goodness of fit has been achieved by removing the high residual items. The goodness of fit indices values have been indicated in Table II. All constructs are found to be significant with p-value greater than 0.05, the last stage is to evaluate the good fit using path analysis by finding the relationship between these constructs.

Table II: Individual Dimension – CFA Results

Factor	Parameter	Value	Reference (Chowdhury, 2018; Hair, 2006)
Hybrid Workplace (HW)	RMR	0.023	
	GFI	0.995	
	CFI	1.000	RMR <0.05
	RMSEA	0.010	GFI >0.90
Moonlighting (ML)	RMR	0.009	CFI >0.90
	GFI	0.995	RMSEA <0.05
	CFI	1.000	
	RMSEA	0.000	

Work Engagement (WE)	RMR	0.006
	GFI	0.992
	CFI	0.998
	RMSEA	0.042
Employee Performance (EP)	RMR	0.007
	GFI	0.993
	CFI	0.999
	RMSEA	0.032

Stage 3: Measurement Model and Hypotheses Testing

The developed hypotheses have been tested and the structural model has been developed with parallel mediation of Moonlighting and Work Engagement to find the relationship between Hybrid Workplace on Employee Performance. The good fit of the model has been accomplished with significance of p-value greater than 0.05 and the values of GFI, CFI and RMR as 0.900, 0.955 and 0.044 respectively by removing high residual variables. Hybrid Workplace has significant impact on Employee Performance with mediating effect of Work engagement (standard regression weights of 0.25 and 0.70). Moonlighting has no significant mediating effect between Hybrid Workplace and Employee Performance with standard weights of 0.06 and 0.08 respectively. The following Figure IV explains the path analysis with standard regression weights between each construct.
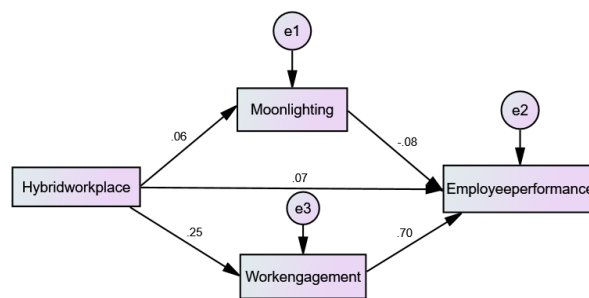
Figure IV: Path Analysis

The mediation effect of Moonlighting and Work Engagement were analysed using bootstrapping method to analyse the full or partial mediation between Hybrid Workplace and Employee Performance using direct and indirect effects. The results are highlighted in Table III for each hypothesis. The criteria for significance level of p-value is less than 0.05 and t-value should be greater than 1.96 (Irawanto et al., 2021).

Table III: Hypotheses Test Results

Hypothesis	Relationship	Path Coefficient	t-value	p-value	Accepted
H_{a1}	HW → EP	0.074	2.319	0.000	Yes
H_{a2}	HW → ML	0.060	1.352	0.176	No
H_{a3}	ML → EP	-0.082	2.661	0.008	Yes
H_{a4}	HW → ML → EP	-0.005	0.667	0.196	No
H_{a5}	HW → WE	0.250	5.760	0.000	Yes
H_{a6}	WE → EP	0.703	22.192	0.000	Yes
H_{a7}	HW → WE → EP	0.175	3.268	0.001	Yes

The proposed constructs and its variables are reliable and valid from the internal consistency perspective as all CR values are higher than threshold value of 0.70 (Cho, 2016). The convergent validity of the constructs is approved with all AVE values greater than 0.50 (Hair, 2006).

Table IV: Convergent Validity Testing

Factor	AVE	CR	Inter-correlation of the Latent variables			
			Hybrid Workplace	Moonlighting	Work engagement	Employee Performance
Hybrid Workplace	0.571	0.799	0.755	0.081	0.304	0.291
Moonlighting	0.763	0.957		0.873	0.288	-0.134
Work Engagement	0.752	0.948			0.867	0.746
Employee Performance	0.718	0.947				0.848

6. Results and Discussion

H_{a1}: The result of this research suggests that hybrid workplace has the most importance to autonomy and flexibility with agree and strongly agree as responses by 73% for autonomy of work time, 63% for flexible work schedule and 55% for flexible work time. There is a significant positive correlation between Hybrid Workplace and Employee Performance. The Hybrid Workplace has significant association with Employee performance with significant p-value of less than 0.05 and t-value as 2.319.

H_{a2}: Employee is willing to improve and utilize skills to enhance resume through moonlighting with 80% of respondents positively agreed with their responses. There is no significant relationship between Hybrid Workplace and Moonlighting. The alternative hypothesis is rejected with p-value as 0.176 and t-value as 1.352. Hence the Hybrid Workplace do not have any significant impact on Moonlighting.

H_{a3}: There exists a negative correlation between Moonlighting and Employee Performance. With the p-value of less than 0.05 and t-value as 2.661, alternative hypothesis is accepted. Moonlighting has negative impact on employee performance.

H_{a4}: The results explain the p-value as 0.196 and t-value as 0.667 which are not significant. Hence the null hypothesis is accepted Moonlighting has no mediating effect on Employee Performance at Hybrid workplace.

H_{a5}: Work Engagement with greater enthusiasm and excitement was observed as the highest significant influential components as per the responses with 75%. Hybrid workplace has significantly positive impact on work engagement. The p-value is less than 0.05 and t-value as 5.760, the alternative hypothesis is accepted.

H_{a6}: The results from path analysis do highlight that p-value is significant with less than 0.05 and t-value as 22.192, alternative hypothesis is accepted. Work engagement has the most significant positive impact on employee performance with the highest path coefficient of 0.7.

H_{a7}: The results of this study reveals with significant p-value as less than 0.05 and t-value of 3.268 which accepts the alternative hypothesis. Work engagement has the positive mediating effect on hybrid workplace and employee performance.

Hybrid Workplace significantly influence the Employee Performance with positive impact (correlation value of 0.291). Work Engagement has significant positive impact (correlation value of 0.746) with mediating effect between Hybrid Workplace and Employee Performance. Moonlighting has very less impact due to Hybrid Workplace (correlation value of 0.081) but it has negative impact (correlation value of 0.134) on Employee Performance through mediation effect.

7. Conclusion

This novel study brings the influence of moonlighting and work engagement on implementation of hybrid workplace for human resource management practices. This study is based on the data collected through primary source with limitation to medium-sized IT companies of South India. Conceptual model has been derived by the identification of

constructs from literature review, data collection is tested through statistical analysis with detailed explanation of results followed by discussion. Moonlighting is one of the key challenges to be considered by IT companies on Employee performance and organisation commitment. Medium-sized IT companies have taken cognizance of hybrid workplace as a productive post pandemic work policy for designing the workplace environment.

8. Managerial Implications

The proposed hybrid workplace model can enhance organizational culture to manage certain business strategies such as high rental amount for office spaces, parking issues, managing the office peak time traffic, and IT infrastructure. Organizations can aim for coworking space as a business strategy with hybrid workplace model. Hybrid workplace is the stupendous prospective to usher business strategy for the development of organizational culture.

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Figure I: Level 1 – Word frequency diagram – Content analysis

Figure II: Level 2 – Word frequency diagram – Content analysis

Authenticity Congruence: Scale Development and Validation of Value Congruence

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Abstract

Organizations are bound by the values that they espouse and enact. Not only are they bound but also identified by the practices that represent these values. Organizations thrive when these values are enacted in daily practices and employees feel a deeper connection with their organization. When employees perceive their organization to embed these values in their practices, they perceive their organization to be authentic. Authenticity can not only have a deeper impact on employees but also the passive pool of labor that attracts individuals who sync with those values. Organizational authenticity is not only a branding mechanism but also makes a more positive influence on society. In our paper, we attempt to create a scale for perception of organizational authenticity.

Keywords: Organizational Authenticity, Espoused and Enacted Values, Scale Development and Scale Validation, SPSS, AMOS

Introduction

Values are identified by personal beliefs or social norms, which are not a direct outcome of situations and the force that guides behavior (Rokeach, 1973). Individuals in organizations observe the values that are practiced in them and deploy the same in their daily activities. Accepting organizational values is implemented in organizations differently depending on several micro and macro factors. In the eye of the general public and the documentation that is done in communities or organizations generally favors the congruence of preached and practiced values (Bureau, 2007). Studies have previously looked into the process of congruence of values in organizations (Matthews, Featherstone, Bluder, Gerling, Loge, and Messenger, 2009). However, they focused more on national culture, industry, organizational culture, and other micro and macro factors.

Organizational values are espoused when the organization claims to observe those values in its daily operations (Argyris, 1999). Enacted values are the ground reality of the espoused values and whether they are practiced in the organization. While values in the company have to be carefully chosen, there is a chance that some of them will contradict each other (Tryce and Beyer, 2003). Both qualitative and quantitative studies have tried to find whether or not there has been an incongruence between espoused and enacted values (Filstad and Gottschalk, 2011; Gray, Smart, and Bennett, 2017; Yang, Zheng, and Cheng, 2021).

In this paper, we shall focus on the development of a scale that will allow organizations to find if they have a congruence between their espoused and enacted values. This scale aims to create a universal scale that will be indifferent to other factors and make the outcome of the scale

context indifferent. The benefit of having a universal scale for value congruence scale is to allow organizations to understand their existing workforce's belief in the organization's value system. The values of the company are ubiquitously found in its mission and vision statements. By using this scale, we can, at any moment, find the ground reality of the practiced value system of the organization. This will give a sense of the organizational culture and the bottlenecks in the execution of those values. Kabanoff and Dally find in their research that nine values were found most commonly in the Australian and American companies: *teamwork, participation, commitment, performance, reward, ethical behavior, supportiveness, authority, and leadership*. Kaufman also suggests that certain values are present nationally, and the only difference of those values in organizations is their degree of intensity. On similar lines as Kaufman and Kabanoff, there have been other studies that highlight various American values that have identified as present in all institutions of the country.

Literature Review

Previously, scales have been developed in the literature of authenticity in personal authenticity (Wood et al., 2008), dispositional authenticity (White, 2011), CSR authenticity (Joo, Miller, Fink, 2019), brand authenticity (Tran and Keng, 2018), leader authenticity, brand authenticity (Mohart, Malar, Guevremont, & Giradin, 2015), perceived authenticity of social influencers, and several others. The concept of authenticity or the word *authenticity* originates from the Greek word αὐθεντικός meaning true or genuine. Authenticity is perceived differently in different cultures. As typically used, authenticity is an attribution that is socially constructed and appears in many domains of social life. Frazier et al.'s (2009) study asks individuals to compare various items and to place values on them. They conclude that, "there is a broad appreciation of authenticity that translates into [individuals] wanting to keep, hold and value original items."

However, our paper is dedicated to understanding the employees perception of their company and our assumption is that companies maintain an international standard of professionalization. We aim to measure if there is congruence between the company values that is propagated and the ones that are actually implemented. Many attempts have been made to create a reliable tool for studying and measuring authenticity. Some of the items that we chose for our preliminary selection of items were very basic, for instance, "I have freely chosen this way of being" (Sheldon et al., 1997), "How much were you acting like your true self?" (Fleeson and Wilt, 2010), or "I can be myself with others" (Kraus et al., 2011). As authenticity research expands, more accurate standard tools are needed. One of the first measures, Authenticity Inventory (Kernis and Goldman, 2006) including 45 items and four subscales, represented an existential understanding of authenticity very accurately and predicted many variables of positive functioning (Kernis and Goldman, 2006; Davis et al., 2015). Its disadvantages are the length and unstable structure (White, 2011; Lenton et al., 2016).

Methodology

We conducted our psychometric research by considering previous studies (e.g., Nunnally and Bernstein, 1994; Hinkin, 1998) and recent scale development papers and methods (Cardon et al., 2013; Scheaf et al., 2020). We conducted a three-stage procedure to develop and validate an instrument to assess value congruence in organizations.

First, we adopted an inductive approach to generate a pool of items and test their content validity. In order to generate this pool of items, we conducted a test of qualitative study to find existing studies that are related to our study. Our initial variables were derived from a study by Gopinath, Nair, Thangaraj, 2018. We probed deeper into literature to find the need for a scale

that will help in estimating value congruence in organizations. This also assists in reducing the cost of adopting studies that are context specific.

We found these basis of two variables from this study, espouse and enacted values. By further probing into these values and conducting a text search for company values that were most accepted, we created our first round of items (Hinkin, 1998). We also conducted semi-structured interviews with industry gurus to find if those values were relevant or not.

To ensure that every item that we structured had a measure reflected, we gave each statement a declarative tone to ensure that the reader has understood the item instead of a question. This process led to us creating 63 items with declarative statements that represent certain espoused values most prevalent in organizations. We followed the same process and asked experts of the field to comment on the validity of items and if any of them needed change.

Second, we conducted a pilot study to reduce the number of items and assess their dimensionality and internal consistency.

Third, we want to conduct three separate studies to cross-validate the new measure scale and provide evidence of the convergent, discriminant, and criterion-related validity of the proposed construct.

Pilot Study

Participants were working in any industry with minimum work experience of six months and spread across geographical locations of Delhi, Bangalore, Hyderabad, Mumbai, Chennai, Pune, and Kolkata. Surveys were emailed to all participants alongwith a cover letter explaining the purpose of the study. They were asked to complete the survey only if they have worked for a minimum of 6 months in their company and refer to their existing company as point of reference.

Items in red were discarded after the first screening by experts and items in blue were altered for the purpose of the scale and went through a second round of editing before sending it out for the purpose of Exploratory Factor Analysis. We conducted the first round of Exploratory Factor Analysis using SPSS 24.

List of Items
My organization encourages competition but doesn't reward high performers.
My organization espouses benevolence but treats all employees volunteering for causes harshly.
My organization promotes boldness and rewards revolutionary ideas.
I am not given autonomy to make decisions at work but my organization preaches autonomy.
My organization claims compassion as a value but discourages compassionate people.
People in my organization are like a community and teams are a company value.
I am respected in my organization and my organization fosters respect.
I respect everyone in my organization and my organization furthers the cause.
My organization promotes creativity and supports those who curate it.
Creativity is espoused in my organization and practised as well.
My organization adopts unjust practices but preaches justice as a value.
My organization follows fair practices and promotes fairness as a value.
I experience fun at workplace and my organization espouses fun.
My organization encourages Learning and promotes individual growth.
My organization preaches hope but asks me to look back to reminisce.
Honest people are recognized in my organization and my organization nurtures honesty.
My organization promotes Happiness and All employees look happy in the workplace.
I experience harmony at workplace as espoused by the company.
Kindness is a value that is espoused and practised at my workplace.
My organization preaches loyalty and I feel loyal towards my company.
My organization pushes employees to achieve their goals and supports them.
My organization promotes openness and I am rewarded for pursuing my voice.
My organization preaches transparency and practises it.
Fairness is espoused in my organization but is discouraged when I speak up.
I experience pleasure while doing my job and loving one's job is a primary value in my company.
My organization fosters justice and executes it in everyday norms.
I can trust the people at my workplace and my organization believes in trust.
My organization advocates safety and yet I feel unsafe at work.
Freedom is embraced at my workplace in words and action.
Career is an important dimension to measure growth at workplace in both practise and theory.
My organization adopts care as a value and I feel cared for at work everyday.
Diversity is an important value at my workplace and I see it at all levels of the organization.
Inclusive culture in my organization is on paper and practise.
My organization seeks excellence and fosters the environment for it.
Employees at my workplace are professional and the organization espouses it.

We observe Innovation as a value because All employees contribute new ideas in the organization.
My organization preaches equality and provides opportunity to all.
My organization ensures transparency is executed by all employees and fosters the same.
Entreprenurship is valued by my organization in practise and paper.
My organization champions pride and I am proud of my organization.
Prosperity is espoused in my organization and I Feel prosperous at work.
Integrity is valued at my workplace and all employees ensure integrity in daily operations.
My organization emphasizes on citizenship and we uphold the same in practice.
My company focuses on quality and ensures it is executed at all levels.
My organization espouses passion and supports people who are passionate at work.
Customer satisfaction is a key value at our company and is enacted by and for all stakeholders.
My company is focused on service quality and delivers the same in every department.
Customer obsessions is a value that is preached and practised in my organization.
Ownership is a value my company ensures is developed by all and prioritizes it as a value.
My company emphasizes the importance of community and I feel it at work.
We are encouraged to be curious at work and it is preached at my workplace.
We observe impact as a company value and try to create impact in everything that we do.
Privacy is an important company value and it is taken seriously at my workplace.
Accessibility is both practised and observed in my company.
Employees at my workplace are mindful and mindfulness is an important value for the company.
We observe genuine policies and practices in my company and it is our core value.
My company promotes being together and I feel a sense of togetherness with all my colleagues.
CSR is a very important value in my company and I see my company doing it.
Craftsmanship can be seen both on paper and practice in my company.
Solidarity is a value all employees in my company preach and practise.
Being playful is a focus of my company in word and implementation.
We are courteous as a company and courteousness is enacted by all in my company.
I believe we make a difference as a company and it is not simply on paper.
I see myself grow in the company just as my company preaches they would.
Simplicity is a company value and we try to avoid complexity in daily tasks.

Rotated Component Matrix[a]

| | Component |
	1	2	3	4	5	6	7	8
Q2			-.558					
Q4	.672							
Q7	.678							
Q10					.519			
Q11	.709							
Q17	.656							
Q20		.539						
Q24	.684							
Q25	.851							
Q27	.803							
Q28	.623							
Q33	.463							
Q36				.741				
Q37				.625				
Q38					.840			
Q39		.688						
Q40		.589						
Q43		.732						
Q44				.452				
Q49		.657						
Q50				.606				
Q51							750	
Q56		.620						
Q57	.570							
Q60						.791		
Q61			.861					
Q62								.879
Q19		.566						
Q23						.684		
Q47			.717					

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 11 iterations.

For the next part of the study, we propose to conduct a Confirmatory Factor Analysis to purify the scale items using AMOS to make a measurement model and confirm the items for the scale.

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Mapping Global Leadership Competencies: Understanding Competency Development through Experiences & Interactions

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1.   Introduction

In the dawn of a globalised economy, businesses are now stretched across borders more than ever. Nevertheless, there is a need for more preparedness for such expansion, marked by a scarcity of global leaders equipped to manage the complexities inherent in such roles (PriceWaterhouseCoopers, 2011). The distinct challenges international business contexts pose require a separate set of competencies not typically encountered in domestic leadership (Osland et al., 2006). Hence, it becomes imperative to understand the unique competency requirements for global leadership, distinct from those of a domestic setting.

Although behavioural global leadership competencies have been a topic of interest in academic research, a considerable gap exists in understanding their development through the lens of experiences, particularly high-contact and low-contact experiences (Caligiuri & Tarique, 2009). While frequently quoted in the literature, these constructs often lack clear operational definitions, often depicted through mere examples. Therefore, this study seeks to delve into this understudied area by exploring the nature and impact of these experiences on the development of global leadership competencies.

Building on this premise, this qualitative research adopts a thematic analysis approach to scrutinise these phenomena. By doing so, the study also addresses an often-neglected component: the moderating role of individual factors and cultural differences in developing these competencies. By proposing a conceptual model, the study aims to answer key research questions that will shed light on these relationships, thus contributing to a more holistic understanding of global leadership competencies.

The research's findings promise to hold immense value for the academic community and business practitioners. This study fills a critical gap in the existing literature by providing more precise operational definitions for high and low-contact experiences and understanding their role in developing global leadership competencies. Simultaneously, the findings bear practical implications for organisations in the process or pursuit of developing their global leadership pool.

2.   Theoretical Framework

This section aims to clarify 'high-contact' and 'low-contact' experiences, integral to developing global leadership competencies. Utilizing a cross-disciplinary approach, it offers operational definitions for these terms, influenced by theories and concepts from sociology, marketing, international business, and communication.

The theory of Symbolic Interactionism (Blumer, 1969), posits that immediate, interactive experiences shape individual behavior, aligning with the prerequisites of global leadership. High-contact experiences involve direct, immersive interactions that foster a rich understanding of cultural diversity. Conversely, low-contact experiences are less direct but essential for reflective observation and adaptability.

The marketing literature introduces the terms 'high-touch' and 'low-touch' experiences (Wolny & Charoensuksai, 2014), paralleling them with high and low-contact experiences. High-contact experiences involve personalized interactions that enhance cross-cultural empathy, while low-contact experiences emphasize indirect engagement with cultural diversity.

International business studies highlight the value of immersion in understanding foreign work environments. Concepts like 'psychic distance' link low-contact experiences to indirect decision-making processes (Evans & Mavondo, 2002).

The Social Presence Theory (Short, Williams, & Christie, 1976) can be extended to suggest that high-contact experiences enhance communication efficacy through face-to-face interactions, whereas low-contact experiences focus on mediated communication and virtual influence.

2.1 Proposed Operational Definitions

High-Contact Experiences. Defined as immersive, sustained, and active engagements within a culturally diverse milieu, these experiences typically encompass direct interactions that provide opportunities for deep cultural immersion and experiential learning, cultivating global leadership competencies.

Low-Contact Experiences. Characterized by indirect, episodic, or less immersive engagements with cultural diversity, these experiences offer opportunities for observational or vicarious learning, thereby enabling leaders to adjust and function effectively in diverse cultural settings.

These definitions encompass insights across multiple fields, adding depth and rigor to the constructs of high and low-contact experiences. High-contact experiences emphasize immersive involvement, nurturing empathy and understanding in foreign contexts. Low-contact experiences highlight indirect engagements and observational learning, enhancing adaptability in multicultural settings. The definitions are a starting point for further empirical research in global leadership. In summary, understanding these experiences is a promising avenue in global leadership research, contributing to the development of competencies for an interconnected world.

2.2 Conceptual Model

In the context of escalating globalization, the demand for leaders proficient in international settings is surging (Mendenhall et al., 2013). To tackle this, our model taps into various scholarly fields—global leadership, talent management, and expatriation among them—with the goal of enriching our comprehension of the skills essential for effective global leadership (Bird et al., 2010).

The theoretical underpinning of our model is twofold: it's anchored in social learning theory and the contact hypothesis. Social learning theory posits that leadership development isn't just

a product of formal education but is also significantly influenced by real-world experiences, such as global assignments (Bandura, 1977; Caligiuri & Tarique, 2009). Meanwhile, the contact hypothesis suggests that interactions at the peer level, especially in culturally diverse settings, contribute to more positive attitudes towards diversity (Allport, 1954; Pettigrew & Tropp, 2006). By integrating these theories, our model offers a nuanced lens to explore the multifaceted realm of global leadership, capturing both the experiential and interpersonal aspects that are critical in an increasingly interconnected world.
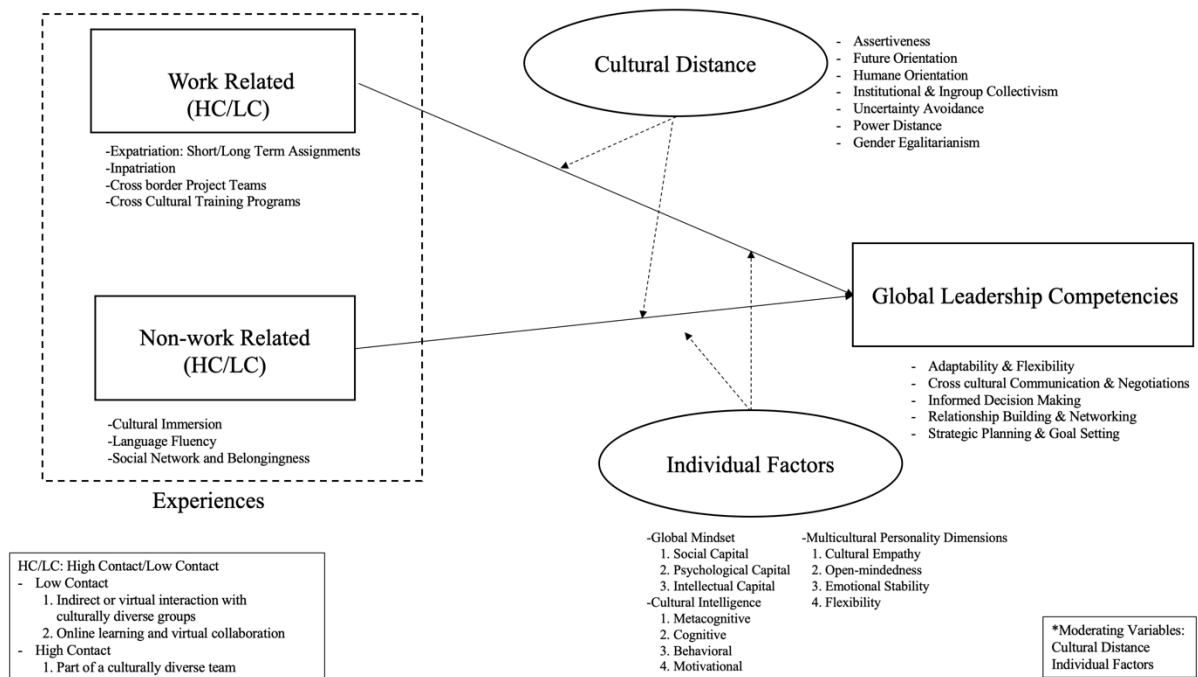
Figure 1: Proposed Conceptual Model

Research evidence underscores the valuable role that diverse experiences and cultural interactions play in honing global leadership competencies (Caligiuri, 2000; Caligiuri & Tarique, 2009). Moreover, individual attributes such as a global mindset and cultural intelligence serve as pivotal moderating factors in this developmental journey (Earley & Ang, 2003; Levy et al., 2007).

Our model synthesizes this by weaving in three forms of capital to decode a global mindset: intellectual, psychological, and social (Javidan & Walker, 2013; Luthans, Youssef, & Avolio, 2007; Adler & Kwon, 2002). Additionally, the model takes into account the nuanced elements of cultural intelligence as a multi-faceted construct and incorporates multicultural personality traits—although it notably leaves out social initiative—as significant variables in the equation (Earley & Ang, 2003; Van der Zee & Van Oudenhoven, 2000). By doing so, the model offers a layered understanding of how individual and experiential factors come together to shape a leader who is not only technically proficient but also culturally agile. This approach aims to reflect the complexity and interactivity of the variables that contribute to effective global leadership.

The GLOBE framework's cultural dimensions, like performance orientation and assertiveness, are included to help leaders adapt to varied cultural norms (House et al., 2004; Kabasakal et

al., 2012). The role of cultural distance is acknowledged as a moderating variable, altering the influence of cultural contexts on managerial skills development.

The model proposes certain outcomes for global leadership development, such as adaptability, effective cross-cultural communication, and informed decision-making in diverse cultural contexts. However, these are preliminary and require further empirical validation, acknowledging the possible variations due to individual, organizational, and cultural factors. Based on this, we propose the following research questions:

RQ1. How do high-contact experiences contribute to the development of global leadership competencies?

RQ2. How does cultural intelligence influence the relationship between high-contact experiences and global leadership competencies?

RQ3. How does an individual's cultural intelligence (CQ) impact their global leadership competencies?

RQ4. How does a developed multicultural personality affect global leadership competencies?

RQ5. How does a multicultural personality impact the relationship between high-contact experiences and global leadership competencies?

RQ6. How does an individual's global mindset interact with cultural distance to influence the development of global leadership competencies?

RQ7. How do a combination of high-contact and low-contact experiences influence the development of global leadership competencies?

3.   Methodology

3.1 Overview

We employed qualitative research, specifically semi-structured interviews, for this exploratory study on global leadership competencies. The study framework was based on high and low-contact experiences, individual factors, and cultural distance (Caligiuri & Tarique, 2009).

3.2 Research Design

The design was influenced by the conceptual model previously discussed, focusing on several global leadership competencies. This design allowed for rich data collection from participants' perspectives.

3.3 Participant Selection

Purposive sampling was used to select participants with relevant global leadership experience. Criteria included holding *mid-level managerial roles*, having *a minimum of 15 years of work experience*, *at least two years of international work experience*, and *exposure to cultures different from their home country*.

3.4 Data Collection

Zoom was used for semi-structured interviews, lasting 25-40 minutes. All interviews were recorded and transcribed after obtaining consent, ensuring confidentiality.

3.5 Interview Guide

An interview guide with open-ended questions was developed around key research themes. The ninth participant, an HR professional, was interviewed using an unstructured format to gather additional perspectives on global leadership recruitment.

3.6 Data Analysis

Thematic analysis was applied to the data, with themes identified via a developed coding scheme. Interpretations were supported by quotes from the interview transcripts.

4.   Results

4.1 Global Leadership Competencies

The comprehensive analysis of the interviews yielded a range of thematic insights that emphasize the pivotal competencies essential for leadership in multicultural and global settings. These competencies can be categorized into four central themes, each of which offers a nuanced understanding of the requisite skills for effective global leadership:

Cultural Adaptability & Flexibility. This theme emerged as an overriding precept throughout the interviews. It encapsulates the ability of global leaders to be highly adaptable to varying cultural paradigms. The findings suggest that effective global leaders are aware of cultural diversity and are flexible in adapting their leadership styles and communication methods to fit different cultural contexts better.

Cross-Cultural Communication & Negotiation. The interviews illuminated this theme as another critical competency. Global leaders are expected to demonstrate superior communication and negotiation skills, particularly in multicultural settings. The importance of this theme is accentuated by the respondents' emphasis on the need to adjust their communication styles to align with different cultural norms, expectations, and sensitivities.

Relationship Building & Networking. Substantial importance was ascribed to this theme by the interviewees. The findings indicate that successful global leaders heavily invest in both personal relationships and professional networking. These relationships facilitate more effective team dynamics and significantly contribute to achieving professional objectives in multicultural environments.

Strategic Decision-Making. Though not as frequently mentioned as the other themes, the importance of strategic decision-making was nonetheless evident. Global leaders need to be adept at making informed decisions that are both sensitive to cultural variations and grounded in universally applicable good practices.

In summary, the interviews provide a rich tapestry of insights into what constitutes effective leadership in multicultural settings. The respondents' experiences and perspectives coalesce around the four major themes, emphasizing the significance of cultural adaptability, effective communication, relationship-building, and strategic decision-making in global leadership roles (also included in the appendix, table 1).

4.2 Research Question Findings

This study unpacks the enriching role of high-contact experiences in developing global leadership competencies. The participants, mainly involved in international assignments, highlighted how these immersive experiences serve as a canvas for skill development. This isn't just about learning theories but about gaining real-world skills. They grow in cultural adaptability, become sensitive to different cultural viewpoints, and gain a nuanced understanding of diverse perspectives. These competencies are learned 'on the job' and play a vital role in problem-solving and leadership in multicultural settings.

Adding another layer to this is Cultural Intelligence (CQ). Far from being a standalone factor, CQ is deeply intertwined with high-contact experiences. It acts like a lens that magnifies the benefits of these experiences, helping leaders become better communicators, decision-makers, and relationship builders in a culturally diverse world. Interestingly, CQ isn't just about understanding 'others'—it also influences how leaders understand their own roles when working internationally.

Then comes the concept of a 'multicultural personality,' which acts as a sort of glue that holds various global leadership skills together. Leaders with such a personality—open, flexible, empathetic, and culturally sensitive—are better at creating inclusive and understanding work environments. This personality trait doesn't just stand alone; it amplifies the benefits of high-contact experiences on leadership skills.

Furthermore, the study introduces the idea of a 'global mindset,' shaped by a mix of high and low-contact experiences. This mindset acts as a bridge, allowing individuals to carry their cultural background into their leadership roles in different settings. It gives them the cognitive flexibility to adapt and function effectively across multiple cultures, helping to break down preconceived stereotypes and broaden their understanding of cultural norms. The study uncovers a complex but harmonious interplay among high-contact experiences, Cultural Intelligence, multicultural personality, and a global mindset. These elements don't function in isolation; they work together to create a leader capable of navigating the complex landscape of a globalised world. For a deeper dive and to read direct accounts from the participants, please consult Appendix-table 2.

5.   Conclusion

This research notably diverts its focus from the conventional emphasis on technical skills—usually considered axiomatic for leadership roles—to explore the underrepresented yet critical realm of behavioural competencies in global leadership. The research employs an exploratory qualitative approach to unearth nuanced aspects of high-contact and low-contact experiences, serving as pivotal elements in shaping global leadership competencies such as adaptability, cross-cultural communication, relationship-building, and strategic decision-making.

While technical skills are assumed prerequisites, the research asserts that the dynamics of global business environments call for an enriched repertoire of behavioural competencies. Leaders must be culturally agile, socially astute, and strategically insightful to navigate a diverse, complex, and fluid global landscape (Adler & Kwon, 2002; House et al., 2004; Kabasakal et al., 2012; Venaik & Brewer, 2010; Van der Zee & Van Oudenhoven, 2000).

However, this shift in focus brings its own limitations. Due to its lens, the study potentially neglects the interaction between technical and behavioural competencies, thereby suggesting

an avenue for future research. Another potential constraint is the study's relatively small sample size and reliance on self-reported experiences. These factors could limit the range and depth of insights gained.

Despite these limitations, the study significantly enriches the existing literature by introducing a novel conceptual framework centered on the influence of varying degrees of cultural engagement—termed as high-contact and low-contact experiences—on global leadership competencies. This opens doors for future explorations in several dimensions, including the interaction effects between technical and behavioural skills, the validation of these operational definitions, and their industry-specific impacts. Furthermore, the evolving nature of the global landscape makes a compelling case for longitudinal studies to understand how the significance of these competencies and experiences may shift over time. In conclusion, this research advances the current understanding of global leadership competencies and lays the groundwork for future scholarly inquiries in this domain.

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Appendix Table 1: Verbatim Quotes & Corresponding Themes from Participant Interviews

Theme	Verbatim Quote	Respondent
Cultural Adaptability & Flexibility	"I think experience in various countries changes your perception towards the culture. You start adapting to the diversified culture. And you can't block yourself with one way of, You know, thinking about the cultures... But you need to change your, and you have to adapt to the culture of where you live. Yeah, so perception changes, yes. Absolutely that, In a way with that, all we have to do is respect the cultures and all we need to take care of other person's culture."	R5
	"You cannot have a one-size-fits-all approach in this case, especially in a global leadership role."	R8
	"What attracts us more is the flexibility of the person, how adaptive a person is."	R9
Cross-Cultural Communication & Negotiation	"Yeah, we have to be very calm and soft with the people while dealing... Yeah, leadership style is affected, that is, earlier we used to, see our colleagues as subordinates basically with my team, we could command them but here, there is a lot of difference. We could not command any of my teammate. We have to take them as a team. We collectively do the job and try to complete all."	R2
	"So, having that open dialogue, with full transparency and watching your actions, like, you know, talking to the team that they kind of feel empowered, but then your actions need to prove that you're empowering them. That's how you gain trust and credibility. So treating everybody with respect, yeah."	R3
	"At the same time, you also try and sensitise them in terms of you know the language that they're supposed to use or the way that they	R9

	have to deal with the people or local people because it has to be respectful at any day and we cannot compromise on that."	
Relationship Building & Networking	"most of the jobs of the directors or head of the departments, I got it from references."	R5
	"If somebody is feeling a little hesitant, you need to understand and probe questions to ask. So that the person becomes open with their cultural needs or you know requests and not feel I mean, there are people who are quite in general. They are introverts. They would not openly tell you easily. But they will keep it in themselves for a long time and then quit, right?"	R6
	"So all these cultural grabs when the person goes, you know, they party together, just normal informal interactions that happen, and, you know, culturally they want to know and they celebrate or they wish them on certain important festivals or something. All these things play a very, very important role in the overall team bonding and combining them and, you know, bringing them together or understanding. So yes, cultural maturity or sensitization plays a very, very important role."	R9
Strategic Decision-Making	"Oh, no, not at all. So when I make any decisions at work. It has nothing to do with any cultural differences, whatsoever. I think there's, you know, the way I approach it is everybody adds value to the table. Different perspectives, different opinions. Those are very important for a healthy team and healthy workforce."	R3
	"See good practices, the good practices has no difference. Good practices do not differentiate between people... Good practice does it is irrespectively same for all the cultures and all the people."	R7

Table 2: Verbatim Quotes Mapped to Corresponding Themes and Research Questions

Corresponding Theme	Verbatim Quote	Respondent
High-contact experiences (RQ1)	Yes, of course. These things [approach to learn a new culture], are not something to learn. These are something which comes by practice, you know. By interaction.	R7
	Leadership is only learned through experiences. One person has to be very much receptive...	R1
Cultural Intelligence (RQ2, RQ3)	When we talk about global leadership competencies, the first thing is that we have to take care of all the cultural differences.	R2
	Understanding their cultures and behaving in accordance to their culture is very important.	R5
	You know, building trust requires a lot of, lot of effort. It's not just one element, there are multiple elements...	R3
Cultural Intelligence & Multicultural Personality (RQ3, RQ4)	If I have to grow, they have to do more. How they will do more, they have to grow also...	R1
Multicultural Personality (RQ3, RQ4, RQ5)	You should always have an open perception of people. Otherwise, there is always a sense of, you know, apprehension.	R7
	And I think again, you know, having that open mindset and not being biased to our own perception. That really helps excel in anything we do.	R3
	Also, poverty is the biggest problem here, the labours hardly get the salary which can earn them bread butter for 2 times.	R2
	Then absolutely that you know that assessment is very much required in terms of their own ability, you know, to, to manage and work with the local people.	R9
Global Mindset (RQ7)	We have to be mindful of all human beings, above all everything else is not important. And then sustainability of humans is in unity. And staying united.	R6
Global Mindset & High-contact	There's no right or wrong way of working, they just have different ways, so that definitely helped me...	R8

and Low-contact experiences (RQ7, RQ8)		
High-contact and Low-contact experiences (RQ8)	I would say once I graduated from INSEAD because INSEAD also has specific courses that target, you know, how to use, you know, work across multiple cultures...	R8
	Yeah, I think for me what worked in my favour was that I did not enter the workforce right away. So I was not working for initial two years...	R3

Thriving at Work and Workplace Social Courage Among Coffee House Employees in Bangalore

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Introduction

The research paper, Thriving at Work and Workplace Social Courage Among Coffee House Employees in Bangalore attempts to analyze the relationship between Thriving at Work and Workplace Social Courage among coffee house employees in Bangalore. The hospitality business includes a wide range of service sectors such as hotels, dining, event planning, theme parks, transportation, cruise lines, and numerous tourism-related industries. It is a multibillion-dollar industry that is strongly dependent on the availability of leisure time and disposable financial resources. Within a hospitality unit, such as a restaurant, hotel, or amusement park, many groups function, including property management, direct operations (servers, housekeepers, bellboys, kitchen staff, bartenders, and so on), management, marketing, and human resources. This industry spans numerous organizations offering food services and accommodations and is categorized into sectors based on the specific skills required for each, including accommodation, food and beverage, meetings and events, gaming, entertainment and recreation, tourism services, and visitor information. (Raghav, A.,2020).

"The Coffee-House: A Discursive Model" by Markman Ellis offers insights into the origins of coffeehouses by contextualizing their emergence within the broader historical landscape of the 18th century.portrays coffeehouses as dynamic spaces that transcend social boundaries, attracting a diverse clientele of intellectuals, merchants, writers, and politicians. These establishments provided a unique setting for individuals to engage in intellectual and social interactions, fostering discussions and debates on topics ranging from literature and science to politics and current events. Coffeehouses, with their unique atmosphere and the allure of this foreign beverage, became fashionable gathering places for those who sought novelty and social engagement. The establishment of coffeehouses catered to the growing urban population, which was increasingly drawn to the cities for economic opportunities and cultural experiences. This urbanization led to a shift in social dynamics, creating a demand for spaces where individuals from different walks of life could interact.

Thriving at work, a concept gaining increasing attention in the field of organizational psychology signifies a multifaceted state where employees not only adapt and endure in their work environments but also experience growth, vitality, and a profound sense of well-being (Spreitzer, Porath, & Gibson, 2012). Thriving at work means being really involved in your job, always trying to get better at it, having a positive attitude, and dealing well with work problems. People who thrive not only help their workplace by being motivated and happy but also feel better in their minds and bodies, showing how important it is in today's work world.

Workplace Social Courage is a vital concept in organizational psychology, signifying the willingness to take bold actions and speak up in the face of ethical dilemmas or workplace

injustices (Morrison & Milliken, 2000). This trait fosters ethical behavior, enhances organizational culture, and empowers employees to be agents of positive change (Hannah et al., 2014). Understanding Workplace Social Courage is essential for creating inclusive, ethical, and safe workplaces, making it a topic of growing interest.

Need for the Study

The need for a study on "Thriving at Work and Workplace Social Courage among Coffeehouse Employees in Bangalore" is driven by several significant factors. First and foremost, the coffeehouse industry in Bangalore, India, has seen substantial growth in preceeding years, with numerous coffeehouses becoming integral parts of the city's social and economic landscape. This rapid expansion necessitates a deeper understanding of the work experiences of coffeehouse employees and the factors that influence their job satisfaction, commitment, and overall well-being. It is essential to explore how thriving, as a positive psychological state, contributes to employee resilience and adaptability in a dynamic work environment. Workplace social courage plays a pivotal role in fostering effective communication, collaboration, and innovation among employees. In the context of coffeehouses, where customer interactions and teamwork are central, studying workplace social courage can provide insights into how employees navigate challenges and contribute to a positive work culture. Overall, this study's findings can have practical implications for coffeehouse owners and managers in Bangalore, informing strategies to enhance employee engagement, job satisfaction, and overall organizational success.

Literature Review

Thriving At Work

Using nationally representative data from 928 directors, Liu and Bern-Klug (2013) investigated factors influencing job thriving among nursing facility social services directors. Their study found that job thriving was associated with factors such as job autonomy, team integration, ample time for resident needs, task delegation, and role clarity. These findings imply that enhancing these characteristics of the work environment might improve job satisfaction among social services employees in nursing homes.

The study by Mary-Louise Conway and Roslyn Foskey (2015) aimed to understand the thriving of apprentices at work through an appreciative lens. They employed fourteen participants as their sample size. Their findings shed light on the factors contributing to apprentices' thriving in a work environment.

Shahid, S et al.'s (2021) study investigates the causes and consequences of thriving at work, finds gaps in the existing literature, and suggests a framework that contains potential avenues for future research on thriving. The present investigation conducted a thorough evaluation of the literature on thriving, focusing on journal papers published between 2005 and 2020. This presents a workable conceptual framework that emphasizes the causes and consequences of flourishing.

Burcu Aydin Kucuk evaluated the influence of uncertainty intolerance on personal success among 278 workers in 2021. According to the study, intolerance of uncertainty affects personal success directly, and this link is somewhat mediated by employees' workability and thriving at work. Workability and thriving at work serve as parallel mediators, underscoring the threat that uncertainty intolerance provides to employees' ability, development, and success.

Parul Malik's (2022) study sought to evaluate the link between individual-focused transformational leadership (IFTL) and workers' taking charge behavior, as well as the mediating roles of psychological capital and thriving at work. He surveyed 220 supervisors from Indian information technology firms. The study's findings show a substantial link between IFTL and psychological capital, job satisfaction, and thriving at work to take leadership. Importantly, the Process macro analysis demonstrated that IFTL has an indirect impact on taking charge behavior through influencing psychological capital and thriving at work.

Workplace Social Courage

Detert and Bruno (2017) did a thorough evaluation of the literature on workplace courage. They presented a working definition of "workplace courage" and investigated its links to several organizational concepts. The authors also reviewed several techniques to analyzing workplace courage and addressed research problems connected to varying views. They indicated potential future study areas, such as the influence of gender, emotions, and time in understanding workplace courage.

Howard and Holmes investigated the relationship between social courage and professional communication in their 2020 study, taking into account many aspects of voice and silence. They discovered that having more social courage was associated with more positive communication (prosocial voice and silence) and fewer negative patterns (defensive voice and silence, acquiescent voice and silence). Notably, no significant moderating variables were found in the study, demonstrating the continuous impact of social courage on communication dynamics. This emphasizes the need to foster social courage in firms in order to improve constructive interactions at work.

Holmes, P.E et al (2022) employ social identity theory (SIT) in the current study to argue that the causes of social courage are not confined to overtly beneficial results. They suggest that organizational identification and moral identity are connected to both social courage and immoral pro-organizational behavior. SIT also investigates if moral identity moderates these correlations. Their analysis confirms each recommendation, with the exception of the moderating effect of moral identity on the connection between organizational affiliation and workplace social courage. The findings indicate that SIT is a useful lens for understanding courage, broadening the theoretical scope of the concept.

Magnano, P et al.'s(2022) study investigated the impact of individual courage, risk intelligence, and workplace social courage on job performance. It collected data from 961 Italian workers and revealed the influence of subjective risk intelligence and bravery on working performance, both directly and indirectly through the mediation of workplace social courage.

Courage was employed as a mediator between positive resources and domain-specific well-being indicators in a study by Lodi,E et al,(2022). This study included 410 Italian university students, and they discovered that courage moderated the association between optimism and academic satisfaction.

Conceptual Model

Methodology

Aim of the study

The purpose of this research is to analyze the effect of Thriving at Work and Workplace Social Courage Among Coffee House Employees in Bangalore.

Objectives of the Study

The following are the objectives of the study

1. To understand the relationship between Thriving At Work and Workplace Social Courage in coffee house employees

2. To determine the differences in demographic variables, age, gender, marital status, job position/role, and work experience on Thriving At Work and Workplace Social Courage.

Research Hypotheses

H1: There exists a significant relationship between Thriving at work and Workplace Social Courage.

H2: Demographic variables, age, gender, marital status, job position/role, and work experience have an effect on Thriving At Work and Workplace Social Courage.

Research Design

This study employs a descriptive research design, as it depicts the participants of the study in an accurate manner without influencing them in any way. The first research question was formed, based on which literature on Thriving At Work and Workplace Social Courage was reviewed. A questionnaire was created and the method of collecting data was identified. Descriptive studies can be carried out in many ways and in this paper survey method was used. The population was decided, and a questionnaire will be distributed to a predetermined sample size in order to collect data. Analyses were conducted to interpret the data.

Sample

Coffee house employees in Bangalore are the participants of this study. Participants were selected based on their employment in coffee houses and their willingness to participate in the research.

Instruments

The questionnaire consists of two scales and five demographic variables. It is a 22-item questionnaire. Thriving At Work was adopted by Gretchen Spreitzer et al. It is an 11-item scale. The Workplace Social Courage Scale was used to measure Social Courage. This scale was adopted by Matt C Howard et al.,2017. It is an 11-item scale.

Data Collection

Primary and Secondary sources of data will be used to collect information.

- The primary source is the questionnaire.

- Secondary courses include internet sources like Google Scholar, Christ Online Library, Emerald Insight, etc.

Data Analysis

The analysis will be done in the SPSS software. The following will be the analysis done:

Descriptive Statistical Analysis: Descriptive Statistics are used to elucidate the basic features of the data. It summarizes the data and provides meaningful interpretations.

Correlation Analysis: Correlation is a technique for examining the relationship between two quantitative, continuous variables. Pearson's Correlation Coefficient, represented by 'r', reflects the strength of the correlation between two variables.

Conclusion

In conclusion, the research conducted on "Thriving at Work and Workplace Social Courage Among Coffee House Employees in Bangalore" has shed light on the relationship between these two important factors in the context of coffeehouse employees. The findings suggest a positive and significant relationship between thriving at work and workplace social courage. Employees who reported higher levels of thriving at work also tended to exhibit greater workplace social courage. This implies that individuals who experience growth, vitality, and well-being in their work environments are more likely to demonstrate the willingness to take bold actions and speak up in the face of ethical dilemmas or workplace injustices. In conclusion, this study underscores the importance of considering both thriving at work and workplace social courage as integral aspects of employee engagement and organizational dynamics.

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Nudging and Teacher Empowerment: A Comprehensive Analysis of Job Performance

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Introduction

Teachers are crucial in helping students learn and grow in today's ever-changing education world. They face many challenges as they work to meet the different needs of their students, especially with all the changes happening in education. Teachers now not only teach subjects but also need to create classrooms where all students can learn and be creative. This is where the idea of teacher empowerment comes in. It means giving teachers the tools and support they need to do their jobs well and improve their performance. When teachers feel empowered, they can better help their students and adapt to new ways of teaching. Empowered teachers can also make a big difference in how colleges work. Teacher empowerment can be pursued through diverse means, and one of the current approaches is using nudging techniques. Nudging means encouraging teachers to make decisions that improve their teaching skills and job performance. Techniques like offering choices, praising, and providing information help empower teachers. Nudging techniques like offering personalized choices and recognizing achievements help empower teachers. These techniques give educators control over their teaching decisions, motivate them to use innovative methods, and provide feedback for improvement. By doing so, teachers gain confidence and become more effective in the classroom, improving education overall.

Literature Review

Positive reinforcement occurs when you reward someone for doing something you want them to do, increasing the chance that they will repeat that behaviour. Positive reinforcement can be used to encourage positive behaviour in the workplace (Nickerson, 2023). Based on B. F. Skinner's reinforcement theory, positive reinforcement is a powerful technique for inspiring individuals within firms. It involves enhancing desired actions by external (such as pay or bonuses) or internal (such as praise or empowerment) implications. Promoting excellent employee behaviours through these rewards improves performance and overall organizational efficiency and effectiveness (Wei & Yazdanifard, 2014).

A choice architect uses methods to guide others into making specific choices that increase the likelihood of a desired behaviour. In simpler terms, they help people make the right decisions without directly telling them what to do. People often make decisions based on feelings instead of thinking logically, leading to bad outcomes. Executives can help by organizing choices to encourage better decisions for the organization and individuals. Poor decision-making often happens because people either lack the motivation to make better choices or are influenced by their natural thinking errors (Making, 2015).

Timely information and feedback can encourage employees to act or make certain decisions. Some researchers used interactive methods like posters and prompts to encourage energy-

saving behaviours, and they found that clear messages with feedback effectively influenced people to save energy. Simple, immediate feedback also proved helpful in promoting energy-efficient actions (Agha-Hossein et al., 2015). Many organizations have feedback systems, but employees often don't find them helpful. This is because there's a lack of mutual feedback between supervisors, peers, and employees. To address this issue, organizations are recognizing the need to create an environment that motivates people to engage in feedback systems, and they are using new digital platforms to facilitate this process (Rivera et al., 2021).

Empowerment has been characterized as the process by which teachers gain the ability to direct their progress and solve their difficulties. Teacher empowerment can be measured using the ability to make decisions, status, and opportunities for professional development (Short, 1992). Empowerment helps resolve potential problems and build team relationships (Thomas & Durai, 2023). When an individual is empowered, it improves job performance (Ölçer & Florescu, 2015). Psychological empowerment positively impacts job performance, which involves employees feeling a sense of control, competence, and influence over their work. When employees feel empowered, they are more likely to engage in organizational citizenship behaviours, such as going above and beyond their formal job roles to help colleagues and contribute to the organization's success. These extra efforts and positive behaviours ultimately enhance overall job performance, benefiting the individual employees and the organization (Chiang and Hsieh 2012).

The Conceptual Model

Figure 1 shows the hypothesis to be tested in this research. Nudging at the workplace helps the employees to get empowered and improves job performance. The model proposes the relation between nudging factors helps to empower teachers and enhance performance in colleges. Various researchers developed this model using related analysis (Fernandez and Moldogaziev,2013; Wong and Laschinger,2013).
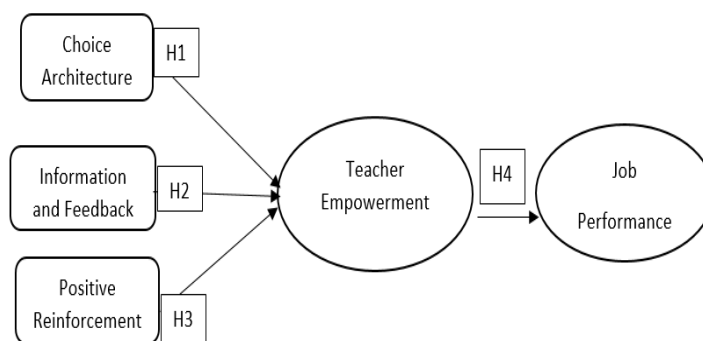
Figure 1 - Conceptual Model
Authors Own

H1: Nudging through choice architecture enhances teacher empowerment
H2: Nudging technique of timely information and feedback enhances teacher empowerment
H3. Nudging through positive reinforcement improves teacher empowerment
H4: Teacher empowerment has a positive influence on job performance.

Methodology

Data Collection: The data were collected from 209 teachers from various arts and science colleges in the Thrissur district. The survey is conducted by mailing questionnaires to emails on the college websites and through direct interviews.

Instruments: Positive Reinforcement (PR) is adapted from the positive reinforcement concept of Alsheeb et al., 2022 and Artis, 2012. It includes praising and acknowledging teachers, motivation through recognition, positive encouragement, a sense of fulfilment and support from seniors. Timely information and feedback (IF) help empower teachers, and Hari Padma Rani developed the construct in 2022 and Baleghizadeh & Goldouz, 2016. Choice Architecture (CA) is measured using the concept put forward by Banerjee et al., 2023. The teacher empowerment model is adopted from the questionnaire developed by Zembylas & Papanastasiou, 2005. It includes satisfaction in supporting student success, contributing to school progress, influencing student behaviour, rewarding positive learning and pride in shaping student growth. Job performance (JP) is measured using the Likert scale developed by Griffin, Neal, & Parker, 2007. It includes task performance skills, effective task execution and performance and initiative. All scales are measured using a 5-point Likert scale.

Data Analysis: SEM (Structural Equation Modelling) is a robust statistical technique that examines complex relationships among multiple variables. SEM using AMOS software is a powerful tool in this research to assess and validate the underlying theoretical framework and hypotheses. The scales' reliability was confirmed by calculating Cronbach's Alpha, and all variables obtained results exceeding the recommended threshold of 0.7, as proposed by (Nunnally, 1975).

In the structural equation model (SEM) analysis, an evaluation of construct reliability and discriminant validity has been conducted for the latent variables CA (Construct A), IF (Construct B), and PR (Construct C). Construct reliability scores that exceed the widely accepted threshold of 0.7 demonstrate strong internal consistency within each construct (CA: 0.7229, IF: 0.8079, PR: 0.7359), indicating that the selected indicators effectively measure their respective latent variables, ensuring the reliability of our measurement model. Furthermore, our discriminant validity assessment using Average Variance Extracted (AVE) values shows that each latent variable (CA: 0.397, IF: 0.419, PR: 0.522) explains a substantial proportion of the variance in its indicators. Notably, the squared correlations between constructs are generally lower than the AVE values for each construct, indicating satisfactory discriminant validity—each latent variable is more strongly associated with its indicators than other constructs.

Data Analysis

Confirmatory Factor Analysis

The fit statistics for the Confirmatory Factor Analysis (CFA) evaluating nudging techniques (CA, IF, PR) suggest a reasonably good model fit. The chi-square statistic (CMIN) of 41.851 with 32 degrees of freedom (DF) and a p-value of 0.114 suggests that the model does not significantly deviate from the observed data. At the same time, the CMIN/DF ratio of 1.308 falls within an acceptable range. Additionally, the Goodness of Fit Index (GFI) at 0.963, the Adjusted Goodness of Fit Index (AGFI) at 0.936, and the Normed Fit Index (NFI) at 0.919 indicate a relatively good fit. The Comparative Fit Index (CFI) of 0.979 signifies an improvement over an independent model. Furthermore, the Root Mean Square Residual (RMR) of 0.014 and the Root Mean Square Error of Approximation (RMSEA) of 0.038 (within the confidence interval) collectively suggest that the CFA model effectively captures the

relationships among nudging techniques, demonstrating its adequacy in assessing these key constructs.

Structural Model

Empowerment and job performance are considered as observed endogenous variables, nudging techniques like choice architecture, information and feedback, and positive reinforcement as exogenous variables. The developed model achieved model fit with a Chi-square value of 2.823 and a P value of 0.244 (>.05).
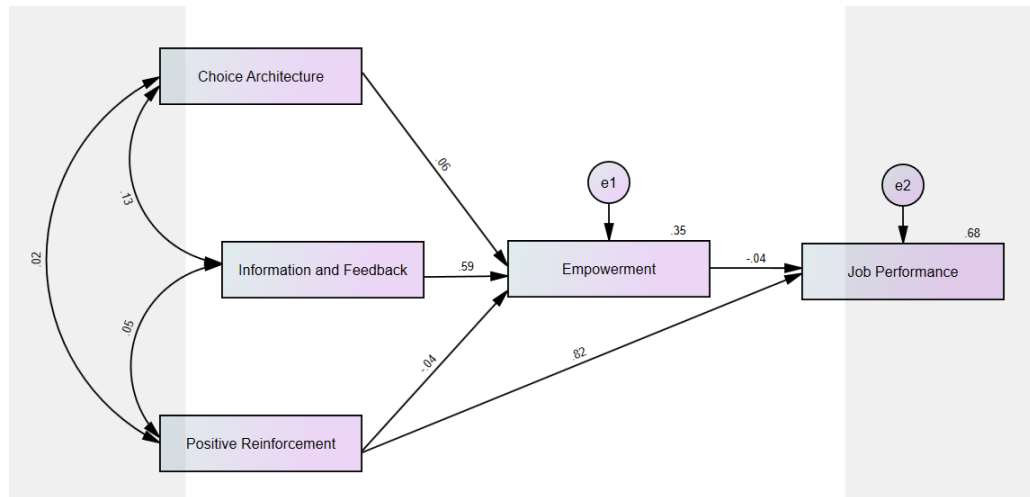
Figure 2 - Structural Equation Model (SEM) based on Teachers empowerment and Job performance
Authors Own

A Chi-square value divided by DF of 1.412 (< 5.00) is relatively low. This indicates that the observed data is reasonably close to the data that the null hypothesis would predict. The goodness-of-fit index (GFI) of .995 (> 0.90) indicates a better representation of variables. AGFI (Adjusted Goodness-of-Fit Index) is .960, which explains 96% of the variance in the data after adjusting for degrees of freedom. The ideal value should be > 0.90, indicating a good fit. NFI (Normed Fit Index) value of .992 (> 0.90) indicates that this is strong evidence that the relationships in the above model are accurate. A value of .997 for CFI (Comparative Fit Index) is satisfied when compared with a standard value of >0.90. Considering the parameters, an RMR (Root Mean Square Residual) value of .043 (< 0.08) indicates that the average difference is minimal. The Root Mean Square Error of Approximation (RMSEA) value of .044 (< 0.08, Hair et al. 2006) measures the discrepancy between the observed data and the model-implied data. This suggests that the model is likely to be a good representation of the underlying causal relationships between the variables.

Results & Discussion

A measurement model is developed with nudging techniques (Choice architecture, information and feedback, setting default options and positive reinforcement), teacher empowerment, and effect on their job performance. The nudging technique instrument includes four variables with 20 questions. A confirmatory factor analysis was done on these constructs. After the analysis setting, the default option variable is deleted as it does not define the construct. The fit statistics for the Confirmatory Factor Analysis (CFA) examining nudging techniques (CA, IF, PR) collectively indicate a reasonably good model fit. The chi-square statistic (CMIN) with 32

degrees of freedom (DF) and a p-value of 0.114 suggests that the model aligns well with the observed data, supported by the CMIN/DF ratio within an acceptable range.

Additionally, the Goodness of Fit Index (GFI) at 0.963, Adjusted Goodness of Fit Index (AGFI) at 0.936, and Normed Fit Index (NFI) at 0.919 reflect a relatively strong fit. The Comparative Fit Index (CFI) of 0.979 indicates an improvement over an independent model. Lastly, the Root Mean Square Residual (RMR) of 0.014 and Root Mean Square Error of Approximation (RMSEA) of 0.038 (within the confidence interval) collectively affirm the model's effectiveness in capturing the relationships among nudging techniques, underscoring its adequacy for assessing these critical constructs.

The measurement model with all five variables shows a good fit. Firstly, the fit statistics for the SEM model indicate a strong fit between the proposed model and the observed data. The low Chi-square value of 2.823 with a p-value of 0.244 (> 0.05) suggests that the model does not significantly deviate from the observed data. This, combined with the low Chi-square value divided by degrees of freedom (DF), indicates a reasonably good fit, indicating that the model aligns well with the null hypothesis. Additionally, various goodness-of-fit indices further support the adequacy of the model. The GFI of .995, AGFI of .960, NFI of .992, and CFI of .997 all surpass the recommended threshold of 0.90, suggesting a robust representation of the relationships within the model. The RMR value of .043 and RMSEA value of .044, both below 0.08, indicate a minimal average difference between observed and model-implied data, further affirming the model's goodness of fit.

Regarding the hypotheses tested, the results suggest that all four hypotheses (H1, H2, H3, and H4) are supported. Nudging techniques like choice architecture, timely information and feedback, and positive reinforcement enhance teacher empowerment, which, in turn, positively influences job performance. These findings emphasize the significance of nudging techniques in education to empower teachers and improve their performance. In conclusion, the SEM analysis results demonstrate a strong fit of the model, supporting the hypotheses that nudging techniques enhance teacher empowerment and job performance. These findings have practical implications for educational institutions seeking to empower teachers through strategies such as choice architecture, timely feedback, and positive reinforcement, potentially leading to more effective teaching and better student outcomes.

Conclusions

Using nudging techniques in education makes a significant difference by empowering teachers and boosting their job performance. Nudging techniques like offering choices, sharing information, and using positive reinforcement give teachers the tools to excel in their roles. When teachers feel empowered, they can create inclusive classrooms where all students can learn and be creative, adapting to new teaching methods effectively. One specific finding from our analysis is that positive reinforcement, in particular, directly links to enhanced job performance among teachers. When educators receive recognition and praise for their work, it motivates them to improve and innovate in the classroom continually. While statistical analysis shows a good fit, ongoing research and exploration are needed to understand the dynamics of education fully. Overall, these insights emphasize the crucial role of teacher empowerment through nudging techniques in shaping a more effective and adaptable education system for the future.

Managerial Implications

The positive impact of nudging techniques on teacher empowerment and job performance has important implications for educational institutions. Firstly, colleges should invest in professional development programs that incorporate nudging techniques. These programs can equip teachers with practical tools and strategies to enhance their job performance and enable them to create inclusive learning environments. Additionally, educational institutions can establish recognition and reward systems to boost teacher morale and motivation, encouraging teachers to continue their innovative practices for better classroom outcomes. Secondly, it is crucial to implement regular feedback mechanisms that provide teachers with data on their performance and areas for improvement. This approach helps teachers make informed decisions and adjust their teaching methods, ultimately improving job performance. Educational leaders should also promote teacher autonomy by allowing educators to make choices related to teaching methods, resources, and professional development opportunities. These choices can be structured using choice architecture aligned with best practices and institutional goals. Continuous research and evaluation of the impact of nudging techniques in education are essential to ensure their effectiveness and adaptation to changing educational dynamics. By implementing these strategies, educational institutions can foster a supportive and empowering environment for teachers, resulting in better student outcomes and a more dynamic education system.

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Conflict Management In The Digital Age: Trends And Perspectives In The Information Technology Sector

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Introduction

Rapid technological innovation and globalization have caused remarkable change and transition across many sectors. One of the domains significantly impacted by these shifts is the Information Technology (IT) sector, particularly software development, which stands as a cornerstone of India's technological progress and economic growth (Arora & Athreye, 2002). However, the sector's dynamic nature and high-pressure work environments frequently result in conflicts among software developers. These conflicts commonly stem from differences in coding practices, project management approaches, resource allocation, and communication breakdowns (Napier, Keil, & Tan, 2009). Conflicts within the IT sector, specifically among software developers, can have profound implications for India's social fabric and the industry's productivity (D'Costa, 2003). Such conflicts can disrupt collaboration, hinder Innovation, and ultimately impact the sector's productivity and performance (Janssen, Van de Vliert, & West, 2004).

The IT sector holds a substantial share of the country's workforce, influencing economic dynamics, societal norms, and dynamics (Messersmith, 2007). Conflicts among software developers can exacerbate existing inequalities, perpetuate divisions, and influence workplace culture and job satisfaction (Gallivan & Srite, 2005). The repercussions of unresolved conflicts can extend to employee turnover, potentially destabilising India's IT sector's growth (Johennesse & Chou, 2017).

Effectively managing conflicts in the IT sector demands a proactive approach that addresses and resolves disputes constructively. Creating an environment that encourages open communication, teamwork, and tailored conflict resolution strategies for software developers is imperative (Luftman et al., 2017). Moreover, fostering a work culture that values collaboration, diversity, and inclusion can act as a preventive measure against the emergence of conflicts (Shore et al., 2018).

In the upcoming sections, relevant studies about conflicts will be examined in the IT sector, clarify our research goals, explain the methods used, share the discoveries and analyses, have an in-depth conversation, and wrap up suggestions to handle conflicts among software developers. This effort aims to add to the growing understanding of managing conflicts in the IT sector.

Review of Literature

Conflict management is a critical aspect of organisational effectiveness, and with the advent of the digital age, new challenges and opportunities have emerged (Ramsbotham, Miall, & Woodhouse, 2011). This literature review examines existing research on conflict management in the digital age, focusing on the trends and perspectives within the organisational culture. By

synthesising the literature, this review seeks to provide insights into effective conflict management strategies in the modern workplace.

Conflict Management in the Digital Age:

New modes of communication and collaboration have emerged due to the digital age's transformation of how organisations function (Thomas & Durai, 2023). Research suggests that conflicts in the digital age may arise from increased virtual interactions, information overload, and differences in communication styles (Gillam & Oppenheim, 2006). Scholars have highlighted the importance of adapting conflict management strategies to the digital context, emphasising the need for effective virtual communication, conflict resolution skills, and technology-mediated tools. (Lee-Geiller & Lee, 2022)

Organisational Culture and Conflict Management:

Organisational culture shapes conflict management practices (Joyner, Frantz, & Maguire, 2013). Different cultural orientations, such as hierarchical, collaborative, and innovative cultures, influence conflict dynamics (Weare, Lichterman, & Esparza, 2014). Studies have shown that hierarchical cultures may experience conflicts due to power imbalances and limited employee participation in decision-making (Coleman, 2006). Collaborative cultures, on the other hand, prioritise open communication and shared decision-making, which can enhance conflict resolution. (Lam & Chin, 2005) Innovative cultures encourage creativity and experimentation, which may lead to conflicts stemming from divergent ideas (Horibe, 2016). Understanding the relationship between organisational culture and conflict management is vital for developing context-specific strategies.

Conflict Management Styles:

Conflict management styles have been identified, including avoidance, accommodation, competition, compromise, and collaboration (Chang & Lee, 2013). The digital age has introduced new possibilities for conflict resolution, such as virtual mediation, online negotiation, and collaborative problem-solving platforms (Katsh & Rule, 2015). Research has explored the effectiveness of different conflict management styles in the digital context, highlighting the importance of selecting the appropriate style based on the nature of the conflict, organisational culture, and the preferences and requirements of the involved parties (Kankanhalli et al., 2006).

Technology and Conflict Management:

Technology plays a significant role in conflict management in the digital age. Virtual communication tools, project management platforms, and collaborative software have facilitated remote collaboration and conflict resolution (Durai & Thomas, 2022). Research has shown that technology improves conflict management by increasing accessibility, efficiency, and transparency. (Bertot, Jaeger & Grimes, 2010). However, technology-related challenges, such as miscommunication, information overload, and lack of nonverbal cues, can also impact conflict dynamics and resolution. (Flammia, Cleary, & Slattery, 2016).

Conceptual Model:

Independent Variable: Organizational Culture

Three categories: Hierarchical, Collaborative, Innovative

Dependent Variable: Constructive Conflict Management Styles

Hypotheses:

This study investigates how various organisational cultures, including hierarchical, collaborative, and innovative approaches, impact conflict management practices in the digital era. By analysing these influences, the study aims to offer valuable insights and practical recommendations to organisations for adeptly handling conflicts according to their cultural orientations in today's digital age. The hypotheses of the research are:

H1: There is a significant difference in the mean constructive style scores among the three organisational culture groups.

H2: The mean constructive style score of the hierarchical group is different from that of the collaborative group.

H3: The mean constructive style score of the hierarchical group is different from that of the Innovative group.

H4: The mean constructive style score of the collaborative group is different from that of the Innovative group.

Research Methodology

The study employed a cross-sectional design, gathering data at a specific point to capture participants' perceptions and experiences of conflict management in the digital age. Participants were selected from the IT sector, totalling 154 software employees. Data collection encompassed structured surveys employing Likert scales to measure responses related to organisational culture, conflict management styles, and perceptions of conflict management in the digital age. Additionally, semi-structured interviews were conducted with a subset of participants to explore qualitative insights. The quantitative analysis involved ANOVA and post hoc tests using IBM SPSS 25 for data processing and interpretation.

Findings and Analysis

Table 1: Gender Distribution

Gender

		Frequency	Percent
	Male	93	60.4
	Female	61	39.6
	Total	154	100.0

(Source: Data analysis)

The data in Table 1 represents the frequency and percentage distribution of gender among 154 respondents. Ninety-three respondents were male, representing 60.4% of the total sample, and sixty-one were female, representing 39.6%.

Table 2: Descriptive Statistics for Constructive_Style by Organizational Culture

Descriptive Statistics : Constructive_Style			
	N	Mean	Std. Deviation
Hierarchical	49	2.755	1.2337
Collaborative	62	3.371	1.3578
Innovative	43	2.6744	1.34024
Total	154	2.9805	1.34539

(Source: Data analysis)

The data in Table 2 illustrates the frequency and percentage distribution reflecting respondents' perceptions of different organisational culture groups. The data breakdown is as follows: Among the respondents, 49 individuals (constituting 31.8% of the total sample) characterised the organisational culture as hierarchical. Moreover, 62 participants (40.3% of the total sample) perceived the organisational culture as collaborative. Additionally, 43 respondents (27.9% of the total sample) described the organisational culture as innovative. These findings provide insight into the diverse perspectives held by participants regarding the prevailing organisational culture groups.

ANOVA Results:

Table 3: ANOVA Results for Constructive_Style

ANOVA

Constructive_Style

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.971	2	7.985	4.620	.011
Within Groups	260.971	151	1.728		
Total	276.942	153			

(Source: Data analysis)

The data provided in Table 3 shows the results of an analysis of variance (ANOVA) for the variable "Constructive_Style."

The ANOVA revealed a significant effect of organisational culture groups on the variable (F $(2, 151) = 4.620$, p = .011), which indicates that there are statistically significant differences in the "Constructive_Style" variable means across the three organisational culture groups. The results confirm hypothesis (H1) and highlight significant mean differences among variables.

The between-groups analysis showed that the sum of squares for the organisational culture groups was 15.971, resulting in a mean square of 7.985 with 2 degrees of freedom. The within-groups analysis yielded a sum of squares of 260.971 with 151 degrees of freedom,

corresponding to a mean square of 1.728. The total sum of squares was 276.942 with 153 degrees of freedom.

Based on the obtained F-value and the associated p-value, it can be concluded that the observed differences in the variable means among the organisational culture groups are statistically significant. The significance level (Sig.) of .011 suggests that the observed differences are unlikely to have occurred by chance. This result could spark curiosity and prompt further investigation into the variables contributing to these differences.

Post Hoc Test

The Tukey's Honestly Significant Difference (Tukey's HSD) post hoc test was adopted based on the Levene Statistic (Based on Mean). The test allowed for comparisons of means between the organisational culture groups in the variable "Constructive_Style." The Levene statistic, with a p-value of .349, did not indicate a significant difference in variances between the groups.

Table 4 Post-hoc Analysis - Multiple Comparisons

Dependent Variable: Constructive_Style				
Tukey HSD				
(I) Organisation Culture Groups		**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Hierarchical	Collaborative	-.61587*	0.25129	0.041
	Innovative	0.08068	0.27471	0.954
Collaborative	Hierarchical	.61587*	0.25129	0.041
	Innovative	.69655*	0.26090	0.023
Innovative	Hierarchical	-0.08068	0.27471	0.954
	Collaborative	-.69655*	0.26090	0.023
*. The mean difference is significant at the 0.05 level.				

(Source: Data analysis)

The Tukey HSD test compared the mean differences between the organisational culture groups on the dependent variable "Constructive_Style". The results showed significant differences in mean scores between specific pairs of culture groups.

Hierarchical vs. Collaborative: There was a significant mean difference of -.61587 (SE = .25129, p = .041), with the lower bound of the confidence interval at -1.2107 and the upper bound at -.0210. Thus, hypothesis (H2) is supported.

Hierarchical vs. Innovative: There was no significant mean difference between these two groups, with a mean difference of .08068 (SE = .27471, p = .954) and a confidence interval ranging from -0.5696 to 0.7309. This result leads to the rejection of hypothesis (H3).

Collaborative vs. Innovative: There was a significant mean difference of .69655 (SE = .26090, p = .023), with the lower bound of the confidence interval at 0.0790 and the upper bound at 1.3141. These findings lend support to hypothesis (H4)

These findings suggest that the hierarchical and collaborative culture groups significantly differ in mean scores for constructive conflict management style. Additionally, the collaborative and innovative culture groups also exhibit significant differences. However, no significant difference was found between the hierarchical and innovative culture groups.

Table 5 concisely summarises the acceptance/rejection status of each hypothesis.

Table 5 Result of Hypotheses

Hypotheses	Result
H1	Accepted
H2	Accepted
H3	Rejected
H4	Accepted

(Source: Data analysis)

Discussion

The research paper investigates conflict management trends and perspectives in the digital age. The results of the analysis of organisational culture groups indicated that the majority of respondents perceived their organisational culture as either collaborative (40.3%) or hierarchical (31.8%), with a smaller percentage perceiving it as innovative (27.9%). These findings highlight the prevalence of collaborative and hierarchical cultures in the sampled organisations and indicate the importance of understanding the impact of these cultures on conflict management.

The ANOVA results indicated a significant effect of organisational culture groups on conflict management, suggesting that different cultural orientations significantly influence how organisations manage conflicts. Specifically, the mean scores for "Constructive_Style" differed significantly among the hierarchical, collaborative, and innovative culture groups. These findings emphasise the need for organisations to consider their cultural orientation when developing conflict management strategies and practices.

The descriptive statistics provided insights into the average scores in each culture group. Collaborative culture had the highest mean score (3.3710), indicating a higher propensity for collaborative approaches to conflict resolution. Hierarchical culture had a slightly lower mean score (2.7551), suggesting a more structured and top-down approach to conflict management. Innovative culture had the lowest mean score (2.6744), indicating a focus on unconventional and creative approaches to conflict resolution.

The significant mean difference between the hierarchical and collaborative culture groups suggests that the collaborative culture promotes more constructive conflict management than the hierarchical culture. This difference can be attributed to the collaborative culture's emphasis on open communication, teamwork, and cooperation, which leads to more effective conflict resolution. The significant mean difference between the collaborative and innovative culture groups indicates that the innovative culture may exhibit a lower level of constructive conflict management, potentially stemming from risk aversion and a focus on disruptive and unconventional ideas.

The significant differences in mean scores among the organisational culture groups highlight the importance of considering cultural factors when designing conflict management

interventions. Organisations with a collaborative culture may benefit from fostering open communication, teamwork, and shared decision-making as strategies to address conflicts effectively. On the other hand, organisations with a hierarchical culture may need to focus on clear communication channels and well-defined conflict resolution mechanisms. For organisations with an innovative culture, providing a supportive environment for idea sharing, encouraging constructive debate, and leveraging creative approaches to conflict resolution may be beneficial.

Conclusion & Recommendations

This study investigates conflict management styles within various organizational cultures in the context of the digital age, revealing significant differences in their approaches. Collaborative culture emerges as the most effective in handling conflicts, prioritizing open communication, teamwork, and cooperation, fostering employee expression of opinions, and promoting collaborative conflict resolution. The study recommends organizations transition towards an innovative culture despite potential conflicts arising from diverse ideas, as technology advances and the threat of automation looms. This shift may involve the growth of self-managed virtual teams and the evolution towards entirely artificial virtual teams. In essence, the research underscores the importance of fostering a harmonious work environment through open communication, teamwork, and tailored conflict resolution strategies, ultimately enhancing productivity and competitiveness in the digital era. Further research is encouraged to refine conflict management practices in this evolving landscape.

Managerial Implications

The research paper has practical advice for managers in India's IT sector. It says that the kind of culture in a company affects how conflicts are handled. Managers should make teamwork and open communication a priority in their teams. They should also match people with similar cultures when making teams. Training for conflict resolution and custom-made strategies are important. In companies with strict cultures, managers should support new ideas. Keeping an eye on conflicts and including different types of people can also help. Using technology and planning for conflicts in the company's future are good ideas

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A Study on the Differences in Learning and Its Parameters Across Generations and Bridging Such Gaps at Hal, Hyderabad

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I.   Abstract

The generation gap, with time, has become a phenomenon that is evolving into a very evident yet hard-to- bridge aspect at workplaces. A focused study on 'The Differences in Learning and its Parameters Across Generations and How to Bridge these Gaps' was conducted at Hindustan Aeronautics Limited, Hyderabad to understand how each generation differs from certain stereotypes and how they behave.

This study included analyzing a set of 64 sample respondents from each generation in proportion to the total population of each generation in the organization (49 employees and 15 apprentice trainees at HAL Hyderabad) on their preferences and opinions concerning the five identified parameters of Learning, namely:

- Motivation: How do they stay motivated in the workplace?
- Communication: How they prefer communicating in the workplace
- Feedback: How frequently and what sort of feedback they Favor for growth and improvement?
- Leadership: What kind of Leader and Leadership do they expect and respect?
- Literacy: What mode of acquiring knowledge and sources do they prefer?

These parameters were investigated using various theories and concepts in the mode of a Questionnaire to try and identify a pattern in the behavior of the respondents from different generations. It also aided in ascertaining the popular choices of each generation and if it is impacted by the fact that they belong to a particular generation group.

Based on the findings of the questionnaire, various technique suggestions for each parameter were catalogued for further implementation by organizations.

Techniques like Gamification, Make your Owns/Buffets, Groupings, 360 Mentoring/Reverse Mentoring, and Extensive Multi-Day Case Projects were suggested after looking at the organization's current needs and requirements. This study aims at getting a closer eye on the prominence and impact of Generation Gap to accommodate and walk hand in hand with the conflicting needs without adversely affecting a particular generation.

As the organization is trying to implement Reverse Mentoring as a portal for upskilling of the employees, this research might act as their first step into understanding the learning aspects of their workforce to make the program more customizable and hence effectively efficient.

II.   Objectives

- ✓ To try and analyze the changing needs of the generations in respect to workplace environment and facilities

- ✓ To differentiate in generations based on psychological and need based indicators
- ✓ To suggest practically applicable ideas to ensure satisfaction of all generation needs
- ✓ To gain insightful knowledge about the organization and it HR related practices (HAL, Hyderabad)
- ✓ To gain a view on the different generations co-existing in the organizations

ii.) Scope

The project mainly aims at trying to understand what generation gap is and how to differentiate the needs of each generation in the PSU Defense set up of Hindustan Aeronautics Limited. It would study the current facilities available and compare it to the up-and-coming needs of the various generations. It will also include assessment of viable suggestions and applications to bridge the said generational gaps to assure a more inter-generationally comfortable workplace environment. The project would also try to entail the various HR processes in the organization and how they happen in respect to the organization.

iii.) Limitations:

- The ideas suggested might not be practically viable due to the nature of the organization's industry.
- Limited data available due to the privacy because of the nature of the organization's industry.
- Limited scope due to only a few actual generations due to the limited and infrequent hiring via direct or internal sources.
- The data acquired by means of secondary sources cannot be assumed to apply to all sample units of a particular classified group, as individual factors may differ.

III. Research Methodology

a. Type of Research: This is Exploratory research that aims at identifying how the different generations differ in their behavior and needs in a workplace. It mainly focuses on 5 major concepts Learning, Motivation, Communication, Feedback and Leadership preferences in the workplace.

b. Sampling Technique: The population of 455 Officer Employees in the organization were mainly split into 5 Clusters:

i. The HR Cluster included the Recruitment, Establishment, Training and Development, Welfare, Admin, Medical and Industrial Relation Disciplines.

ii. The Marketing Cluster included the Business Development, Marketing and Customer Services Disciplines.

iii. The Finance Cluster included Finance, Accounts, Stores and Purchases Disciplines.

iv. The Technical Cluster included all Assembly and Testing Disciplines.

v. The Planning Cluster included all Planning and Methods Disciplines.

These clusters were then used to shortlist sample units based on the different generations. Additionally, Apprentice Trainees were chosen randomly based on their availability and educational qualifications.

c. Type of Data: The Survey Data is Primary Data

d. Survey Instruments:

>i. Survey Questionnaire: A questionnaire including the aforementioned concepts that was filled by the respondents.

>ii. Observational Interview: Some of the respondents were interviewed at the time of filling the questionnaire and were observed for their reactions and reflex time to each of the questions.

e. No. of Respondents:

>i. A total of 64 Samples were chosen for the Survey

>ii. Each Department/Discipline was made to include

>>1. 4 units from Generation X (20 units)

>>2. 5 units from Generation Y (25 units)

>iii. For Baby Boomers as the population was 8, 3 units were randomly chosen as per their availability.

>iv. For Trainees, a total of 15 units were randomly selected to fill the questionnaire.

>v. For Trainees, a total of 15 units were randomly selected to fill the questionnaire.

IV.   Generational Gap at Private Companies

Many companies have faced issues due to the generational gap, and several have implemented strategies to address them. One example is IBM, which faced challenges due to generational differences between its older and younger employees. In the 1990s, IBM faced challenges in its business. Its employees were divided into two groups: the older, more experienced employees who had been with the company for a long time and the younger, more tech-savvy employees who were new to the company. The older employees resisted change, while the younger employees pushed for more innovation and technology integration. This created a significant generation gap within the company, which affected the company's ability to compete in the market.

To address this issue, IBM's CEO, Lou Gerstner, implemented a program called "Project Diversity" in 1995. The program aimed to bring together employees from different age groups, cultures, and backgrounds to collaborate on projects. The program helped break down barriers and created a more collaborative work environment.

The younger employees were able to learn from the experience of the older employees, and the older employees were able to learn from the younger employees' fresh ideas and new perspectives. IBM also invested in training and development programs for its employees to help them acquire new skills and keep up with the latest technology trends.

The company also introduced a more flexible work culture that allowed employees to work from home and choose their work hours. These initiatives helped bridge the generation gap within IBM and created a more cohesive and innovative workforce. Today, IBM is a leading technology company, and its success can be attributed to its ability to embrace diversity and overcome the generation gap.

IBM recognized that it had a diverse workforce with employees from different generations, each with unique perspectives, expectations, and work styles. However, they also recognized that generational differences could lead to misunderstandings and conflicts that could negatively impact the workplace.

To address this issue, IBM implemented several strategies, including:

- Encouraging Cross-Generational Collaboration: IBM encouraged cross-generational collaboration by creating opportunities for employees from different generations to work together on projects, share knowledge and expertise, and learn from each other.
- Providing Flexibility: IBM provided flexibility in work arrangements, including telecommuting and flexible work schedules, to accommodate different generations' different work styles and preferences.
- Offering Training and Development: IBM offered training and development opportunities to employees from different generations to help them acquire new skills and stay current with emerging technologies and practices.
- Emphasizing Diversity and Inclusion: IBM emphasized diversity and inclusion by promoting a culture that values and respects differences and encourages open communication and collaboration across different generations.

These strategies helped IBM address the issue of the generational gap and create a more inclusive and collaborative workplace. By recognizing and valuing the perspectives and contributions of employees from different generations, IBM was able to leverage the strengths of its diverse workforce and promote innovation, productivity, and growth.

V. Generational Gap at PSU's:

A generational gap can be more prevalent in Public Sector Undertakings (PSUs) due to several reasons. Here are some of them:

- Hierarchical Structure: PSUs are often characterized by a hierarchical structure where older generations occupy top-level positions while younger generations are at the lower levels. This can lead to conflicts due to differences in leadership styles and communication preferences.
- Lack of Diversity: PSUs may have a limited workforce diversity, with older generations dominating the workforce. This can lead to a lack of understanding and acceptance of different viewpoints, leading to conflicts and tensions.
- Resistance to Change: PSUs may have a rigid organizational culture that is resistant to change. This can challenge younger generations, which may be more open to new technologies and innovative practices, leading to generational conflicts.
- Job Security: PSUs may offer job security to their employees, leading to a culture of complacency and resistance to change. This can challenge younger generations who may be more interested in learning and development opportunities and career growth.
- Technology: PSUs may be slower to adopt new technologies than private companies, leading to a generational gap. This can lead to conflicts between older and younger generations over using and implementing new technologies.

PSUs, or Public Sector Undertakings, often face the brunt of the generational gap due to several factors. One of the main reasons is that PSUs are often seen as traditional organizations that are resistant to change compared to private sector companies.

As new generations enter the workforce, they bring new ideas, attitudes, and values that may clash with PSUs' more traditional and hierarchical structure. This can lead to conflicts and difficulties in communication and collaboration between different generations.

Another reason why PSUs may face the brunt of the generational gap is that they often have a large number of employees who have been with the organization for a long time. These employees may have established ways of doing things and may resist change or new ideas from younger employees.

Moreover, PSUs may also have a slower pace of innovation and adaptation compared to private sector companies, making it challenging to keep up with the changing needs and preferences of younger generations.

A study on Corporate Governance Practices and Women Leadership in Business Organizations in India

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Abstract

Today, there are female heads of state, cabinet ministers, bureaucrats, members of international boards, and military commanders; there is rising evidence that having more women in important roles will be advantageous. Organizations with a diverse mix of genders are more inventive, lucrative, and responsive to their customers' requirements. Diverse leadership benefits not only women and the organizations they manage, but also their families' and communities' economic standing. This study elaborates the dominant arguments for -Why women matter in leadership and how they can improve organizational performance and governance. Moreover, it contributes to management's understanding of the unique challenges faced and opportunities provided by the women with their leadership abilities at a higher position in organizations. This present study uses a survey questionnaire method to focus on women leadership and corporate governance, organizational performance, and leadership styles. Moreover, the study will also attempt to assess the leadership behaviour and styles prevailing in women and male leaders of Indian organizations. Finally, the study will provide the important suggestion of involving the women leaders in essential decisions for corporate governance and organizational performance.

Keywords: Corporate governance, Leadership styles, Organization performance, Women Leadership, Business organisations.

Introduction

A leader's capacity to sway his followers' actions is a crucial component of his leadership, which is described as a process of interpersonal social interaction in which performance outcomes play a major role. Emotions are crucial to leadership and leadership development. According to Posner and Kouzes (1988), leadership is a skill anybody can learn and practice.

Leadership is a concept that evolved considerably from its emergence. Svensson & Wood (2006) Claimed that the development of leadership focused around three periods: first, the trait theory, the second is leadership from a behavioural perspective and, finally, the contingency theory of leadership. The trait theory of leadership perspective studies started from 1910 to the First World War, and the second phase of investigations was of the behavioural perspective, beginning from the Second World War to the late 1960s. Finally, the third phase of the contingency perspective began from 1960 to beyond, focusing on contemporary theories. Understand leadership from its origin requires an understanding of these initial emergences of leadership theories.

Trait Theory

Trait theory assumed that influential leaders have superior and specific traits or characteristics that make a leader unique from the followers. In the leadership, early research phases, the Great Man theory of leadership focused on identifying the traits of a leader that are essential for successfully delivering the leadership responsibilities (Stogdill, 1974). Features like a firm hold of power, interpersonal skills and social skills and compatibility among others, are considered to be good leaders' identity. Initially, leadership research points out that leaders were somehow unique and different from their followers and, therefore, focused on identifying these outstanding, especially rare traits. Stogdill (1974) argues that leaders' traits alone do not recognize leadership and that it is advisable to consider the behavioural and situational characteristics of a leader before developing leadership adequately.

Behavioural Theory

Many studies of leadership styles have concentrated on task- or people-oriented approaches. Ohio State University and University of Michigan studies from the 1960s and 1980s impacted this. These earlier studies focused on (a) the leadership behaviours necessary for effective leadership or patterns of communication termed consideration (Yukl, 2008) and (b) the importance of a leader's interpersonal relationship with their followers, as well as their concerns for completing tasks toward goals or initiating structure. Accordingly, behavioural theories have concentrated on a leader's consistent mode of activity, often classified as an orientation to either task or people.

Contingency Theory

Research has switched from examining why behavioural leadership approaches are beneficial in specific contexts but not others, as suggested by behavioural leadership theories. Organizational outcomes like employee happiness and output varied widely among identified types of leadership behaviour (Chemers, 2002). Contingency leadership theories emerged to explain the right leadership style depending on the leader, the follower, and the scenario after personality and behavioural studies failed to establish a leadership style that worked best in all situations (Hersey et al., 2007). According to the literature on contingency theory, leaders adapt their personalities and methods of leading to the requirements of their followers. Specifically, the contingency theory examines the impact of a leader's actions on his or her followers' motivation and satisfaction levels by considering factors such as the task's complexity and the followers' level of knowledge.

Corporate Governance

Corporate governance (CG) is a whole process or mechanism and principles to ensure that an organization is managed to fulfil its stakeholder's best interest requirements. CG is the set of the system by which organizations are directed and controlled. It ensures and promotes corporate transparency, accountability, discipline, integrity, independence, fairness, and equity. CG ensures that:

- Protection of the interest of Shareholders;
- Disclosure and transparency in all organizational transactions;
- Compliances of all required mandatory and non-mandatory statutory and legal framework;
- Ethically conduct business and
- Commitment to values to stakeholders

Corporate Governance Theories

Agency Theory

The primary premise of corporate governance is agency costs. Designing and implementing disclosure, monitoring and correction systems that closely combine both management and shareholder goals to reduce agency costs is a crucial element of corporate governance.

According to Jensen and Mecklling, "Agency theory involves a contract under which one or more persons engage another person" (the stockholders) to execute a service on their behalf, which may entail transferring some decision-making power to the agent. The agent will not always behave in the principal's best interests if both parties to the relationship maximise utility. Managers are encouraged to implement incentive plans that financially compensate shareholders to raise their interest in the company and minimise agency losses. An effective and independent board of directors may assist cut down on agency expenses and boost firm performance if proper governance metrics and financial data are disclosed.

Stakeholder Theory

The stakeholders in a business include the shareholders, the customers, the community, the suppliers, the unions, the political organisations, and so on. Anyone or any organisation with influence over the company's operations is considered a stakeholder. This group includes workers, clients, vendors, creditors, the general public and rival businesses. The stakeholder theory of corporate governance postulates that organisations are best understood as collections of individuals with competing goals. In his book "Strategic Management: A Stakeholder Approach," R. Edward Freeman laid out the theory's foundational concepts, including the identification and modelling of the groups that are stakeholders of a firm and the recommendation of methods in which management might pay proper attention to the interests of those groups. In a nutshell, the "principle of who or what counts" is the focus of this theory's efforts.

The conventional business method prioritises shareholder returns at the expense of all other considerations. However, from the perspective of corporate governance's stakeholders, it is essential to consider all shareholders' needs.

Stewardship Theory

An alternative to agency theory is the stewardship idea of corporate governance. The stewardship idea disagrees with the foundation of the agency theory, which is self-interested action. According to this view, managers will make good decisions on the resources over which they have authority. The hypothesis is that managers place a high premium on honesty and integrity. They incorporate the company's status into their feeling of self-worth.

The idea also suggests that a company's structure should promote cooperation between upper-level employees and shareholders. The CEO serving as the Board Chairman facilitates this role. CEOs can perform at their highest levels when they are given unchallenged and unpublished control over the whole company. The scenario is characterised by one individual's concentration of power and authority. As a result, there is more precision and consistency in what senior executives demand of their direct reports and the rest of the board of directors. Therefore, there can be no doubt about who is ultimately in charge and accountable in any given circumstance. The organisation will thrive under unified leadership and tight management.

Resource Dependence Theory

Resource dependency theory articulates the use of external resources necessary for an organization to survive. The basic premise of this theory is the need for an environmental relationship between the organization and external resources. The board serves as an essential point of contact with external and inter-agency contacts, such as external directors' appointment on the board; this theory supports multiple directorships. It provides the opportunity to gather information and networks in a variety of ways.

Women Leadership and Organization

Today, there are a number of women CEOs and directors of companies, as well as women in senior management positions. Why does the inclusion of women matter for leadership? What is the business case for women in leadership? These questions are coming fast in view of the changes that have taken place in the direction of empowering women in business. Women in leadership roles provide good financial results for businesses. Studies on the relationship between women's leadership and the bottom line in companies have shown that —companies with a high-quartile representation of women on executive committees perform better than organizations that do not have women at the top (Carter & Wagner, 2011). Despite this research, worldwide, women's leadership improvement in business has been low (Georges et al., 2017).

The evidence shows that women in leadership roles are vital for companies in terms of their bottom line, fulfilling their moral responsibility to more than half the population and their diversity, and accessing larger talent pools. Typically, women in senior management positions in the corporate world fall into one of several categories:

Table: 1 Women Leaders

Name	Organization/ Position
	Women entrepreneurs
Kiran Mazumdar Shaw	Biocon
Deepa Soman	Lumiere Business Solutions
Shahnaz Hussain	Shahnaz Beauty products
Paru Jaykrishna	CMD of Asahi Songwon Colours
Meena Bindra	Chairperson BIBA
Divya Gokulnath	Byju's co-founder
Women in family businesses	
Shobhana Bharatiya	Chairman and Editorial Director of HT media
Mallika Srinivasan	Chairman of —TAFE
Roshni Nadar Malhotra	CHairperson HCL Corporation

Priya Paul	Chairperson of Apeejay and the Park Hotels chain of boutique hotels
Professional women	
Chanda Kochar	—Former CEO of ICICI Bank
Naina Lal Kidwai	— Board of Directors of Holcim
Indra Nooyi	—Former Chairperson and Chief Executive Officer of PepsiCo

Vasavada (2012) states that women make up a mere 36% of the labour force; organizations employ 22.6%; 6% are in senior management, and 4.9% are on boards of directors. Despite rapid urbanization and industrialization, strong embedded religious and patriarchal influences reinforce male superiority and female inferiority. This continues to impact women's progress across the Indian workforce and in all sphere of society negatively (Rahi, 2015).

Saha (2015) estimates that it may take up to 81 years before the gender gap within the workforce is closed. She points to a recent study showing that the proportion of women in senior management roles declined from 19% in 2013 to 14% in 2014.

Even fewer women hold board-level roles in Indian firms, according to a claim made by Sundar (2016). Only 59 (or 5.3%) of the directors of the 100 businesses listed on the Bombay Stock Exchange are believed to be women. This is lower than the rates in Canada (15%), the United States (14.5%), Great Britain (12.2%), Hong Kong (8.9%), and Australia (8.3%).

Koburtay et al. (2019) stated that gender discrimination refers to an institutional problem that has a broader impact on individual women than the impact of individual discrimination. Women's perception that discrimination occurs with them regardless of their personal experience in their work environment leads them to evaluate their organizations and organizational experiences more negatively than men. The examination has shown that ladies, as a rule, report their associations as being less comprehensive and less reasonable than men do.

Women's leadership means women increase their share of management positions or management jobs are combined with women's work or that leadership needs a more feminine management style (Storvik, 2012). Women leadership is taken here in the context of the spread of traits and characteristics associated with women in the process of leading organizations and the entry of women into the general male profession (Chatwani, 2015). Emerging models in the twenty-first century emphasize human relationships and shared goals. In contemporary research, the significant organization has argued that leadership in modern organizations should be aggressive based on teamwork and specialize in building deep relationships (Pounder & Coleman, 2002).

Companies are under pressure to increase their competitiveness; therefore, dynamic businesses need more relational, interactive, and participatory management approaches. Due to this circumstance, some researchers have suggested that leadership is process-based, transformational, value-based, non-coercive, and collaborative, and that "the modern manager is now encouraged to surrender control and share responsibility, help and develop others, and build a connected network of relationships" (Dugan, 2006). Furthermore, according to leadership theories, leaders should exhibit novel, maybe feminine, leadership characteristics (Johanson, 2008). According to Loo & Thorpe (1998), we need to support feminine leadership styles not to displace but to balance out male forms.

Consequently, organizations globally are increasingly selecting women to serve in senior leadership positions because their unique skills can contribute to organizational management. Women have been socialized to develop values and attributes that produce leadership elements based on relationships, encouragement and support, which differ from the traditional competitive, controlling, male aggressive leadership behaviours (Pounder & Coleman, 2002). Female leadership behaviour is characterized as thought behaviour that pays attention to people's feelings and requires satisfaction, participation, and friendship (Johanson, 2008). Women leaders emphasize a more democratic leadership style based on strong democratic skills, focusing on dialogue using a people-oriented and team approach. At the same time, men are more dependent on task-related behaviours and are considered patriarchal, authoritarian, and goal-oriented leaders. Women's skills and behaviours reflect relationship-building, process-orientation, connectedness and the ethics of care and concern for transformed leaders. and exhibit transformative behaviours such as clearly communicated values, motivation, optimism, readiness, Considering new policies and taking care of individual needs as coaches and teachers (Dugan, 2006). However, the general perception that the management style ideal is male is a negative perception of women as leaders in most organizations. Many women around the world live in a climate of intense controversy about whether when and how women should exercise their leadership authority (Chatwani, 2015).

Baker et. al. (2019) believes that gender stereotypes link women leaders with change and men with stability. If the change is needed for an organization to survive adverse circumstances, female leadership may be favoured over male leadership. Researchers have argued that female leaders are just as influential as men and that female leader exhibit masculine and feminine traits and capture behavioural flexibility, which ultimately leads to leadership (Johanson, 2008).

When women act like men, they are considered to be less than women, and when there is merit in what would usually be considered a female approach, then men generally have a feminine attitude; men accept it as their own; what was considered weak is now thought of as flexible; what was emotional now brings balance (Appelbaum et al., 2003).

It is essential to understand that different approaches to women leaders are crucial. An essential aspect of this research is to examine why there is a need to differentiate in men and women's leadership, identify what makes a strong woman leader, and, critically, develop an original model for women's leadership development. It involves advising young women to start their careers and identifying essential points needed for women who are struggling to go beyond middle management and to reach senior leadership and executive positions.

Women Leadership and Corporate Governance

Will the increased performance results brought about by women in leadership have a noticeable effect on the lower levels of corporations? Research by Catalyst, McKinsey, and the Credit Suisse Research Institute has dominated discussions on the financial value of having women in leadership positions. Over a year's worth of research on the representation, leadership, and management of women on board

is included in this study. Better financial performance for businesses was the result. Businesses with the largest participation of women on the board of directors performed better financially, per a study by Carter & Wagner (2011) of Fortune 500 businesses. According to these justifications, the three key financial performance indicators of Return on Equity (ROE), Return on Sales (ROS), and Return on Invested Capital (ROIC) are constructed. According to Carter and Wagner (2011), women's leadership growth boosts all three indicators by 42% in ROS, 53% in ROE, and 66% in ROIC. A number of earlier studies in the McKinsey "Women's Matter" research serve to illustrate these points. Their long-term research demonstrates that the BRICS market is expanding, with companies with the highest proportion of women on boards outperforming those with no women at all by 41%. Reports of higher equity returns. There are also more women in top management for organisations that rank at the top of organisational performance.

While McKinsey studies have shown a clear correlation between the success of organisations and the percentage of women working under their leadership (Desvaux et al., 2017), further research have provided explanations for the reasons behind these disparate outcomes. The average ROE of companies with at least one woman on the board has been more than 16% over the past six years, the average ROE of companies without a female board representation, according to the Credit Suisse Gender 3000 study, which followed 28,000 executives from 3,000 companies in 40 countries (Dawson et al., 2016). When examining the research through the lens of gender diversity and corporate performance, diversity should benefit not only women but also other shareholders, corporations, investors, and the macroeconomic environment. This is in accordance with the principles of equality and fairness.

Russell Reynolds's Justus O'Brien, a research firm working with organizations around the world on the legacy planning and appointments of board companies, said that one of the primary issues that disturb the gender structure of boards is that the pool of talent is minimal (Jackson et al., 2003). It is usually a group of retired or active CEOs - mainly men who are given the historical legacy of corporate leadership. The Old Boys Club mentality is strongly ingrained, and this team is often seen as just a pool of talent. Similarly, in the Indian market, where women are being appointed to boards, they too are drawn from a small pool, causing many women to occupy multiple board positions. The talent pool needs to be expanded, and the network of ―Old Boys Clubs‖ and the small, tight group of women who already occupy board positions need to move to sponsor more women on board and leadership positions. Organizations now have a duty of care to include qualified women at the Seat of power and make plans to expand their networks. To address this issue, governments in many developed countries, such as "Norway, Spain, France, and Finland, have introduced quotas, targets, and recommendations regarding the percentage of women on corporate boards in publicly listed companies" (Sealy, 2010). However, with the idea of quotas and goals, women face the challenge of being appointed to positions of power based on goals rather than qualifications. How women get there is another matter for investigation, but it needs to be argued that they should get there as the evidence points to the business benefits of diverse boards and senior leadership roles.

Nowadays, women can be found as cabinet ministers, heads of state, authorities, and individuals from the worldwide board and military leaders; there are solid proof and developing acknowledgement that the incorporation of more women in critical positions will have clear advantages. Gender- diversified workforce orientation enhanced organizations, become more imaginative and liable for their client and client needs. The advantages of different initiatives not only advantage women or the associations they lead yet also improve the monetary states of their families and networks.

Objective

The overall objective is to bring light to women leadership and its impact on corporate governance and various other impacts in in Business Organizations in India.

Methodology

Primary Data: To collect primary data, a survey using a questionnaire is being carried out. A survey is a terrific approach to learn what a lot of people think about a certain topic or how a group of people describe their conduct. Questionnaire Primary data for the study is gathered by Survey/Schedule questionnaires. Researchers have surveyed by giving out questionnaires to get the essential data using a specially created structured questionnaire

Secondary Data: Secondary data was collected from prior researchers, articles, research journals, websites etc.

Sample size: 300 surveys have been sent to the target market. 195 of the 200 questions have **been fully answered.**

Location: India

Respondents: Leaders, Managers and people working at senior positions from various business organisations were picked at random, without prejudice or any other practical consideration. The study initial sample size was 200 participants. Only 195 of the surveys, which were all completely completed, were considered.

Nominal Scale: This experiment made use of a nominal scale. From a statistical perspective, the Nominal Scale is the lowest measurement scale.

The technique used: Descriptive statistics, T-Test, Regression are used.

Data Coding: A Likert scale was used to code the qualitative data in this study. With the help of SPSS and MS Excel, data coding and data transcription have both been completed.

Data Analysis

Table: 2 Demographic Details of Respondents

"Demographic Variables	Categories	Frequency	Percentage"
Gender	"Female"	102	52.0
	"Male"	93	48.0
	Total	195	100.0

Age	"20 to 30 years"	32	16.7
	"30 to 40 years" "	43	22.1
	"40 to 50 years"	38	19.4
	"50 to 60 years"	57	29.0
	"Above 60 years"	25	12.9

	Total	195	100.0
Education	Graduate	23	11.7
	Postgraduate	103	52.9
	Professional	64	32.9
	Others	5	2.5

	Total	195	100.0
Designation	Senior manager	31	15.2
	Executive	39	20.0
	CTO	52	26.7
	CFO	23	12.1
	Director	50	26.0
	Total	195	100.0
Stay duration	"Less than 5 years"	67	34.4
	"5-10 years"	91	46.5
	"11-15 years"	25	12.7
	"More than 15 years"	12	6.5

Total	195	100.0

Table 3: Mean Value of Construct and Ranking of Mean Values

	Construct	**Mean values**	**Ranking**
Corporate	A	3.3743	4
Governance	D	3.3639	5
	TR	3.4583	2
	ID	3.4234	3
	RS	3.4995	1
Leadership	NS	3.4949	1
Styles	TS	3.4388	2
	PS	3.3232	4
	BS	3.3510	3
	AS	3.1354	5
Leadership	DE	3.4104	3

Behavior	PC	3.3854	4
	GA	3.4486	2
	OS	3.3500	5
	E	3.4496	1
Organization Performance	OC	3.3958	4
	RF	3.4297	3
	TD	3.4995	1
	EM	3.4583	2
	EF	3.3806	5
Diversities in Board	BD	3.1942	2
	WE	3.2687	1
	MD	3.1396	3

*"A, Accountability; D, Discipline; TR, Transparency; ID, Independence; RS, Responsibility; NS, Nurturant leadership style; TS, Task-oriented leadership style; PS, Participative leadership style; BS, Bureaucratic leadership style; AS, Authoritarian leadership style; DE, Dependable leadership behaviour; PC, People-centric leadership behaviour; GA, Global ambitions leadership behaviour; OS, Opportunity sensing leadership behaviour; E, Exemplary leadership behaviour; OC, Open communication; RF, Result focused; TD, Talent development; EM, Employees' empowerment; EF, Equity & Fairness; BD, Board diversity; WE, Women equality; MD, Men's dominance"

As shown in Table above, all constructs have mean values of more than 3, which means survey organizations are adhering to all corporate governance practices; survey leaders usually adopt all leadership styles; all leadership behaviours are highly visible among survey leaders; all organizational performance indicators are visible at the high extent in organizations and all types of diversities prevailing at the board of survey organizations. Moreover, Table above shows; responsibility practice is most prominent among corporate governance practices of survey organizations. Similarly, the nurturant leadership style is most prominent among the leadership styles of survey leaders. In addition, exemplary leadership behaviour is most evident in different parameters of survey leaders' leadership behaviour. Furthermore, talent development performance is most prominent among different types of performance indicators of survey organizations. Lastly, women equality is mostly prevailing at the board of survey organizations.

H1: "There is a moderating role of gender of leaders in relationships between leadership styles, leadership behaviour, organisation performance, board diversity and corporate governance".

Table 4: T-Test Results

Construct	Levene's statistic	T statistic	Mean Difference
CG	0.013	10.860	.53115
LS	0.003	9.743	.72378
LB	0.004	9.305	.72345
OP	0.022	12.934	.73164
DB	0.041	7.835	.58942

 *statistics are significant at 0.05 levels.

Table above reported the T-test results for the value of Levene Statistics (sig. value) is less than.05 in all the cases above (.013,.003,.004,.022, .041) respectively which means that There is moderating role of gender of leaders in relationships between leadership styles, leadership behaviour, organisation performance, board diversity and corporate governance

H2 : "There is a significant relationship between Relationship between gender of leaders and corporate governance".

Table 5: Coefficients^a

"Model"	"Unstandardized Coefficients"		"Standardized Coefficients"		
	"B	Std. Error	Beta	t	Sig."
1 (Constant)	1.788	.212		8.429	.000
CG	.164	.099	.087	1.651	.010

a. Dependent Variable: GL

" The regression constant and its significance results have been given in the above table. The p-value for regression coefficient is 0.010 for hypothesis testing which is less than .05. So, in

this case the hypothesis is accepted and it means that there is a significant relationship between gender of leaders and corporate governance".

H3: "There is a significant relationship between leadership style and gender of leaders".

Table 6: Coefficients^a

"Model"	"Unstandardized Coefficients"		"Standardized Coefficients"		
	"B	Std. Error	Beta	t	Sig."
1 (Constant)	2.216	.078		28.520	.000
LS	.192	.038	.222	5.080	.000

a. Dependent Variable: GL

"The table above gives constant and coefficient regression and its value. Now the p values is .000, less than 0.05, when testing the hypothesis for the regression coefficient .The hypothesis is thus relevant and accepted which means there is a significant relationship between leadership style and gender of leaders".

H4: "There is significant relationship between parameters of the leader's behaviour and gender of leaders".

Table 7: Coefficients^a

"Model"	"Unstandardized Coefficients"		"Standardized Coefficients"	"t"	"Sig."
	B	Std. Error	Beta		
1 (Constant)	1.788	.212		8.429	.000
LB	.164	.099	.087	1.651	.100

a. Dependent Variable: GL

"The regression constant and its significance results have been given in the above table. The p-value for regression coefficient is 0.100 for hypothesis testing which is more than .05. So, in this case the hypothesis is rejected and it means that, there is a significant relationship between parameters of the leader's behaviour and gender of leaders".

H5: "There is a significant relationship between parameters of organization performance and gender of leaders".

Table 8: Coefficients^a

"Model"	"Unstandardized Coefficients"		"Standardized Coefficients"		
	"B	Std. Error	Beta	t	Sig."
1 (Constant)	1.252	.054		23.173	.000
OP	.279	.026	.430	10.611	.000

a. Dependent Variable: GL

"The above table gives the regression constant and coefficient and their significance. Now by testing hypothesis the p-values for regression coefficient is .000 which is less than 0.05. Therefore, the hypothesis is relevant and accepted which means there is a significant relationship between parameters of organization performance and gender of leaders".

H6: "There is a significant relationship between parameters of diversity and corporate governance".

Table 9: Coefficients^a

"Model"	"Unstandardized Coefficients"		"Standardized Coefficients"		
	"B	Std. Error	Beta	t	Sig."
1 (Constant)	1.220	.071		17.190	.000
DB	.413	.035	.472	11.938	.000

a.   Dependent Variable: CG

"The above table gives the regression constant and coefficient and their significance. Now by testing hypothesis the p-values for regression coefficient is .000 which is less than 0.05. Therefore, the hypothesis is relevant and accepted which means there is a significant relationship between parameters of diversity and corporate governance".

Findings

In this study, using the sample of 195 leaders, the researcher has attempted to examine the influence of women leaders and their leadership on adhering to corporate governance practices and performances of organizations. Through this study, the researcher has tried to answer whether corporate governance practices and performances in organizations may become better from the diversified personality in their organizational board. Besides, the researcher has also attempted to review the leadership styles and leadership behaviours adhered to by women leaders and men leaders in Indian organizations. To assess the behaviour of leaders, the researcher has also approached their immediate subordinates. The

researcher has also attempted to examine the influence of different diversities prevailing in organizational boards of Indian organizations on the corporate governance of organizations. The broad findings of this study are described below:

- "There is moderating role of gender of leaders in relationships between leadership styles, leadership behaviour, organisation performance, board diversity and corporate governance.
- There is a significant relationship between gender of leaders and corporate governance.
- There is a significant relationship between leadership style and gender of leaders .
- There is a significant relationship between parameters of the leader's behaviour and gender of leaders.
- There is a significant relationship between parameters of organization performance and gender of leaders.
- There is a significant relationship between parameters of diversity and corporate governance".

Conclusion and Suggestions

The study suggests that adhering to those organizations' corporate governance is going in a negative direction, where men' dominance prevails in the corporate board to take the crucial decisions. Besides, the study has also suggested the substantial positive influence of board diversities on corporate governance practices. Various types of organizational performance such as open communication, result-focused, talent development, employees' empowerment and equity & fairness are also better in female leaders as compare to male leaders. However, based on moderating results for the gender of leaders on the relationship of leadership styles and corporate governance, the study has suggested that women leaders should not adopt the masculine type of leadership style, particularly authoritarian style; otherwise, it may unfavourably affect corporate governance of the organizations. The leadership behaviour and leadership styles prevailing in women leaders compared to male leaders of Indian organizations are more exhibiting leadership behaviour such as dependable, people-centric, global ambitions, opportunity sensing and exemplary.

Leadership styles have a significant influence on the corporate governance of the organizations irrespective of the gender of the leader. Authoritarian leadership might influence corporate governance adhering only in the case of male leaders. The most probable reason for this could be that women leaders naturally have the skills and characteristics, like Relationship building, empathy and concern for employees and Encouraging the self-worth of employees, contrary to authoritarian style dimensions such as inflated ego, power and status-oriented and blaming others. Women show the traits which are more related to men leadership style is not accepted by their colleagues and employees (C. Baker, 2014). A. H. Eagly & Johannesen-Schmidt, (2001) and Alice H. Eagly & Johnson (1990) reported that women tend to adopt democratic or participative style as against the men who adopt the autocratic and directive style. Female leaders —care more for their employees compared to male leaders. Women show the traits which are more related to men leadership style is not accepted by their colleagues. So we can conclude from the results of this study that gender-based stereotypes still prevail in the organization, which makes authoritarian style insignificant in relationship with the corporate governance when adhere to by the female leaders.

The study provides the important suggestion of involving the women leaders in essential decisions for better corporate governance and organizational performance. The gender-based stereotype is still the hurdle for women to reach their maximum potential growth level. The organization should take the necessary step to avoid such barriers faced by women leaders. The organization should actively recruit more females onto the higher management level to leverage their value and diversity of experience to

increase overall corporate governance practices. This practice provides the organization with a holistic competitive edge.

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Greening Higher Education: Achieving Carbon Neutrality on IIM Kozhikode Campus

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Introduction

The abstract explores the innovative effort to make the Indian Institute of Management Kozhikode (IIMK) a carbon-neutral campus. As a result of current environmental concerns, the abstract emphasizes the importance of carbon neutrality. The report provides insights into how IIM-K can achieve its goal of being carbon-neutral by 2047 through cutting-edge strategies and environmentally friendly practices.

Literature Review

Carbon is a chemical that is quite prevalent on Earth and is vital to both our daily existence and civilization. But our dependency on carbon is a factor in the world's climate change. Global greenhouse gas emissions are expected to rise by 50% by 2050, owing primarily to CO_2 emissions from non-renewable energy use (Rabaey and Ragauskas 2014).

As of 2020, Bhutan became the first country to become carbon neutral. Bhutan's forests remove about nine million tons of carbon annually, while its economy only generates about two million tons. Other countries such as Comoros, Gabon, Guyana, Madagascar, Niue, Panama, and Suriname have also achieved this feat of becoming a carbon-neutral nation. Brazil, the US, and Canada have kept a target to achieve carbon neutrality by 2050, China by the year 2060, and India by the year 2070.

India is the world's 4th biggest emitter of CO_2 after China, the US, and the European Union.

However, its emissions per capita are much lower than other major world economies due to its large population. India emitted 1.9 tonnes of CO_2 per head of population in 2019, compared with 15.5 tonnes for the US and 12.5 tonnes for Russia in 2019.

Understanding and reducing the quantity of carbon emissions we are producing while still providing for our energy demands is necessary to address this issue. We should prioritize carbon accounting for the IIM K campus and look for measures to reduce our overall CO_2 emissions in order to achieve this. The extended abstract goes into detail about the measures taken to make the campus carbon-neutral by 2047.

The Conceptual Model

The aim is to develop a baseline value for total CO_2 equivalent emission and explore scenarios for the 5-year and 10-year duration and related simulations.

Carbon Accounting

Our focus is on triangulating and validating the current CO_2 equivalent emissions of the IIM-K campus through both per capita consumption and per capita area emission. Accordingly, utilizing the data on the built-up area from GRIHA, the following per capita area emission has been arrived at:

Energy consumption as per built-up area = Built-up Area X Energy Performance Index (EPI)

$$= 29,599.412 \text{ sqm X } 61.7 \text{ kWh/sqm/year}$$

$$= \mathbf{18,26,283.72 \text{ kWh/ year}}$$

Similarly, for developing a bottom-up per capita consumption estimate, we rely on the total number of people residing on campus or utilizing campus facilities per their average individual consumption trends and forecasting.

The table below summarizes the current cper the people categoryampus occupancy as per the category of people.

People Type	Students	Faculty	Administrative Staff, Security, Helpers	Family	Others (Executive Programs Part-time Campus)
Head Count	1072+86+35	100	100	160-200 (2 per faculty)	1525

Note: Estimate no. of students enrolled per year per course and the total faculty and support staff (chechis, chettas, watchman, receptionists, office staff, admin staff.) and family have been considered and validated.

Total per capita energy consumption based on bottom-up estimation:

= Headcount X Average time spent per year on campus X Per capita average emission

=1323 X 50% X Emission equivalent per hour (1910 kg CO_2 per year)

= 12,63,465 kg equivalent of CO_2

Assumptions:

0.385 kg CO2 per kWh is emitted.

Therefore total per capita base CO2 emission is estimated to be

12,63,465/0.385 = **32,81,727.27 kWh/year**

Solutions

We need to figure out how to cut or eliminate CO2 emissions from every source if we want to lessen our carbon footprint. This study looks at several solutions, both general best practices and those that are particularly relevant to educational institutions. It examines how these organizations' current architecture affects greenhouse gas emissions and rates how prepared they are to become carbon neutral.

Green/Tree cover

A mature tree may emit oxygen and absorb a substantial amount of CO_2, which has several advantages, like lowering temperature, conserving energy, and lowering heating expenses. Trees' shade can greatly lower temperatures, which can save enough energy to run several air conditioners. Trees also serve as windbreaks in winter, lowering energy use and heat loss. CO_2 emissions at IIM K have decreased due to the presence of trees.

Direct Component: Current CO_2 emission abated by Total trees at IIM K

$$= 1597 \text{ trees X } 9.97 \text{ kg of CO2 equivalent}$$

$$= 13,526.59 \text{ kWh/year}$$

Indirect Component: Trees themselves reduce overall ambient temperature and can reduce the need for air conditioning. Note: 1 tonne AC power consumption = 2.9 kWh (assume)

$$= 2.9 \text{ kW X } 20 \text{ hours X } 10 \text{ ACs X } 1597 \text{ tree}$$

$$= 9,26,260 \text{ kWh}$$

Lake in Campus

Except for March, lakes have a cooling impact on the area by lowering the maximum temperature year-round and raising the minimum temperature. This is true because lakes, as opposed to land, have higher heat capacities and may absorb or release more energy for a given change in temperature. Lakes also help to boost precipitation in the surrounding areas. For instance, the typical summer and winter temperatures of Sukhna Lake in Chandigarh are 7.51 °C and 3.12 °C, respectively. Even tiny lakes like those at IIM K can serve to moderate the microclimate and lower carbon emissions on campus.

Assumptions:

Ratio of IIM K lake to Sukhna lake = 2.5/741 = 0.003 which is equal to 0.3%

Accordingly, below is the estimate of CO_2 emission reduction by lakes at IIM K.

(Reduction in temp due to Lake / Reduction in temp owing to trees) X Reduction in energy due to indirect component X Ratio of IIM K lake to Sukhna lake

= ((7.51 -3.12)/ (25-11)) X (9,26,260) X 0.3% = 979 kWh

Renewable energy Generation

Solar energy of 50 kWp (Kilo Watt Peak) is also being harnessed on the campus. Phase V campus's built-up area is 27,870.91 sqm. The peak solar energy generation capacity is 50 kWp. For the overall campus with a built-up area of 29,599.41 sqm, the peak solar energy generation capacity is assumed to be 53.10 kWp.

1.) Base Case – 50kWp
2.) 5-year projection assuming a 50% expansion of renewable energy generation with respect to the existing built-up area will be an additional 26.55 kWp
3.) 10-year projection is estimated to be an additional 53.10 kWp

Accordingly, below is the estimate of CO_2 emission reduction by renewable energy at

IIM K.

The average sunshine per year in Kerela is 2344 hours.

Total renewable energy capacity at present = 2344 hours X 50 kWp   = 1,17,200 kWh

Consumption at present   = 18,26,283.72 kWh

Therefore, the total share of renewable at present   = 1,17,200/18,26,283.72

= 6.41 %

Other Solutions for Net Carbon Neutrality

Biowaste treatment

A sewage treatment plant has been established on the campus to treat effluents used for toilet and washroom flushing, besides gardening and irrigation.

Rainwater Harvesting

The campus requires up to 350 Cum (3.50 lakh Liters) of daily water. As run-off water from rainfall flows by gravity from an elevated location down a slope or gradient to a lower elevation, storing the water at the lowest possible location is very much feasible. Additionally, a rainwater harvesting pond has been developed to cater to the water requirements of the whole campus, with up to an estimated 1.6 crore capacity as of today (including Phase V). Besides, the campus boasts rainwater storage tanks with a 40-lakh liter storage capacity, which have been provided under the campus buildings to meet any emergency requirement.

DC mode Fans

The cost of AC fans was less compared to DC fans. However, this price difference does not exist today & and efficient DC fans are commonplace. DC fans consume 70 % less energy compared to similar powered output AC fans, i.e., a 25-watt DC fan equals a 100-watt AC fan output.

Others

- Recycling, re-use, or down-cycling (if any)
- Food waste treatment: Exploring organic composting facilities on campus.

- The social cost of Carbon needs to be accounted for to achieve true sustainability by ensuring optimum:
  - Energy Demand on campus
  - Energy Supply
  - Transportation
  - Engagement

Other Technologies to be Evaluated

Using biomass for heating can be avoided if the heating requirements are low, and solar water heating devices can be used instead. Gasification of renewable biomass resources can also be considered for generating heat and electricity on campus. Adapting wind, water, and solar electricity generation facilities to efficiently convert natural resources into electricity using turbines or solar panels is important.

Methodologies.

Overall processes and readiness recommended:

1. Expansion of waste sorting at the household level.
2. The already existing recycling, up-cycling, or down-cycling activities should be reorganized and re-evaluated.
3. There is a need for awareness, facilities, and infrastructure for waste handling, planning, and forecasting.
4. Regular checking of potential waste disposal
5. Promote education and awareness on decoupling and net carbon or carbon-neutral methodologies.
6. Establishing a governance mechanism, setting goals, and exploring external financing options.
7. Concrete vs. plastic bitumen and unpacked roads
8. Using windmills, solar energy, etc., and exploring their feasibility
9. Invest in supporting energy demand reduction by immediately promoting energy conservation programs.
10. Start investing to transition to a low-carbon campus energy consumption and supply. The EV charging and supply side has done it in part by proposing solar and wind power combined with battery energy storage.
11. Explore energy solutions by partnering with local (KSEB) and regional entities (DISCOMs) through the second phase of the Government of Iraq's "Grid Connected Rooftop Solar" plan, MNRE.
12. Further research and groundwork is required to develop a robust framework, including exploring examples and case-study-based linkages to IIMK campuses or similar campus settings.
13. Expand accreditation of GRIHA and green building energy standards and approve retrofits during maintenance and any new construction projects to support only 'high-performance buildings' on campus.
14- Develop and start up the infrastructure as soon as possible (within two years) to support a fleet of cars, bikes, and clean fuel cars to replace and adapt the existing fleet and take care of the bikes strictly from the main gate on a rental basis.
15. Behavioral change is promoted through programs including Live Green, Think Big, awareness posters, campaigns, and relevant campus engagement programs.
16. Ensure that all graduating students have basic knowledge of climate.

17. The university should evaluate pilot/pilot programs and initiatives that target the energy needs of the campus and that are expected to have a significant impact on the carbon footprint because it is a residential campus (replacing fans with natural ventilation and climate options)

Data Analysis

Baseline, 5- year, and 10-year projections for achieving Carbon Neutral Status

Baseline calculation based on current assumptions for Carbon Accounting

A.) Based on overall energy consumption - **18,26,283.72 kWh/ year**

B.) Based on per capita CO2 footprint - **32,81,727.27 kWh/year**

Therefore, we assume the baseline estimate to be an average of points 1 and 2 above, considering additional carbon-neutral footprint factors related to water consumption, waste generation, gadget utilization, and other utilities.

C.) Baseline estimates = Average of 1&2 = **(18,26,283.72 + 32,81,727.27)/2 kWh/year**

$$= \textbf{25,54,005.36 kWh/year}$$

D.) Current Carbon neutral activities= Tree Cover + Water body + Renewable Energy

$$= \textbf{(9,39,786.59 + 979+ 1,17,200) kWh/year}$$

$$= \textbf{10,57,965.59 kWh/year}$$

E.) Current baseline CO2 balance = C-D

$$= \textbf{(25,54,005.36 - 10,57,965.59) kWh/year}$$

$$= \textbf{14,96,039.77 kWh/year}$$

Accordingly, provided below are 5-year and 10-year carbon neutral balance estimates:

F.) 5-year horizon Carbon neutral activities = Tree Cover (increase by 300 trees) + Water Body (increase by 50%) + Renewable Energy (26.55 kWp if only solar) +Proposed solutions

$$= \textbf{11,16,327.59 + 1,468.5 + 179433.2}$$

$$= \textbf{12,97,229 kWh/year}$$

G.) 10-year horizon Carbon neutral activities = Tree Cover (increase by 600 trees) + Water Body (increase by 100%) + Renewable Energy (53.10 kWp if only solar) +Proposed solutions

$$= \textbf{12,92,868.36 + 1,958 + 124,466}$$

$$= \textbf{14,19,292.36 kWh/year}$$

H.) 5-year horizon CO2 balance = C-F = 25,54,005.36 -12,97,229   kWh /year

$$= \textbf{12,56,776 kWh/year}$$

I.) 10-year horizon CO2 balance = C-G = 25,54,005.36 – 14,19,292.36 kWh /year

= 11,34,713 kWh/year

Note: The above calculations use various assumptions and estimates that could vary depending on more accurate triangulation of the predictor variable, such as CO2 reduction by tree cover, temperature differences due to seasonal and geographic variations and water body status, as well as efficiency of renewable and other CO2 reduction measures. Also, Proposed Solutions and their contributions are to be further evaluated, scrutinized, and finalized as per the specific feasibility concerning the IIMK Campus.

Result and Discussion

Cost Implication of the Measures taken

As per the institution faculties and student ratio, we have estimated that around 50 cars and 60 two-wheelers would be introduced on the campus as electric vehicles. For this, EV charging stations need to be constructed on campus, which could satisfy the needs. Considering that the land is available with no additional cost in acquiring it, the expenditure to construct an EV charging station is as follows. All the following costs are calculated for 30 years

Expenditure

Electric Vehicle Charging Station Illustrative Scenario (For 30 years)				
Charging station to support 50 cars vehicles and 60 Two-wheelers				
Solution	**Up-Front Capital Cost**	**Annual Operating cost**	**Total cost for 30 years**	**Annual Equivalent Cost**
Electric Vehicle Charging Stations				
LEVEL 3 DC Current for Cars (25 Nos.)	32000000	500000	47000000	1566666.667
EV Charger for 2 Wheelers (60 Nos.)	2900000	250000	10400000	346666.67
			Total	**₹ 19,13,333.33**
Say 19.2 lakhs per year				

Further, the EV vehicle cost is calculated in the table below. In this, the vehicle's life cycle is taken as 15 years.

EV Vehicle buying cost				
Type of Vehicle	Number of Units	Cost of 1 vehicle	Total Cost (15-year life cycle)	Annual Equivalent Cost
Car	50	700000	35000000	2333333.333
Two Wheelers	60	100000	6000000	400000
			41000000	**₹ 27,33,333.33**
Say 27.3 lakhs per year				

It is assumed that the Institute IIMK is open for 300 days a year, and the vehicles travel a distance of 20 km to and fro in a single day. Hence, the vehicle charging cost is described in the table below. The chargers installed on the campus would be fast turbochargers; therefore, they would charge Cars in 50 mins and Two-Wheelers in 25 mins. The cost of charging per minute is taken as ₹ 19, which some charging companies take in the present scenario in India.

EV Vehicle Charging Cost					
Type of Vehicle	Charge time (Minutes)	Cost per Minute	Distance (Km)in a single charge	Rs per km	Yearly Cost
Car	50	19	250	3.8	22800
Bike	25	19	200	2.375	14250
					₹ 37,050.00
Say 37 thousand per year.					

Installing EV chargers and introducing Electric vehicles on the campus would help reduce carbon emissions and would also help in reducing the fuel cost. An average vehicle run produces 4.6 metric tonnes of CO_2 for 18507 km (11500 miles). As per the EPA, for reducing each kg of CO_2 emission, around ₹ 4000 (50$) is saved. The calculation is given in the table below –

Saving					
Money saved by reducing Carbon emission					
Type of Vehicle	Number of Units	Distance Travelled (10 km for 300 days)	CO2 (kg) Emission per Km	CO2 (kg) reduction per year	The cost saved per kg of CO2 emission	Cost of CO2 saved/year
Cars	50	3000	0.25	37283.19	4000	₹ 14,91,32,760.58
Two-wheelers	60	3000	0.30	53687.79	4000	₹ 21,47,51,175.23
						₹ 36,38,83,935.81
Say Rs 36.39 crore /year.						

Assuming the same working 300 days and a vehicle covering a distance of 20 km to and fro in a single day, the cost of fuel saved is as follows –

Cost of Fuel saved						
Type of Vehicle	Number of Units	Distance traveled in a year (km)	Avg. distance covered per liter	Total Fuel consumed (Litres)	Fuel cost per liter	Total Money Saved
Car	50	6000	10 km	600	₹ 105.00	₹ 31,50,000.00
Two-Wheeler	60	6000	20km	300	₹ 105.00	₹ 18,90,000.00
					Total	₹ 50,40,000.00

Hence the net expenditure and savings are summarized below –

Expenditure & Saving Analysis			
Particulars	Amount	Particulars	Amount
Expenditure		Saving	
Cost of building EV Charging stations	₹ 19,13,333.33		
EV Vehicle buying cost	₹ 27,33,333.33	Money saved by reducing Carbon emission	₹ 36,38,83,935.81
EV Vehicle Charging Cost	₹ 37,050.00	Cost of Fuel saved	₹ 50,40,000.00
Total Expenditure	₹ 46,83,716.67	Total Saving	₹ 36,89,23,935.81

As per the table, the balance amount is detailed below –

Balance = Saving – Expenditure

$$= ₹ 36,42,40,219.14$$

₹ 36.42 crores can be saved by introducing EV vehicles into the campus, which is the environmental cost that is being saved—considering other incumbent practices, such as the use of food delivery or hyper-local services (on the rise) being replaced by the EV fleet to be introduced, which could further reflect a much higher inherent environmental cost that could be saved.

Combining all the Carbon neutral measures and sources such as trees, lakes, renewable energy, and Electric vehicles, the cost which can be saved in 5 and 10 years is estimated in detail in the table below

Analysis of all the Carbon-Neutral Measures			
Current Scenario			
Particulars	**Energy Saved (kWh)**	**Rate per kWh**	**Amount**
Trees	939786.59	₹ 8.50	₹ 79,88,186.02
Lakes	979	₹ 8.50	₹ 8,321.50
Renewable Energy	117200	₹ 8.50	₹ 9,96,200.00
		Total	**₹ 89,92,707.52**
Say Rs 89.93 lakhs			
5 Years			
Proposed	**Energy Saved (kWh)**	**Rate per kWh**	**Amount**
Trees	1116327.59	₹ 8.50	₹ 94,88,784.52
Lakes	1468.5	₹ 8.50	₹ 12,482.25
Renewable Energy	179433.2	₹ 8.50	₹ 15,25,182.20
Emission reduction by 50 cars & 60 Two Wheelers			₹ 36,42,40,219.14
		Total	**₹ 37,52,66,668.11**
Say Rs 37.53 crores			
10 Years			
Proposed	**Energy Saved (kWh)**	**Rate per kWh**	**Amount**
Trees	1292868.36	₹ 8.50	₹ 1,09,89,381.06
Lakes	1958	₹ 8.50	₹ 16,643.00
Renewable Energy	241666.4	₹ 8.50	₹ 20,54,164.40
Emission reduction by 50 cars & 60 Two Wheelers			₹ 36,42,40,219.14
		Total	**₹ 37,73,00,407.60**
Say Rs 37.73 crores			

Hence, we can say that by applying these carbon reduction measures, IIM K can save up to ₹37.73 crores. The actual cost for the upcoming five years is summarized below.

Actual Cost in 5 Years		
Particulars	1 Year Cost	Cost for 5 Years
Construction of EV charging Station	₹ 19,13,333.33	₹ 95,66,666.67
Electricity consumed for charging vehicles	₹ 37,050.00	₹ 1,85,250.00
Fuel saved	₹ 50,40,000.00	₹ 2,52,00,000.00
	Total Money Saved	₹ 1,54,48,083.33
Say ₹ 1.55 crores		

Conclusion

The extended abstract provides a thorough analysis of the institute's eco-friendly practices, using cutting-edge technologies, and campus-wide initiatives to show the practicality, effectiveness, and strategy of how IIM-K to reduce its carbon footprint.

The estimated final carbon neutral calculations accordingly as per baseline,5 years,10 years are as follows:

Current baseline CO2 balance - = 14,96,039.77 kWh/year

5-year horizon CO2 balance = 12,56,776 kWh/year

10-year horizon CO2 balance = 11,34,713 kWh/year

Managerial Implications

The abstract suggests that managers should analyze IIMK's projects to evaluate the potential cost savings and long-term advantages of adopting sustainable practices. It emphasizes the various benefits of achieving carbon neutrality, such as decreasing energy consumption and waste, improving corporate reputation, and attracting environmentally conscious customers.

It emphasizes the benefits of long-term initiatives and the importance of teamwork, leadership, and innovation in driving significant change. The abstract strongly argues for adopting environmentally responsible practices, emphasizing the potential for sustainable managerial decisions to bring about global transformation by 2047.

Further scope

The model can be further proposed to several other people staying on educational campuses at any given time around the world. Considering Scope 1,2,3 emissions framework focuses a lot more on economic activities or related pursuits, there could be a significant difference and deviation in applying standard frameworks to evaluate carbon net neutrality initiatives.

We believe that linking the pertinent human activities and consumption patterns within a campus or an academic setting would provide a fresh perspective to evaluate and understand the effectiveness of traditional measures and solutions targeted at carbon net neutrality objectives.

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Mapping the Trajectory of Sustainable Industry 4.0 Advancement: A Systemic Approach through Causal Loop Diagram Analysis

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1. Introduction:

The increasing usage of new and disruptive technologies has resulted in a corresponding growth in the generation of electronic waste, which has risen from 49 million metric tons in 2016 to approximate amount of 60 million metric tons in 2021 (Cho, 2018). The rapid proliferation of energy utilization as per Moore's law emphasizes the need to exercise prudent utilization, and consequently, underscores the imperative to investigate the connection between resilience and sustainability.

The use of emerging technologies to combat societal challenges and accomplish sustainability goals, such as the Sustainable Development Goals (SDGs), has gained increased interest among scientists, development practitioners, business leaders, and policymakers. Their positive interconnection has already been corroborated in various domains (Bekaroo et al., 2016; Uddin & Rahman, 2012). In the realm of manufacturing information technology expenditure, Industry 4.0 has displayed a notable evolution, evolving from a constituent of 5% in 2011 to a substantial 20% by the year 2021. This transitional trajectory spanning over a decade has witnessed an impressive amplification of 9.6 times, progressing from an initial valuation of $10.5 billion in 2011 to a substantial $103 billion in 2021 (ET Online, 2022). This progression finds its impetus in a confluence of factors, including expansion of businesses, fortification of resilience, and the pursuit of sustainable practices. These dynamic developments collectively underscore the pivotal role that Industry 4.0 occupies in the modern industrial landscape.

To ensure comprehensive coverage across the entirety of the sustainability landscape, a holistic approach must be adopted, encompassing end-to-end strategies (Frustaci et al., 2017; Mitton et al., 2016). While big data and AI-driven technologies have gained considerable attention, solutions based on blockchain, Augmented Reality, and other emerging technologies have been identified as holding significant growth for sustainable development (Schulz et al., 2020). Following the United Nations' proclamation of sustainability development goals in 2015, there has been a marked proliferation of sustainability-related discourse within academic literature. However, a noticeable gap persists in adequately addressing the integration of sustainability factors within the landscape of Industry 4.0 implementation. Existing literature often overlooks the integration of sustainable practices while adopting Industry 4.0 technologies. This study aims to fill this gap by proposing a comprehensive framework (causal loop diagram) using a system thinking approach that not only tackles implementation challenges but also emphasizes the incorporation of sustainability principles, thereby facilitating a more environmentally and socially responsible transition to Industry 4.0.

The rest of this paper is organized in the following manner. Next, we describe the theoretical foundations of our study. We discussed the industry revolution and the importance of sustainability in the current era. Further, we conducted a bibliometric literature review from Scopus and Web of Science, with results presented in Section 4. Using the system thinking approach we developed a causal loop diagram based on the literature for a holistic understanding of the adoption and implementation of industry 4.0 technology with sustainable development for the future. Finally, Section 6 concludes the

study by discussing its implications for theory as well as practice and suggesting directions for future research.

2. Literature Review:

2.1 Industrial Revolution:

Throughout history, the evolution of industries has been marked by distinct revolutions that have reshaped production and labor paradigms. The transition from manual labor to mechanization and then to digitalization has ushered in remarkable changes. The First Industrial Revolution (Industry 1.0) saw the introduction of steam engines, transforming weaving looms into steam-powered machines. The Second Industrial Revolution (Industry 2.0) harnessed electricity and assembly lines, streamlining mass production. The Third Industrial Revolution (Industry 3.0) brought computer technology and automation to the forefront, while the Fourth Industrial Revolution (Industry 4.0) is characterized by the fusion of information and communication technology, leading to digitalization and interconnectedness. Industry 4.0 emphasizes digital transformation with IoT, cloud computing, AI, and machine learning, fostering data exchange and informed decision-making. Table 1 illustrates the key components of each industrial revolution, showcasing their unique contributions to the ever-evolving landscape of industry and production.

2.2 Industry 4.0:

Industry 4.0 embodies a transformative paradigm centered on the foundational concept of the Internet of Things (IoT), facilitating a harmonious synergy between human capabilities and advanced technologies such as Artificial Intelligence (AI), Machine Learning (ML), and Augmented Reality (AR) (Dalenogare et al., 2018). This revolutionary approach acknowledges the inherent interdependence between organizational triumph and the holistic well-being of its workforce. At its core, Industry 4.0 strategically harnesses the potential of digital innovation to optimize operations, elevate efficiency, and accelerate task execution (Zhou et al., 2015). Illustrated in Figure 1, the model encapsulates the intrinsic components that epitomize the essence of Industry 4.0, emblematic of a dynamic fusion blending technology, collaborative human interaction, and operational prowess. Fundamental to the framework of Industry 4.0 is the creation of intelligent grids spanning the entire value chain, interlinking machinery, systems, and assets to autonomously oversee production processes. This engenders a newfound organizational capability for predictive maintenance scheduling, failure anticipation, and seamless adaptation to evolving production demands and unforeseen disruptions (Jazdi, 2014).

Table 1: **Timeline of Industrial Revolution – Industry 1.0 to Industry 4.0**

Industrial Revolution	Key Dimensions	Timeline	Commonly Known As	Source
Industry 1.0	Steam Engines, Coal, Steam Power Engines, Job Creation, Wealth Increase	1784	Mechanical Production	(Kelly et al., 2023)
Industry 2.0	Mass Production, Electricity, Mechanical Devices, Cars, Lean Production, Gleization, Productivity	1890	Mass Production	(Mokyr & Strotz, 1998)
Industry 3.0	Computer Technology, Information, Analog to Digital, Computing Power, Outsourcing	1969	The Digital Age	(Jiang et al., 2022)

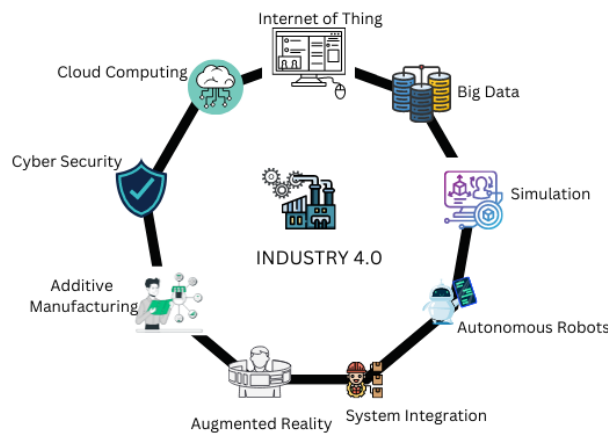| Industry 4.0 | Digital Transformation, IoT, Cloud Computing, AI, ML, Connectivity Software and Connectivity | Today | The Smart Factory | (Lasi et al., 2014) |

Figure 1: Components of Industry 4.0

2.3 Sustainability:

The concept of sustainability, as elucidated by the United Nations (UN) Brundtland Commission report in 1987 (Brundtland, 1987; Redclift, 2005), encapsulates a fundamental principle of development that prioritizes meeting the present needs of the current generation while safeguarding the capacity of future generations to fulfill their requirements. This foundational definition has since resonated across various global initiatives, including the United Nations' Sustainable Development Goals launched in 2015 (Griggs et al., 2013), underscoring the enduring significance of balancing societal, environmental, and economic dimensions to ensure enduring well-being and prosperity for both present and forthcoming generations.

2.4 Industry 4.0 and Sustainability:

The application of Industry 4.0 presents a captivating opportunity within a market landscape where customers increasingly seek value-added experiences and dependable outcomes from their investments in smart equipment and products (Machado et al., 2020). This shift towards Industry 4.0 technologies not only drives operational efficiency and cost reduction but also emphasizes a broader commitment to sustainability, aligning with the growing importance of environmental responsibility to customers. This evolution might appear to challenge the traditional pursuit of high efficiency and low costs, yet it is particularly pertinent for midsize manufacturing enterprises facing tighter profit margins and inventory constraints. By prioritizing sustainability, these organizations can fortify their supply chains against avoidable disruptions and enhance their overall resilience.

In the context of Industry 4.0, the concept of Sustainability 4.0 emerges (Javaid et al., 2022), denoting industrial practices aimed at mitigating adverse environmental and social impacts through waste reduction, recycling, and judicious utilization of natural resources. Industry 4.0-enabled business models harness the connectivity of the Internet of Things (IoT), interlinking products, and processes to achieve enhanced value for both customers and internal operations (Frank et al., 2019). While conventional industry models have often perpetuated unsustainable practices for short-term financial gains, Industry 4.0 offers a pathway toward sustained efficiency, resilience, and societal well-being,

thereby aligning with economic, social, and environmental values (Strandhagen et al., 2017). Notably, small and medium-sized enterprises (SMEs) can leverage Industry 4.0-based business models by nurturing their absorptive capacity for technological innovations and cultivating effective innovation strategies (Müller et al., 2021). Figure 2 shows the recent trend in academic publications related to Industry 4.0 and sustainability, data extracted from a Scopus search.

From the graph, we have observed a sharp rise in the number of studies since 2015 after the UN declaration of Sustainable development goals. The study is spread across multiple subject areas as can be seen from the pie chart. From the chart, we can observe that the majority of the

Figure 2: Trend in publication related to Industry 4.0 and Sustainability
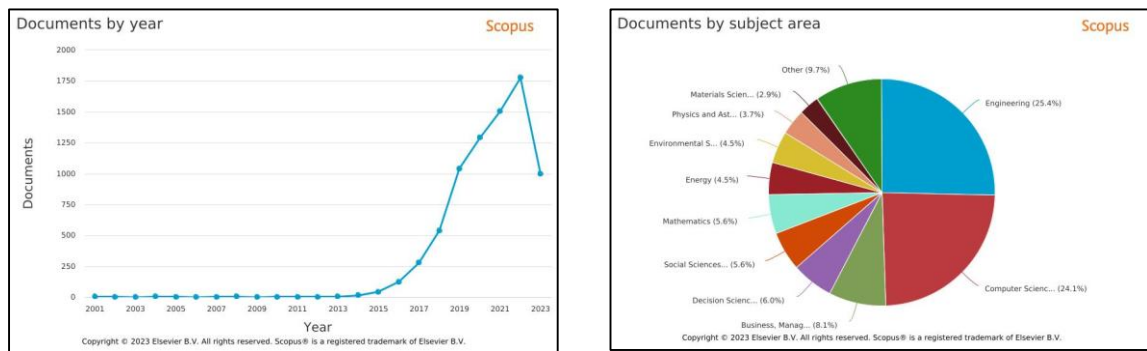
studies are in the field of engineering (25.4%) and computer science (24.2%) while other major areas are business, management and accounting, decision science, and social science. We can say that most of the studies are related to the impact of technology on the environment and sustainable practices. Table 2, provides a detailed review of recent literature to understand what the current technology and their sustainable implication have already been studied based on the triple bottom line pillars of sustainability – social, economic, and environmental. Based on prior literature we found that most of the studies are based on literature review with very few empirical studies. Also, we found that the studies mostly focussed on the environmental aspect of sustainability with less focus on social and economic aspects.

This research underscores the transformative potential of Industry 4.0 in fostering sustainable practices and enabling businesses to navigate the complex interplay between economic prosperity, ecological stewardship, and social equity.

3. Methodology:

The study began with bibliometric analysis. This approach facilitates a comprehensive review of the subject, highlights gaps in existing literature, and generates innovative ideas (Donthu et al., 2021, Feng et al., 2022). The flowchart used for this bibliometric analysis was based on the procedure suggested by (Okoli, 2015) for systemic literature review (Figure 3). Following by bibliometric review, we have utilized system dynamic modeling and developed a causal loop diagram for a holistic understanding of the pre as well as post-implication of industry 4.0 technology for sustainable development.

3.1 Bibliometric review:

This study initiates with a foundational Bibliometric analysis, aiming to offer a comprehensive overview, pinpoint gaps in the literature, and inspire novel ideas (Donthu et al., 2021; Feng et al., 2022).

Table 2: Recent Literature Related to Industry 4.0 and Sustainability

Source	Industry 4.0 Technology	Sustainability			Key Findings	Research Methodology
		Economic	Environmental	Social		
(Bai et al., 2020)	Individually evaluate all the technologies including additive manufacturing, iOT, AI, Blockchain, AR, Cybersecurity, etc.	Yes	Yes	Yes	The study uses a hybrid decision method to evaluate Industry 4.0 technologies for sustainability and application, incorporating hesitant fuzzy sets, cumulative prospect theory, and VIKOR.	Mixed Method - Quantitative (VIKOR), Qualitative (case study)
(Kumar et al., 2020)	AI	Yes	Yes	Yes	Various methods used in existing literature related to AI and sustainability and tried to identify various issues, opportunities, and barriers due to AI and its impact on sustainability	Qualitative: SLR
(Margherita & Braccini, 2020)	I4.0 Technology - Internet of Things (IoT), Integrated logistics, Robotics, Tracking systems, Data Analytics	Yes	Yes	Yes	Utilizing IT value theory, it asserts that Industry 4.0 technologies foster sustainable organizational value through worker-centric deployment.	Qualitative: Case Study Analysis of four Italian manufacturing organizations that implemented I40 technology for Flexible Manufacturing
(Pan et al., 2022)	AI, ML, iOT, analytics	NA	Yes	NA	Australia's perspective and approach (future research direction) to address climate change by creatively deploying digital technology.	Qualitative
(Schoormann et al., 2023)	AI	Yes	No	No	Used a sample 95 article to provide a systematic overview of IS literature, and how AI can be utilized for achieving a certain SDG.	Qualitative: SLR
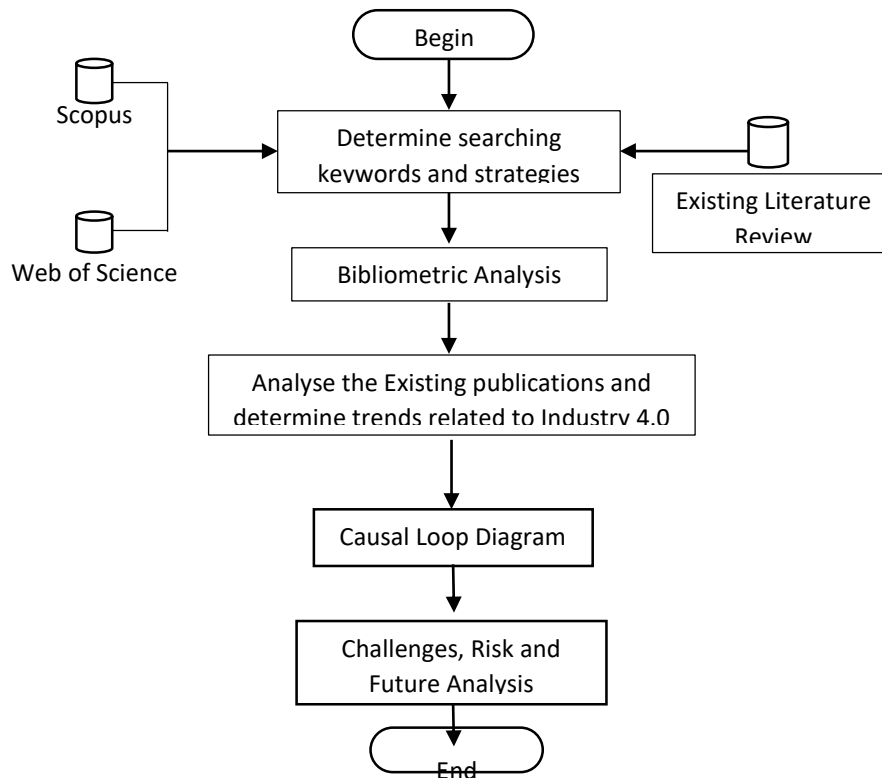
Figure 3: Methodology used for the study

3.2 Keyword Selection:

Based on the research objectives and purpose of the study, we identified the set of keywords: "Industry 4.0", "Sustainability", "Environment", "technology"

3.3 Data Source:

Scopus and Web of Science were chosen as data sources for this study due to several reasons. Firstly, both platforms provide extensive multidisciplinary databases containing peer-reviewed academic literature. Secondly, they encompass scientifically valid journals across a broad spectrum of academic subjects, which is crucial considering the subject-neutral nature and its impact on various domains like business, engineering, government, and society. Lastly, these platforms offer advanced capabilities for comprehensive bibliometric analysis, including insightful analytics. We have limited our search to only the English language.

3.4 Keyword Analysis:

For this study, we have only used keyword analysis. Utilizing bibliometric analysis, we explore keyword co-occurrence, a method expounded by (Callon et al., 1983) to unveil conceptual frameworks in research areas. Our specific focus is on Industry 4.0's evolution within sustainable development, capturing predominant concepts. This approach grants valuable insights into the intricate interplay between these domains, enriching ongoing discourse and guiding future research directions. We utilized VOSviewer to visually represent the keyword analysis of Industry 4.0 and sustainability (van Eck & Waltman, 2010).

The network diagram based on Scopus bibliographic data is depicted in Figure 4 while that of Web of Science is shown in Figure 5. The left figure shows the overall network diagram while on the right we have shown the cluster of network diagrams with sustainable development in focus.
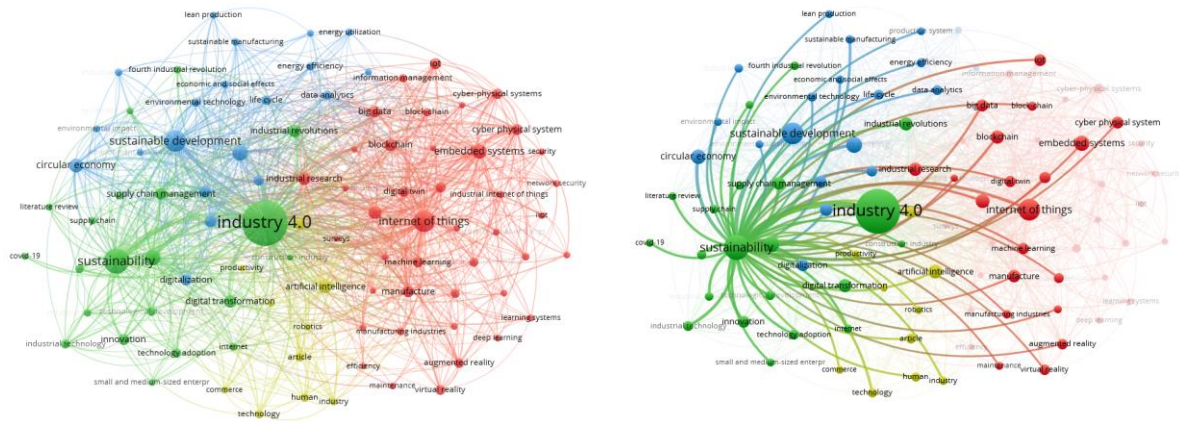
Figure 4: Keyword mapping of Industry 4.0 and Sustainability from Scopus (Minimum occurrence = 25)
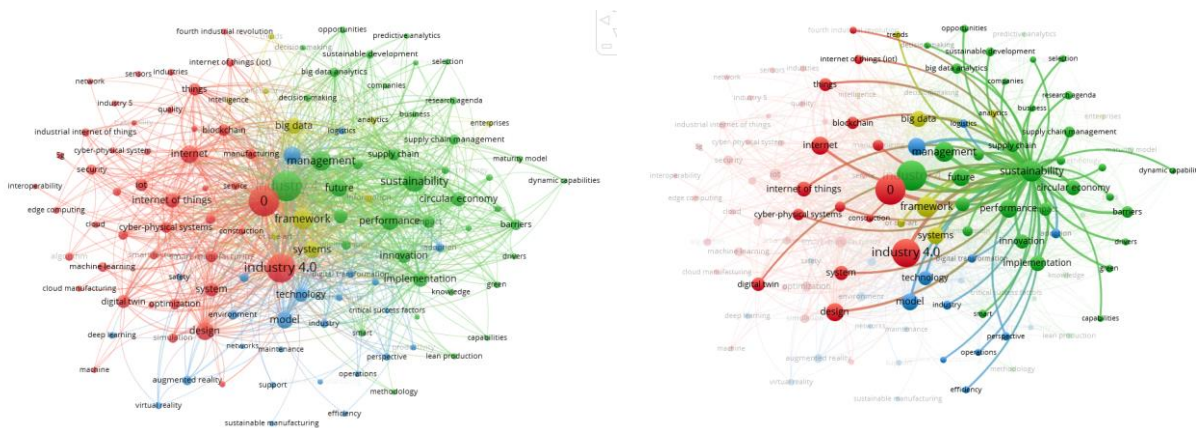
Figure 5: Keyword mapping of Industry 4.0 and Sustainability from Web of Science (Minimum occurrence = 15)

From the network diagram from both the sources – Scopus as well as Web of Science, we have found that the Internet of thing, big data, cyber-physical systems, artificial intelligence, smart manufacturing, circular economy, decision-making, blockchain, and digital transformation are some of the most frequently used keywords in the literature.

3.2 System Dynamics Modelling

In 1997, Forrester introduced the concept of System Dynamics (SD) as an exploration of how information feedback elements within industrial processes, such as organizational structure, policy amplification, and time delays, interact to influence the success of a venture (Chao & Zishan, 2013). SD's core objective lies in problem-solving through feedback assimilation, emphasizing a system's inherent dynamic feedback structure and the interactions among its components. Models developed through SD aim to decipher complex systems, uncover how specific behaviors impact them, and predict outcomes over time.

This study incorporates the causal loop diagram within the System Dynamics framework, following Booth and Sterman's methodology, to explore the domain of Industry 4.0 technology adoption (Sweeney & Sterman, 2000). The primary emphasis is placed on understanding its effects on key national sustainability indicators. A systems diagram captures problem identification, goals, stakeholders, process structure, and policy interventions, following the Input-Process-Output (IPO) model. In Table 2, the study's various parameters are presented. The model's Causal Loop Diagram (CLD) illuminates complex connections between variables, showing cause and effect using arrows and polarity symbols. The process of forming the model starts by defining the problem and listing system components. A plus (+) symbol signifies a reinforcing link between variables, while a minus (-) symbol indicates a balancing relationship. The delay (//) symbol signifies that cause and effect between variables occur after some time. These CLD loops can either strengthen (R) or balance (B), shaping growth, decline, or goal-driven behaviors (Tip, 2011).

Table 2: Variables Used in the Study

Stage	Parameters Used
Input	Education Rate, Inflation Rate, Effect of Technology on Energy Emission, Effect of Technology on Energy Efficiency, and Other Factors like industry growth rate
Output	GDP growth, Industrial Production, Industry Energy Consumption, Industry 4.0 Technology Adopters
Stakeholders	Government – Minister of Education, Minister of Skill Development and Entrepreneurship, Minister of Commerce and Industry, Central Pollution Control Board, Industries, Common Citizen
Supporting Policies	Government Policy for Investment, Policy for Sustainable Production, Policy to improve education

4. Results and Discussion:

Based on the research objective and the problem statement, we have conceptualized the CLD model in the form of a system diagram as shown in Figure 6.
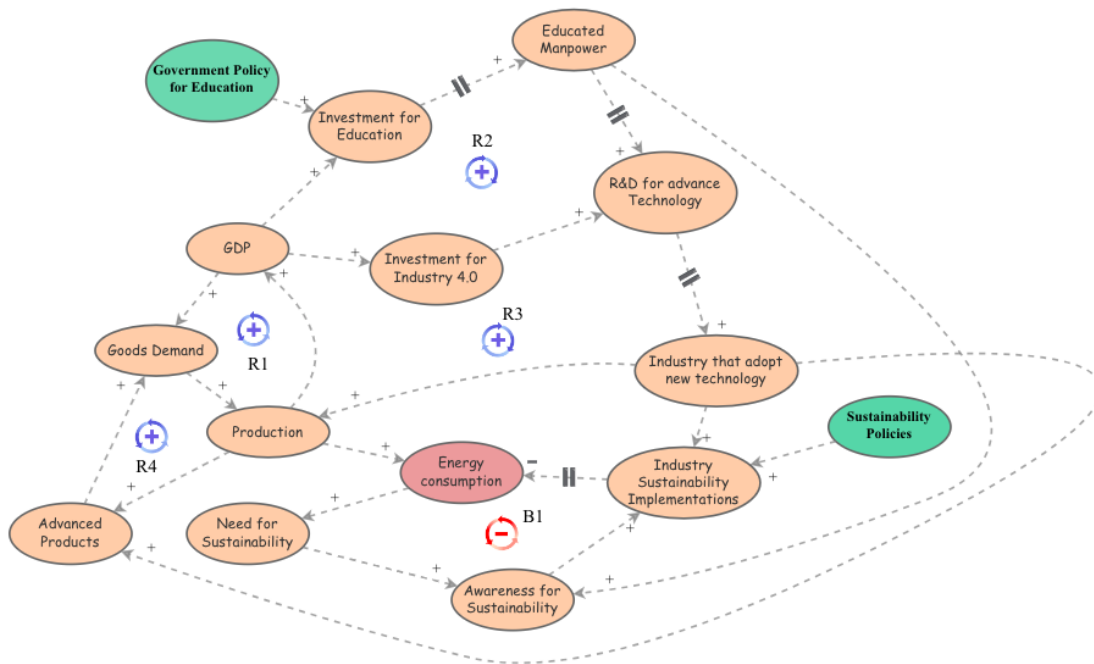
Figure 6: Causal Loop Diagram (CLD) Model Conceptualized from the study

The process structure represented by CLD in the study consists of 3 reinforcement loops and 1 balancing loop. Based on the three pillars of sustainability (Social, Economic, and Environmental), we can categorize the reinforcement loop R1 and R4 as an Economic Loop, R2 and R3 as a social aspect, where balancing loop B1 can be stated as the environmental pillar of sustainability.

4.1 Economic Loop (R1 & R4): The economic loop encompasses three pivotal variables: growth of Gross Domestic Product (GDP), industrial demand, and supply. The uptake of Industry 4.0 technology triggers heightened demand, leading to GDP growth. Additionally, the integration of new technology augments demand, consequently driving an expansion in supply, following the fundamental principles of economic supply and demand.

4.2 Social Loop (R2, R3): These social loops (R2 and R3) can again be seen as the result of a rise in a country's GDP. When a country's GDP increases, it becomes more inclined to invest in improving education and adopting new technologies for further advancement and growth. The reinforcing loop R3 illustrates the socio-technical progress of a nation, where a strong focus on Research and Development creates an environment that attracts industries to adopt Industry 4.0 technologies. As the number of industries using these technologies increases, so does industrial productivity. This improved productivity allows industries to generate more output, leading to an increase in the volume of industrial production. This rise in production volume, as explained in the Economic Loop, contributes to a higher GDP, thereby making the country more appealing for industry investment. This enhanced GDP is also believed to allocate a larger share of investment towards technological education as shown by R2. Once investment in education takes place, the quantity and quality of the workforce will improve, although this improvement will take time (indicated by the delay symbol in the causal loop). This, in turn, strengthens industrial productivity and supports even larger industrial production volume.

4.3 Environment Loop (B1): The environment loop (B1), which acts as a balancing mechanism in this research, is based on the idea that as industries embrace Industry 4.0, their overall

production will likely rise, leading to increased energy usage. However, owing to growing concerns about sustainability and government policies promoting it, industries will take steps to cut down on energy consumption and adopt eco-friendly practices. This effort to balance energy consumption could also encourage a shift towards the use of renewable, green energy sources. Ultimately, the increased focus on sustainable energy will drive further investment in Industry 4.0 technology.

4.4 Theoretical Implications: The study presents a causal loop diagram analysis as a novel lens through which the intricate web of relationships and influences in Industry 4.0 advancement can be comprehended. By delving into the systemic nature of these interactions, the study expands the theoretical framework for understanding how technological adoption intersects with sustainability concerns. This not only contributes to the academic discourse on Industry 4.0 but also advances systems thinking approaches in the context of sustainable technological transitions.

4.5 Practical Implications: The study's findings have the potential to guide industries and decision-makers in a more informed manner during the implementation of Industry 4.0 technologies. By highlighting the critical role of sustainability considerations within the trajectory of advancement, organizations can strategically embed these principles from the outset. This has far-reaching implications, ranging from optimized resource allocation and reduced waste generation to heightened eco-efficiency and enhanced long-term viability. Moreover, the systemic approach can help identify potential pitfalls and unintended consequences, enabling proactive mitigation strategies that lead to more resilient and socially responsible Industry 4.0 implementations.

The sustainable implementation of Industry 4.0 will also impact achieving the 17 sustainable development goals aimed at eradicating poverty, safeguarding the planet, and fostering global peace and prosperity by 2030. Industry 4.0 technology has potential benefits directly or indirectly on most of the SDG goals – especially SDG 9 (Industry Innovation and Infrastructure) as well as SDG 12 (Responsible consumption and production), but improper implementation may exacerbate adverse societal effects like inequality – digital divide, promote consumerism, and lead to social isolation.

5. Conclusion:

This study's implications bridge the gap between theoretical insights and real-world applications. They lay the foundation for fostering Industry 4.0 ecosystems and a step towards a foundation of Industry 5.0 with a sustainable, resilient, and human-centric industrial ecosystem that not only drives technological progress but also aligns with sustainable paradigms, ultimately contributing to a more harmonious coexistence of innovation, industry, and the environment.

5.1 Limitation and Future Research: This study is limited to developing a theoretical model for the complex process of adopting Industry 4.0 technology to ensure a sustainable future. To progress to the next stage of system dynamics modeling, it's vital to create a well-validated conceptual model and conduct simulations. To enhance the reliability of outcomes in both quantitative and qualitative aspects, it's advisable to explore an extended model using a Stock and Flow Diagram (SFD) and simulation for future research.

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Lessons in Innovation Skills from Mahatma Gandhiji

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Abstract

The need and importance of innovation is well established in management literature. Among many streams of research in innovation, one important aspect is the skills required for innovation. Mahatma Gandhiji is among the foremost leaders in the history of mankind. His ideas, actions and life itself are a great learning for anyone including management scholars and practitioners. There are tremendous management lessons that can be learned from him. In this paper, we focus on the innovation skills of Mahatma Gandhiji. Gandhiji was a great innovator with the skills of questioning, experimenting, observing, idea networking and association - the five skills identified as Innovator's DNA in management literature. These five skills have significant implications for practitioners as by building these skills, managers can grow in their innovation journey and can add value to the organisation and society.

Keywords: Mahatma Gandhiji, Innovation, Innovation Skills, India, Indian Thought

1. Introduction

The need and importance of innovation are well established in the management literature (Akpan et al., 2021; Bocken et al., 2020; Herrero et al., 2020; Pillania, 2020; Meissner et al., 2017; Pisano, et al. 2015; Morrar, 2014; Block et al., 2013; Kline et al., 2010; Tzeng, 2009; Pillania, 2008; Pillania, 2005; and, Van der Panne et al., 2003). Innovation has become a key skill for survival and growth in the fast-changing global environment and era of tough competition in the VUCA world (VUCA stands for volatility, uncertainty, complexity, and ambiguity). Among many streams of research in innovation, one important aspect is the skills required for innovation (Dyer et al., 2019; Sousa et al., 2019; Nakano et al., 2018; and Dyer et al., 2009).

The world including the business world needs more innovations to solve various challenges being faced and explore various opportunities. For this, one way is to look for ideas and examples from various sources and time periods. This is one of the motivations to look at innovation lessons from Mahatma Gandhi ji. What he did, how he did and the success of his efforts in getting independence for India that too using innovative ways is probably unmatched.

Mahatma Gandhiji is among the foremost leaders in the history of mankind. His ideas, actions and life itself are a great learning for anyone including management scholars and practitioners. There are tremendous management lessons that can be learned from him. In this paper, we focus on the innovation skills of Mahatma Gandhiji. The same skills are identified as key skills for innovations by leading global innovations scholar Prof Clayton Christen and others in The Innovators DNA (Dyer et al., 2009 and Dyer et al., 2019).

2. Lessons in Innovation Skills from Mahatma Gandhi and Discussion

Mahatma Gandhiji was a great innovator. He has many skills which helped him in creating innovations. In this paper, we look at his five key skills for innovation. The five skills are discussed in this section.

2.1 Questioning

Let us start with an incident which has a huge influence on Gandhi and in a way started the social-political journey of Gandhi.

On 7 June 1893, Mahatma Gandhi was thrown out of a first-class coach on the train in Pietermaritzburg, South Africa. Gandhi was travelling from Durban to Pretoria on a first-class ticket to meet his client. While he was seated in the first-class compartment, a White man called the railway authorities and asked for the man looking like a 'coolie' to be removed from the coach. Gandhi possessed a valid ticket and so he refused to move out of the first-class coach to the rear end of the train. When Gandhi did not move out of the first-class coach, he was thrown out of the train. He had stayed at the station that night shivering in the cold. He was thrown out because only white people were allowed to travel by first-class coach. He was certainly not the first person to face discrimination based on race in South Africa. Unwillingly, people have accepted it as a way of life under the dominance of a strong British Empire.

Gandhi refused to accept the discrimination prevalent in South Africa and he questioned it. This questioning resulted in more ideas and he started challenging the status quo through the press to draw attention towards this unfair practice of discrimination in South Africa. And later on, followed it with more actions as we all know. In this whole incident, the most important part is his questioning the practice of discrimination.

If he had not questioned it, and accepted it as a way of life in South Africa, we might not have seen the rise of Mahatma Gandhi as a force to reckon with and we might not have the valuable guidance of him in the freedom movement of India. This is not the only incidence, throughout his life, Gandhi ji questioned a number of well-established practices such as some of the established practices of the Congress Party in India or some of the malpractices of Indian society such as bad treatment of people from lower castes or use of violence for gaining independence.

3.2 Experimenting

The name of the autobiography of Mahatma Gandhiji is quite unique- An Autobiography: The Story of My Experiments with Truth. The word from it that we need to focus is on Experiments. The life of Gandhi ji was full of experiments.

Let us look at one story often shared and many of us already know it. One mother was disturbed by the fact that his son was eating too much sugar. This was not good for his health and she was worried about it. She went to Gandhiji with her son and shared her ordeal with him. She requested him to help her in getting rid of this bad habit of her son. Gandhiji thought for a moment and requested the woman to come in two weeks.

The mother was expecting a solution and was not very happy with this response. She went back to Gandhiji after two weeks. Gandhi Ji looked into the eyes of the boy and told the boy to stop

eating sugar as it was not good for his health. The boy agreed. The mother who was watching this happening, got confused and requested Gandhiji to tell her, why he did not say the same thing to the boy in the first meeting two weeks ago. Gandhiji told her that he was also fond of sugar and was eating sugar two weeks ago but he had given up eating sugar now.

This is just one such instance. There are a lot of such stories where Gandhiji ran experiments throughout his life. Even his ashrams were a place of great experiment for him.

Gandhiji was not successful in all his experiments and many of his experiments resulted in failure at first. But he learned from these failures, improved on the failures and later ran more successful experiments. Remember his saying, "My imperfections and failures are as much a blessing from God as my successes and my talents and I lay them both at his feet. But success and failure are of no account. They are God's concern, not mine" (Gandhi Research Foundation, 2023).

3.3   Observing

Gopal Krishna Gokhale was the political guru of Mahatma Gandhiji. In GOKHALE - My Political Guru, Gandhiji wrote that he saw in Gokhale the ideal servant of India. He has even provided support and funding to the Gandhiji struggle in South Africa.

Gopal Krishna Gokhale asked Gandhiji to return from South Africa and serve the people of India. Gandhiji was not sure about it as he had limited knowledge and experience of the ground reality of India. Gokhale ji advised him that since Gandhiji had been away from the country for a long, he must travel across India to understand the country. He also sought a promise from Gandhiji that he would not utter a word on Indian issues for one year till his discovery of India was complete.

With financial support from Gokhale ji, Gandhiji travelled across India for one year observing everything to learn about India. These observations helped him in bringing a number of innovations including innovation in the way of working of the Indian National Congress. There are a lot of such instances where Gandhiji used observation to understand and come up with innovative ideas and solutions.

3.4   Idea Networking Skill

Idea networking means meeting people with knowledge to get ideas from them (Dyer et al., 2009).
Mahatma Gandhiji was very good at Idea Networking. He has different people from different backgrounds in his friends and acquaintances. He also used to read a lot and get new ideas from reading.

Gandhiji himself has said! "Three moderns have left a deep impression on my life and captivated me. Raychandbhai by his living contact; Tolstoy by his book, "The Kingdom of God is within you"; and Ruskin by his "Unto This Last". Besides these three personalities, Gopal Krishna Gokhale, the Gita and the Bible were lifelong sources of inspiration for Gandhiji (Gandhi Research Foundation, 2023).

He also got the opportunity to interact with a diverse set of people while working with the Congress Party as it has people from different parts of India, with different religions, and ideas.

In his acquaintances and friends, there were people from different countries, different religions, ideologies and ideas.

3.5   **Association Skill**

Association means using two existing ideas, concepts or products and coming up with a new idea or concept or product by combining these existing ideas or concepts or products (Dyer et al., 2009).

Mahatma Gandhiji was very good at Association. Many of the concepts that we believe were his original creations were in fact created by associating with existing ideas.

For example, his idea of ashram was taken from concepts of ashrams in India and ideas from Leo Tolstoy. He combined these ideas to come up with an ashram which was an ideal place for him and a solution for many of the problems faced by Indian society.

His idea of Satyagraha was a combination of peaceful disobedience by laborers in the UK and his own focus on the search for truth which was another idea he got from reading.

4   **Conclusion**

The need and importance of innovation is well established in management literature. Among many streams of research in innovation, one important aspect is the skills required for innovation. Mahatma Gandhiji is among the foremost leaders in the history of mankind. His ideas, actions and life itself are a great learning for anyone including management scholars and practitioners. There are tremendous management lessons that can be learned from him. In this paper, we focus on the innovation skills of Mahatma Gandhiji. Gandhiji was a great innovator with the skills of questioning, experimenting, observing, idea networking and association - the five skills identified as Innovators DNA.

5   **Managerial Implications and Contributions**

These five skills have significant implications for practitioners as by building these skills, managers can grow in their innovation journey and can add value to the organisation and society. Gandhiji used these skills and was successful in achieving his goal of getting independence for India in an innovative non-violent way.

Questioning is a very important skill for innovation and throughout history great innovators have innovated by questioning the common wisdom. It is a skill and can be learned through regular practice by anyone. It is essential to experiment to come up with innovative ideas and to convert the innovative ideas into solutions.

Similar to Gandhiji, great innovators do a lot of experiments to come up with new ideas and to convert innovative ideas into solutions. To find a solution to a problem, it is very important to observe it and understand it and use these observations to come up with innovative ideas and solutions.

Similar to Gandhiji, great innovators are keen observers and use these observations to come up with new ideas and solutions. It is very important to keep learning by interacting with people from diverse backgrounds to get new ideas.

Similar to Gandhiji, great innovators are idea networkers and use these knowledge sources to come up with new ideas and solutions. Last but not least, the skill of association is an important skill for innovators to combine two ideas into a new innovation.

Contributions to Research and Practice:

Managers and leaders need to take these learnings from Mahatma Gandhi's life and build on their innovation skills for solving problems and exploring opportunities. Academicians also need to take the learnings seriously. Today management education and contributions of management education are questioned at times. Academicians need to use innovation skills to come up with innovative teaching, training, research, consultancy and related solutions to make more significant contributions. This will be a real tribute to the Father of the Nation, Mahatma Gandhi Ji. This work has tried to contribute by trying to share the importance of innovation and the results of using innovation through the examples from the life of Mahatma Gandhi ji.

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Malicious Domain Names and Their Semantic Features: Building Intelligent Predictor Systems Using Textual Features of DNS Dataset

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1. Introduction

Malicious websites are developed primarily with the intent to exploit the security of the device visiting that webpage, or harm any individual or an organization clicking on that webpage. They can also enable phishing activities such as collecting sensitive information including passwords or credit card numbers, or for engaging in cyberattacks, malware spreading and ransomware attacks. Authenticity (Satyam) is one of the three pillars of "Globalizing Indian Thought". Relevant security measures and technologies play a significant role in driving authenticity in today's digital age. They provide means to verify identities, secure communications, protect data, prevent fraud, and ensure the authenticity of various digital assets and interactions. DNS (Domain Name System) security is crucial in authenticating websites and ensuring a secure online environment. DNS security can prevent DNS spoofing and cache poisoning, protect against man-in-the-middle attacks, enhance website trustworthiness, verify website identities, mitigate DDoS attacks, and so on. In India, healthcare happens to be the most vulnerable industry in terms of cyber-attacks, followed by education and research, government and military and insurance or legal firms ("Over 2,000 Cyber Attacks Hit a Single Indian Firm a Week on Average: Report," 2023). Also, on an average, per week an Indian organization is observed to suffer 2146 cyber-attacks ("Over 2,000 Cyber Attacks Hit a Single Indian Firm a Week on Average: Report," 2023). India also recently hosted a G20 Conference in Gurugram on Crime and Security in the Age of NFTs (Non-Fungible Tokens), Artificial Intelligence and Metaverse ("PM Says Cyber Crimes Can Have Social, Geopolitical Implications; Need Global Cooperation to Deal It," 2023).

Through DNS poisoning and spoofing, malicious actors manipulate DNS records to redirect legitimate traffic to malicious websites which lead to serious business implications. Malicious domain names often exhibit various semantic features that help identify them as potential threats. These features are important for cybersecurity professionals and organizations to detect and block malicious domains (Koutsokostas et al., 2022). Some common semantic features of malicious domain names include names containing random combinations of characters, numbers, and symbols to evade detection, misspelled words to mimic legitimate ones, homoglyph (local language) substitution (Yazdani et al., 2020), presence of subdomains, using hyphens within domain names to make them look like subdomains, using lengthy names to confuse users and hide malicious intent, phishing domains using words like *urgent*, *expire*, or *warning* to pressure users into taking immediate action, using IP addresses instead of domain names to make them appear as a sequence of numbers, which can be more challenging to recognize, and creating multiple subdomains to obfuscate their activities and increase the complexity of the domain name. To detect and mitigate the threats associated with malicious domain names, organizations employ security tools that analyse these semantic features, along with other technical features such as internet protocol (IP) reputation, secure socket layer (SSL) certificate status, and historical data. Machine learning (ML) can be used to enhance the accuracy of domain name threat detection.

From an organization's perspective, malicious websites affect tangible as well as intangible assets of the firm. It not only leads to monetary and asset losses, but also leads to defamation and puts the organization's reputation at stake, especially if sensitive information of clients is revealed. As such, firms are coming up with enhanced cyber security mechanisms, phishing prevention, stricter compliance management, quick incident response and threat intelligence. Early identification of malicious websites, or alerting users in case of observing any suspicious website is of utmost importance. DGAs, or Domain Generation Algorithms are widely used to generate large number of malicious domain names. Often, the textual analysis of the website helps in early identification of suspicious activities. For websites deployed through DGAs, observing the underlying characteristics of domain names and building appropriate machine learning processes yield much accurate results (Almashhadani et al., 2020; Cucchiarelli et al., 2021; Selvi et al., 2019; Yang et al., 2019; Yang et al., 2021; Park et al., 2022). Also, DNS can significantly be utilized to detect suspicious websites (Yazdani et al., 2020; Wang et al., 2023; Palaniappan et al., 2020; Sun et al., 2020). This paper proposes to use a ML classifier to detect malicious websites. We intent to use a decision tree (DT) classifier to identify what kind of textual features of the domain name leads to the decision of it being categorized as a malicious domain name. In alignment with our objective, we frame the following research questions:

RQ1: How much accuracy can be achieved by a Two-Class Boosted Decision Tree Classifier when used for malicious website detection on a DNS dataset?

RQ2: What are the textual patterns observed in the domain name of malicious websites when Two-Class Boosted Decision Tree is used to predict the same?

2. Literature Review

Malicious domain names are categorized into four types including random character based, word based, predicted character based, and multi-element hybrid (Yang et al., 2022). They used syntax tree analysis for identifying the semantic relationship between the elements. They could observe significant difference between legitimate and malicious domain names. Cucchiarelli et al. (2021) studied lexical features of domain names, used supervised machine learning process and presented domain names detection based on n-grams features. Masked n-grams are also observed to provide greater accuracy in malware detection (Selvi et al., 2019). They also used Random Forest relying on lexical features of the domain names. Liang et al. (2022) proposed a feature extraction method to analyse features such as length of domain name and public suffix. Its relevance is highlighted by the fact that the length of the domain names generated by the botnets are different and botnets often hide their command-and-control server in order to generate their domain names. Almashhadani et al. (2020) developed a malicious domain name detection system which is based on ML and detects DGA based domains. DGAs also have the capability of changing the domain name frequently, and hence the detection becomes even tougher.

Satoh et al. (2020) studied possible solutions for the above and built an approach for estimating the randomness of domain names by analysing the character strings. The principle is based on the fact that contrary to DGA domain names, human generated domain names would try to reflect the name of the organization or purpose behind creating the DNS. Hence by analysing the domain names, they were able to identify domain names generated through DGAs. Their method has high precision and recall, which shows that the method was effective. Yang et al. (2019) also explored semantic analytics to identify DGA generated domain names. They focused on inter-word and inter-domain correlations through semantic analysis and explored in detail the various parts of speech (POS) of the DGA generated domains by constructing an ensemble classifier. Park et al. (2022) identified domain linguistic patterns through significant feature extraction

methods by building a malicious domain detection method with autoencoder which achieved 99% accuracy.

Yang et al. (2021) proposed a lightweight full-convolutional detection model with a detection pipeline comprising high-speed data acquisition, filtering, and inference. The system shows improved processing capability and uses significantly fewer parameters. Stealthy domain generation algorithms (SDGA) are even harder to detect (Yang et al., 2020). They showed that characteristics such as dynamic generation and use of obfuscation techniques are difficult to blacklist. They analysed the characteristics of SDGA generated domain names minutely at the character level. Following that, they proposed a heterogeneous deep neural network framework (HDNN) for detecting SDGA. DGA archives were also unable to cover newer malicious non-existent domain names (NXDomains). Sun et al. (2022) proposed a positive-unlabelled (PU) learning with feature selection (PUFS) framework for training and detecting malicious NXDomains which could improve the feature extraction efficiency by 1,153%.

For detecting phishing websites, Karthika et al. (2022) implemented a block-chain based filtering mechanism, which detects homographic phishing URLs with an accuracy of 91%. It is particularly of use when such URLs are being hosted in the cloud. The existing blacklisting software often lack the ability to detect multi-level phishing addresses in the cloud. DNS Firewalls mostly work on the principle of blocking the known malicious domains. The inclusion of Unicode characters in domain names allowing users to use regional languages (homoglyph), making the detection of phishing attacks difficult. Yazdani et al. (2020) proposed a structured approach for detection of suspicious homoglyph domain names based on the characteristics of the domain name. This mechanism allowed to detect 2.97 times more the homograph domains. A three-level dynamic malicious domain detection method (DDOFM) was proposed by Wang et al. (2023). It combined the statistical features of benign domains with some DNS features and also looked at identifying warned domain name attributions. Apart from using lexical features and DNS data, Palaniappan et al. (2020) used web-based features of domain names and built a logistic regression classifier. A novel Graph Convolutional Network (GCN) method was proposed by Sun et al. (2020) using the dynamic and heterogeneous nature of DNS which was found to be harder to invade by attackers.

3. Dataset Description

We used the DNS dataset obtained from the journal *Data in Brief* (Marques et al., 2021), and it has 34 features such as domain name, Shannon entropy, DNS record type, creation date, open ports, IP, geolocation, number of strange characters and different ratios of various alphabets, sequences details such of maximum number of consecutive consonants or vowels, etc. The dataset is labelled with a class name equals to 0 for malicious domains and 1 for non-malicious domains.

4. Methodology

Based on literature, ML can be effectively used to predict malicious websites. Decision trees, a popular ML algorithm, are well-suited for classification problems, easy to understand and interpret and can handle mixed data types. We can also visualize the tree structure to see how decisions are made at each node, which can provide valuable insights to the stakeholders. As such, a Two-Class Boosted Decision Tree Classifier was built using the Microsoft Azure Machine Learning Studio to predict malicious website detection predominantly based on textual characteristics of domain names. The feature of DNS Record type in the dataset has been kept for filtering purpose (Marques et al., 2021) and we focused on DNS record type A which signifies the IP address of a given domain with 49529 records. Features selected include whether the Domain is listed in Alexa, the number of strange characters present, IP reputation, consonant

ratio, numeric ratio, vowel ratio, special character ratio in the domain name, consonant Sequence, vowel sequence, numeric sequence, special character sequence, domain length, and class (malicious or non-malicious). No missing values observed. Maximum of 10 leaf nodes were constructed in 50 iterations, the learning rate provided was 0.2 and dataset was split into 50:50 ratio through randomized seed for training and testing.

5. Results
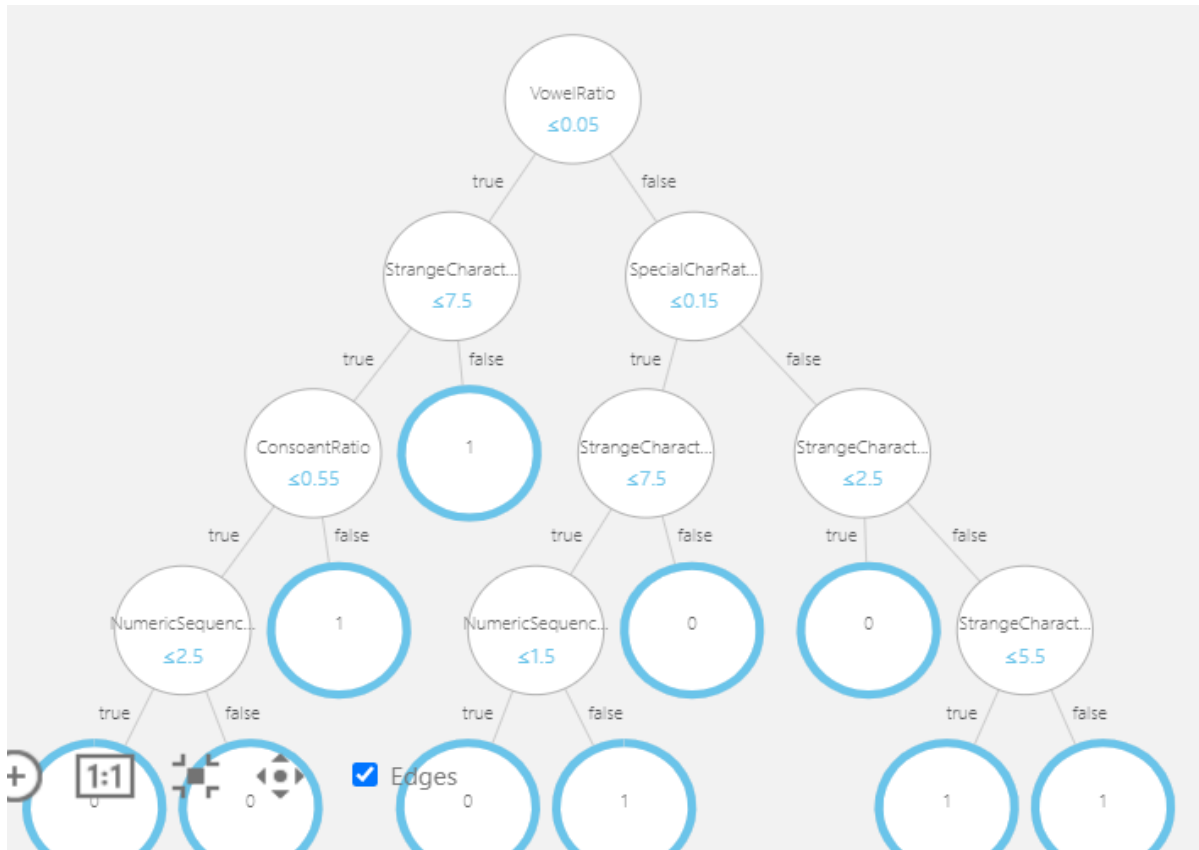
Figure 1: Two-Class Boosted Decision Tree Classifier for Malicious domain classifier

From Figure 1, it is observed that for higher vowel ratio, lower special character ratio and higher number of strange characters predicted malicious domain. Also, for higher vowel ratio, higher special character ratio but lower number of strange characters predicted malicious domain. For lesser vowel ratio, higher number of strange characters leads to non-malicious domain detection. From Figure 2, we can see that the Accuracy, Precision, Recall, F1-score and AUC score of the DT classifier as 98.9%, 95.7%, 91.6%, 93.6%, and 99.8%, respectively. This shows that the classifier is performing very well in detecting malicious domain names. From Figure 1, we can observe that the textual patterns observed in the domain name of malicious websites include combinations of specific ratios of vowels, consonants, numeric sequence, strange characters, and special characters, leading to the prediction of malicious domain names.
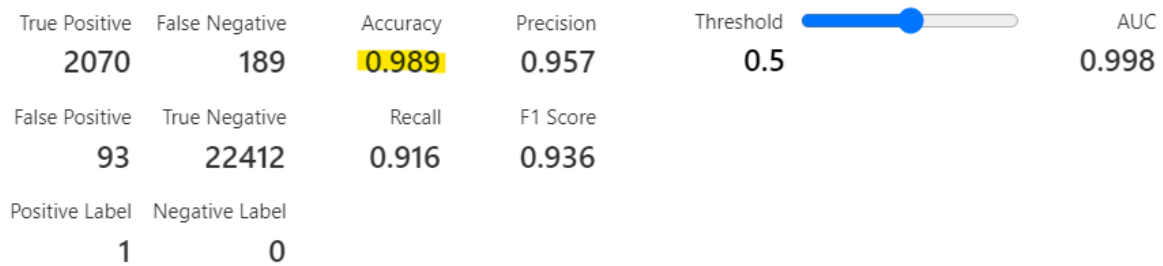
Figure 2: Confusion Matrix for the proposed classifier

6. Discussion

Data breaches or cyber-attacks not only lead to financial loss for organizations but also image loss and puts the brand reputation at stake. Malicious websites that are accessed due to DNS poisoning may be used for various fraudulent activities, including phishing, scamming, and distributing malware. Businesses may suffer financial losses due to fraud, legal expenses, and potential fines. If users are redirected to fraudulent websites that collect sensitive information such as login credentials, credit card numbers, or personal data, it can lead to data breaches. These breaches can result in regulatory penalties, lawsuits, and reputational damage. Cybercriminals may use DNS poisoning to redirect traffic to websites that steal intellectual property, trade secrets, or proprietary information. This can harm a business's competitiveness and innovation. Meeting security standards and ensuring security compliance at all levels of the organization are mandatory requirements. AI and ML based systems can help building robust cybersecurity measures which, in turn, can enhance the competitive advantage for organizations. Implementing simple malicious website detection systems can alert even the non-technical employees of a firm with greater ease and reduced costs and prevent such users from further visiting such suspicious sites. This is especially relevant in today's times when employees tend to share seemingly non-sensitive data in the internet with the advent of generative AI and freely available AI tools for preparing PPTs and attractive reports.

7. Conclusions

With the availability of labelled dataset pertaining to malicious and non-malicious domain names, building of classification models-based ML algorithms can help in effective detection of malicious domain names. Since such domain names are often generated by bots or pre-trained systems, they lack coherent meaning and hence studying the textual characteristics of the domain names can help build interesting models. In this study, a DT classifier was built from a dataset containing various features of the domain name such as consonant ratio, maximum number of consecutive consonants in sequence, presence of special or strange characters, etc. The accuracy of this model is 98.9%. The DT shows combination of various ratios of vowels, consonants, numeric sequence, strange and special characters leading to the prediction of malicious domain names. Future studies could be conducted on identifying other influential factors present in malicious domain names. In all, classifier ensembles can help detect malicious websites by looking at their name with great accuracy and help ensure safety in cyberspace. Employee awareness is also facilitated via explainability since they are able to understand certain unnatural ratio of vowels, consonants and presence of various strange characters constitute malicious domain names, which often goes unnoticed when lurked by malicious websites, promising AI enabled tools for enhanced productivity.

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Organisations, Individuals and Their Cognition of AI and ML: An Actor-Network Perspective

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The most emergent IT developments today are still machine learning and artificial intelligence, which have made unheard-of strides in recent years. Artificial intelligence (AI) is now present in every facet of the business world specifically AI-powered smart systems capable of carrying out tasks that typically require human intelligence. A multitude of AI apps can assess, forecast, and diagnose issues to help HR professionals make better decisions; integrating AI with management practices will considerably benefit businesses.

Theoretical Contextual Background

In this paper, we speak sociologically to machine learning and artificial intelligence (AI) through the lens of Actor-Network Theory (ANT) and the importance of context drawing from the Philosophical investigations of Wittgenstein. We investigate how AI systems shape the decision-making process of an organization in the Indian context. India is on the verge of enormous change in terms of human-technology interactions, and change of workspace interactions among employees mediated by technology. Further investigation entails how an understanding of the reality of technology is adapted and its subsequent iterative impact on individual and organisational decision-making processes in an evolving socio-cultural milieu like India. ANT considers the world as a network of actors, both human and non-human within the Indian context of an IT firm. The study will bring out the subjective dimensions underlying AI development by collecting data on the sensemaking process of multiple stakeholders in a technological context where AI is developed and used extensively.

This allows us to understand how AI is not merely a technical tool, but rather a social and political construct that is shaped by the interactions of a variety of actors. We believe that ANT can help us to socio-technically understand the organisational ecology of AI or the way in which AI systems are embedded in and shaped by organisations. We focus on how actors engage with, interpret, reinforce, and iteratively shape AI. Our phenomenological study will show how AI systems and algorithms are not simply created by a single actor but rather are the product of a complex network of interactions and meaning-making. Our evolving paper will understand and contribute to a sociologically grounded process-based understanding from an Indian context of how various organisational stakeholders perceive and interpret their work with AI and ML and extract the subjective decision-making dimension at every step and how these decisions and assumptions shape their interaction with data, ML and in turn themselves.

The rapid development of machine learning and artificial intelligence (AI), particularly deep learning, generative AI, and the availability and mobilisation of large amounts of asynchronous data, has led to the proliferation of AI-powered smart systems in every facet of the business world. These systems are capable of carrying out tasks that typically require human cognition and these advances have been celebrated by the business press and many books by Morrow [2022] and others. However, AI critics argue that Searle's Chinese room experiment still holds,

and scholars such as Taylor, Beer, Schuulenburg and Peters, Hong and the physicist Stephen Hawking also point to the genuine potential dangers of AI, algorithmic thinking, and big data.

Furthermore, the development of AI and ML must reconcile the mind-body problem in social theory. AI systems are often designed to mimic human cognition, but they do so without considering the embodied nature of human subjectivity. Merleau-Ponty argued that human beings are not simply disembodied minds but rather that our minds are inextricably linked to our bodies and the world around us. Our physical and socio-cultural context shapes human affect, cognition, and actions. AI systems, on the other hand, are typically designed to operate in a decontextualized environment. They are given a set of data and instructions and tasked with making decisions based on that data. Algorithmic thinking overlooks that humans make non-programmed decisions in a much more complex, messy and nuanced contextual way. Humans consider their experiences and understanding of the social world foregrounded in their sense of fairness and morality. AI-powered applications can only be as good as the data they are trained on. Therefore, businesses must carefully curate their data and monitor the performance of AI-powered applications to ensure that they are not making biased or discriminatory decisions.

For instance, mainstream managerial literature proclaims that the integration of AI with HR practices has the potential to revolutionise the way businesses manage their workforce. AI-powered applications can assess, forecast, and diagnose problems to help HR professionals make better decisions. For instance, AI in HR can use swarm intelligence. Swarm intelligence is a type of AI that simulates the collective behaviour of decentralised agents to solve problems. It can be used to develop AI-powered applications to make intelligent decisions with relatively little human input. For example, AI-powered applications can automatically match job seekers with open positions or accurately predict attrition.

However, integrating AI with HR practices raises many ethical and social concerns. For example, AI could lead to the de-skilling of HR professionals, the surveillance of employees, and the potential for AI to discriminate against certain groups of people. It is essential to carefully consider these concerns before AI is widely adopted in organisations, as they can potentially impact employees and the workplace negatively.

Concerns have been raised in the Critical management studies community regarding the dominance of hegemonic Western concepts in management scholarship, the lack of scholarship representing the diversity of Indian thought, and the need for managerial epistemologies that are applicable to the Indian context. India is an intuitive, oral, and reflective society that is evolving and seeking answers regarding norms, social inequalities, and climate change, as well as a global epicenter for IT and ITES.. Indian managers, academics, and policymakers must collaborate to prevent AI from replicating the colonial power dynamics identified by Spivak and Said. India's media and management consultants appear unconscious of emergent Indian understandings of AI and the role of organisational power dynamics influenced by employment relationships in algorithmic development. However, if generative AI can be adapted to multiple Indian contexts with a clear purpose there is also immense potential for individuals and organisations to be better versions of themselves.

RESEARCH QUESTIONS

To dive into the emergent fluid interaction between organisations, employees, data, and AI, we have employed an exploratory phenomenological approach to understanding the practitioner's view on how AI is understood within an organisation's actors.

Research Questions

1. How can we understand Human AI interactions and their representations of the structuring of ML?

2. How. human subjectivity and learning discursively shaped by AI?

3. How do decisions at various times shape the trajectory of AI development, deployment, and application?

4. If computer perception merges with machine learning, how does it affect algorithmic thinking ?

Methodology

Our data collection entails numerical and narrative data collected using questionnaires with close-ended questions and semi-structured interviews with open-ended dialogical interpretive interviews. Potential respondents were individuals who have hands-on experience in AI development and are or have been actively involved in projects of AI implementation. We conducted semi-structured interviews with business decision-makers who were knowledgeable about the underlying ideas behind artificial intelligence and were able to interact with senior managers of companies such as HCL and the like. We first understood the operative context of AI across multiple sectors, such as the automotive industry, IT and manufacturing and the difference underpinning the extent and scale of AI development and usage in India. We explored allied concepts such as IOT and AI. We then focussed on IT companies such as HCL and the technological software firms actively starting to embrace AI technologies.

Participants were asked to report their demographic characteristics, such as age, gender, and education. Unstructured interviews of over three hours each were done in Bangalore and Hyderabad over offices and other informal settings for over three months. Telephonic conversations and data revalidation were made with consultants with vast domain expertise in leadership roles in organisations, including technocrats advising companies working on cryogenic technologies. Our focus thus far has been the senior leadership level across multiple sectors to understand what AI and ML mean to them to set the context of our study.. We will expand the sample within the IT software development sector and also spend time shadowing employees of one mid-sized firm working on application development and fuzzy logic. We have analysed and extracted the themes emerging from our text.

We use the concepts of thematic analysis (Braun and Clarke, 2006, 2012) to analyze the interviews to determine the conditions for AI understanding in an organisation. In the questionnaire, the respondents were asked to specify details about their interaction with AI logic and the end objective of AI design in their operational module. We will have wider-ranging interviews and continue with more focused deepening interactions with senior managers, developers, and testers. We will continue to bracket these statements and draw out the central themes in this ongoing exploration of AI, managers and their sensemaking process.

Data Analysis

As the representative sample quotes from interviews indicated senior managers were yet to develop a more holistic perspective that captures the subjective power asymmetries and tensions arising from the development and deployment of algorithms of an intelligent AI. They are in a

state of wonderment and think of AI and ML development as relatively linear cost-effective technological solutions to many complex organisational and market challenges. Some respondents indicated their worries about AI, but these were generic concerns in a rapidly changing but nascent context and removed from concerns arising from human-machine level interaction dynamics.

R1

"Decision-making algorithms shape and reshape the evolving understanding of Indian IT professionals. Many Indian IT professionals will be replaced and rendered redundant, and the existing Indian IT ecosystem will be disturbed. However, since India has a large body of trained workforce, it can be used to "analyze and process data at a much lower cost. Traditionally India has been strong in testing rather than original software development. India will take some time to create something close to sentient AI. We are analysing how AI develops in India.

R2

AI is not artificial intelligence. It is just a data harvesting mechanism that sorts, arranges, and comes out with novel patterns and insights that would otherwise have been months to arrive at. It can also play havoc with signaling systems and power grids. AI has the development dimension, the security dimension and the ethics dimension within which human subjectivity interacts and shapes judgments, processes, and outcomes for multiple stakeholders.

R3

Everyone is excited about smart system AI and how it can provide innovations to new start-ups without the entrepreneur giving away much about the algorithmic development process. It can transform lifestyles as long as technology cuts costs and reduces labour. Companies want to automate to get predictable, consistent output without worrying about human emotions and subjective considerations. When the computer came, employees felt threatened; such reactions are natural in AI. The bottom line is profitability for a company rather than employing all costs.

R4

The more powerful the networks mimicking a neural network, the more complex and quicker data is repurposed. Ai is programmed to predict the future based on careful inferences from its data. Crunching and processing considerable information is the hallmark of AI. How will firms developing and mining data shape and structure their algorithm and generative AI? Sensors do everything, and their complexity and utility vary. AI has many aspects and components to it. In this regard, careers and conventional Indian IT career pathways will be shaped fundamentally.

R5

India's most significant opportunity is its cost advantages and ability to become a data processing hub and customise and develop AI within and across multiple sectoral contexts and work processes.

R6

Transformational leaders are required in companies but the kind of leadership styles given AI and how it structures work groups will change and evolve.

R7

AI smart systems are unlike passive machines that are capable only of mechanical or predetermined responses. Humans are slowly coming under the control of computers. Most of the time,we are unaware that our decisions are powered by AI which becomes an actor's input in a network.

AI cannibalization often happens. Especially in the automotive industry. The system malfunctions and starts consuming itself.

R8

The above data indicates that insights of Actor-network theory are a fundamental jprerequisite to understand subjective decision-making dynamics and assumptions relating to meanings within and from technological process development. Our study is a work in progress, and many more interviews will be done, drawing upon phenomenology and quantitative surveys. The sample data reveals that they do not understand the micro politics of interaction between animate and inanimate technological workflows and employees and their subjective concerns and insecurities.

Visualisation of an AI network and its actors' assumptions of its workflow that is being unpacked
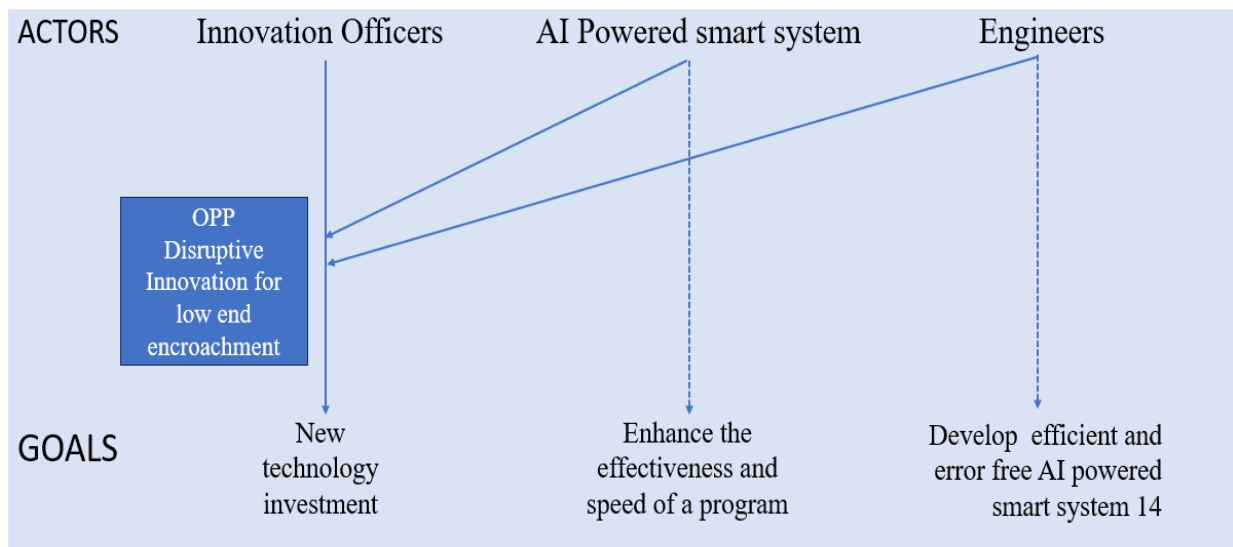
Concluding Discussion

The above study has laid out the structured classification of the various current research streams and a list of promising emerging trends. Findings have shed light on six topics attributable to three different themes, namely, the nexus of AI (ML) and human interaction, interconnected iterative sub-themes (people, tech, and broader ecosystems), and grey areas of ethical utilisation of AI. A vital revelation is deconstructing the microdynamics of actors' their dilemmas, decision making alternatives and trade offs both situational and in totality and they interact with data and are informed by AI to shape the anatomy of an organisation. T

As AI is deployed in an intermediary role to directly interface between humans and specific actions, it is also designed to learn from its experience.Human brain has got something beyond mathematics and logic which draws a line at the tech-human nexus.Illusion is being created where AI powered systems are telling you what ultimate reality is and your subconscious mind is readily accepting that. This I believe is an underlying damage going unnoticed as it is is Nirvana for you'. AI is promised in India as a powerful silver bullet. Embedded in AI is an asymmetry between humans and machines concerning trust and empathy.

The most challenging aspect to promoting ethical AI will be the competitive context of companies who are leading the integration of the technology. Google, Microsoft, and Amazon have significant market presence and lobbying strength.The implications of AI and algorithms on human livelihoods and agency within and beyond organisations in the Western context from Sennett, Bauman and earlier on Marcuse are exacerbated. In an Indian context understanding and theorising these tensions are critical because they have far-reaching social, moral and economic implications. We believe that AI provides immense opportunities to facilitate innovation but also opens a dilemma in understanding of cognitive intuition of technology implementation. Shaping multiple levels of supervised and unsupervised AI that is foregrounded Indian epistemologies and vocabularies rooted in the aspirations of a developing diverse country is critical for multiple stakeholders.

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Vidura and Yagnavalkya in a B-school classroom: Creating Reflective Spaces for Indigenous Philosophical Systems in Management Pedagogy

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1.   Introduction

The researcher's experience of teaching Communication, Leadership and Negotiation Skills in an Indian business school revealed the limitation of a template-driven pedagogy: a constrained classroom interaction that afforded little room for reflective thinking, self-enquiry and a deeper understanding of the complexity of the leadership dilemmas. A sixth-trimester elective titled "Communication and Leadership through Literature" was therefore created to unpack learning moments from classic literature and the complex interplay of protagonists with their respective circumstances. The aim of the elective is to break away from the functionalist perspective that creates a static problem-solution paradigm for transferable skills and introduce students to complex, often inherently ambiguous narratives that create questions rather than supply answers. It offers a mixed selection ranging from classics such as "To Kill a Mockingbird", "Saint Joan" and "Siddhartha" to excerpts from the Mahabharata and the Upanishads. In this abstract, we will focus on the rationale behind selecting two Indian philosophical texts: the analysis of Vidura's conduct extracted from Iravati Karve's Yuganta (1991) and the conversation between Yagnavalkya and his wife Maitreyi from Chapter II of the Brihadaranyaka Upanishad (Krishnananda, n.d.). We will also discuss the conceptual model that provides a platform for discussion and self-reflection, the pedagogical exercises designed to unfold the principles and learnings therein, the post-discussion reflections, and the implications of embedding such texts in management pedagogy.

2.   Literature Review

The impetus to include ancient Indian philosophical thought in a second-year elective in the MBA program titled "Communication and Leadership through Literature" stemmed from the need for a holistic approach that offers a balanced perspective on indigenous as well as western systems of thought. Hence the researcher's focus on including ancient Indian texts that bring a flavor of complexity and nuanced discussions on philosophical dilemmas, as well as the importance of equanimity in the face of volatility in uncertain times. Gopinath (1998) argues that global management principles expound the development of the intellect, and that little is being done to transform the quality of feeling and emotions at the level of the individual. He recommends the interpretivist paradigm which will help "research traditional writings and religious scriptures to identify aphorisms or injunctions which may be interpreted to have relevance for modern management" (p. 262).

Joy and Poonamallee (2013) also advocate a postcolonial approach to management education to counter the tendency of the west to control the process of transfer of knowledge, by virtue of its "undisputed faith in the superiority of its own knowledge and ways of knowing" (p.403). Their contention that businesses in different parts of the world may not share the capitalist objective of profit making resonates with the views of Giri (2020) who avers that there is very little theorizing about the human condition emerging from contemporary India and its global implications. Ghosh (2020) argues: "Today's business practice is self-destructive and unsustainable…spirituality has to be the master." She concludes that "the purpose of

management and business is not merely producing profit or increasing the market value of the company but also to serve the self-realization of all the persons involved, including all the stakeholders" (p.2).

Manikutty (2015) comments on the dilemmas faced by characters in the Mahabharata and the possibilities of bringing these home to his business school students as part of his course on moral enquiry. While there is a significant body of research encouraging the use of ancient indigenous knowledge systems in the realms of philosophy and spirituality in modern business education (Sharma and Tiwari 2017, Kumar 2017, Poruthiyil 2012), the focus is largely on the rationale and the benefits of mapping discussions and reflections to constructs of sustainable leadership. There is very little scholarship on how these discussions can be embedded in experiential pedagogy for a contemporary audience. The abstract is an attempt to showcase the pedagogical approaches used in the course of the elective.

"Yuganta" (1991) by Iravati Karve is included as a pre-read to discuss the actions and decisions taken by Bhishma and the trials and tribulations of Vidura. The former is ideally positioned for a discussion on the dilemmas faced as a consequence of one's decisions, while the latter is an ideal choice for the themes of resilience and equanimity, by virtue of his profound compassion, wisdom, and self-discipline (Dhand, 2004). The conversation between Yagnavalkya and Maitreyi from the Brihadaranyaka Upanishad (Krishnanda, n.d.) is also chosen for a reflective discussion on the notions of ownership, detachment, and the impossibility of attaining eternal happiness through material possessions. The pedagogical exercises based on these two pre-reads are described in Section 4.

3.   Conceptual Model

The Sattvika Leadership Model proposed by Alok Kumar (2017) provides an alternate approach to western models and theories of leadership. Sattvika Leadership (SL) is defined as "a set of purposive leader actions comprising knowledge-driven cooperation that are initiated on the basis of positive and reasonably accurate assumptions and executed through morally responsible and sustainably fruitful means to secure the flourishing of followers and the collective" (Kumar, 2017, p.121). The elective does take recourse to the models of transactional, transformational and transcendental leadership (Gardiner 2006, Gyensare et al 2016, Laing 2019) while discussing literary classics such as "Jonathan Livingston Seagull", and "To Kill a Mockingbird". While discussing indigenous systems of philosophy, however, Kumar's model that focusses on deeper engagement with morality and ethics was believed to be more suitable to discuss the darsanas, or Indian systems of thought. The discussion on Vidura's actions in the Mahabharata is validated by Kumar's model and his detailed construct with its emphasis on equanimity toward success and failure. It also finds application in the idealism of Yagnavalkya who explains to his wife the notions of temporality and the illusion of ownership.

4. Discussion of the Pedagogical Exercises

4.1.Pedagogical Exercise I: Class discussion and discussion on Vidura

One of the themes in the elective titled "Communication and Leadership Through Literature" is "Narratives of Resilience" in which Iravati Karve's "Yuganta" is taken up for discussion. Two characters were chosen from the Mahabharata against the context of the theme: Vidura and Bhishma owing to the rich potential for discussion afforded by the dilemmas they face. Bhishma is forced to take hard decisions because of his allegiance and loyalty to his family, and he faces the consequences of his decisions with immutable fortitude. Vidura lives out his destiny through

a stoic and virtuous acceptance of his station in life in spite of the evident injustice meted out to him by life and circumstances.

4.1.1. Session Plan

For the purpose of this abstract, we will discuss how students in the course were encouraged to reflect on the role played by Vidura as discussed by Karve (1991) in Yuganta. Two questions were assigned based on the reading:

- Everyone is caught up in one's own dilemmas, and moving inexorably to one's own destiny…is reconciliation to one's fate a solution to all our earthly griefs and sorrows? Base your response on Vidura's story.
- Suffering is a part of life. Certain circumstances are beyond one's control. Does Vidura's conduct help one understand how to sustain oneself?

In order to lend structure to the discussion, the class was divided into two groups: an inner circle and an outer circle with a question assigned to each. The following ground rules were set for the discussion:

- The inner circle responds to the first question, one by one, with precision and logic, citing examples from Vidura's experiences and their reflections on his conduct.
- The outer circle only listens, quietly making their notes in case they wish to contradict, or agree.
- Once the inner circle finishes with their responses, the students from the outer circle respond to each point, carefully observing the rules and decorum of "sandhaya sambhasa" or an amicable debate as against "vigrhya sambhasa" or hostile debate, as advocated by Caraka (Matilal, 1998).
- The facilitator does not intervene till the last responder in the outer circle gives his or her opinion. The students from the inner circle could respond with a counter in the same respectful tone, applying the skills of active listening imparted in the first year.
- The same process is followed with the second question, with the outer circle responding to the second question.

4.1.2. The learning outcomes of the exercise:

The discussion yielded interesting perspectives on how Vidura does not emerge as a brooding pessimist resigned to his fate, but does his bounden duty as the faithful minister while championing the cause of the Pandavas. Karve's perspective that Vidura's life is transfigured by sadness was critically analyzed and found wanting in the absence of any logical evidence. The discussion also veered into topics such as free will v/s destiny, the vulnerability of human beings in the face of quirks of fate and one's station in life, and the possibilities opened up by being stoically resilient in the face of vicissitudes. Students also mapped the learnings from this discussion to the learnings from an earlier prescribed reading of "Siddhartha" by Herman Hesse (1922) by commenting on how each being has to navigate their own journey to self-realization and how there are multitude ways of doing so.

The caveat of an amicable debate ensured that students listened respectfully to opinions contrary to their own and presented compelling arguments to attack the positions taken, and not their peers.

4.2. **Pedagogical Exercise II:** Class discussion and exercise based on Yagnavalkya's conversation with Maitreyi

The conversation between Yagnavalkya and his wife Maitreyi in the Brihadaranyaka Upanishad was included as a reading for the theme "Language and Reality" with a two-fold objective:

1. To demonstrate the subtle ways in which language can impose a reality through the subtle connotations of words and implied meanings
2. To prove how it is possible to revisit reality through philosophical reflection using Yagnavalkya's philosophy.

The conversation between Yagnavalkya and Maitreyi focuses on earthly attachments, the transient nature of reality, and the impossibility of gaining eternal happiness through material possessions. While this elective does not explicitly aim to increase the spiritual quotient of students, it does intend to introduce values such as enlightened guardianship and a healthy sense of detachment as a pathway to transformational leadership. Hence the choice of this ancient discussion that advocates transcending excessive attachments.

To summarize the conversation, Yagnavalkya argues that one cannot permanently possess anything, as the connection is psychological and temporal; and happiness is after all, a condition of the mind. Even if you wish to get united with the object of your desire, it is not possible for you to enter into the being of that object. He then goes on to explain the nature of the soul, which alone is the source of fulfilment and hence the only worthwhile object of meditation.

To introduce this conversation as a learning and reflection component, it was necessary to position it in a contemporary context for reflection. The students needed to examine the content of the conversation in the light of their personal connotations of words and concepts such as "possessions", "attachments", "reality" and "self". The exercise described below was devised to reinforce and clarify the understanding of what can be arguably a complex prose piece for a 21st century audience.

4.2.1. The Session Plan

The class was shown a series of statements and responses were invited to explain how in the light of the conversation, the statements no longer stood the test of veracity in the light of the sage's philosophy. The table below shows how students proceeded to strip the statements of their claims by mapping it to specific excerpts from the conversation:

Table 1: Mapping of statements to the philosophical discussion

Statement	*Mapped to the conversation
I inherited property	There is no vital connection between the thought of the person and the landed property. The connection is imaginary. The whole question of ownership is a condition of the mind.
I am wealthy	Time has a say in the matter of our possessions. The very idea of permanent possession is false.
I am ruined…I have lost everything	This is a condition of the mind that cannot understand that sorrow comes from falsely

	believing that you have lost something/everything. What you lost did not belong to you in the first place.
I own two cars	The whole idea of ownership is artificial.
I have ornaments of great value	This is related to Maitreyi's question of the great value of the property that Yagnavalkya will be bestowing upon her; the truth is that value is temporal.
I will be happy only if I get a promotion	Nothing external can give you enduring happiness.
My little niece is dearest to me in the whole world	No object can be regarded as lovable or desirable. What you love is only the condition that you imagine to be present in the state of the possession of the object.

Source: Created by the author

*These statements are based on the responses contributed to the discussion. These, therefore, are not exactly congruent with the script of the conversation.

4.2.3. The learning outcomes of the exercise

The exercise and the resulting discussion led to several observations and questions on cultural and philosophical polarities: the individualism and ambition mindset that is sociologically prevalent versus the eastern concepts of disinterested discharge of duties with detachment. Students expressed their discomfort with the idea of renunciation being introduced on the threshold of their careers and personal growth. However, some students attempted to understand the rationale behind the exercise and reasoned that the conversation was not about giving up on ambition altogether; it was more about coping successfully with the sorrows that emerge from excessive attachment to the objects of one's desire.

Parallels were also drawn with contemporary business leaders such as Dilip Shanghvi whose virtues of quiet diligence and detachment are reflected in his biography "The Reluctant Billionaire" (Das 2010) and Subroto Bagchi whose autobiography "Go Kiss the World" (2008) is a reflection of a philosophical bent of mind that helped him take tough decisions in a crisis.

5. Conclusions

The researcher believes that the class discussions based on indigenous systems of philosophy helped achieve the intended learning outcomes in the following ways:

- They introduced students to the richly nuanced texture of spiritual discussions not afforded by a curriculum based on western thought and ideology.
- They created spaces for self-reflection, self-inquiry and intellectual stimulation which are important for self-development; this in turn according to Ghosh (2020) is crucial to increase the ethicality quotient in management decision-making. Mapping to the Sattwika Leadership model helped to lend a pragmatic touch.
- The logistics of the exercise helped apply rules of "sandhaya sambhasa" as against the Western debate framework that aims to outwit the opponent through combative and aggressive arguments that are slowly vitiating public discourse (Anand, 2022).

6. Managerial Implications

Historically speaking, business school education in India has always privileged universal managerial qualities and competencies fostered by the west; this has often led to a psychic conflict as managers tried to reconcile the home and imported values (Joy and Poonamallee 2013). The inclusion of Indian scriptures and texts in management curricula helps to achieve a much-needed shift away from the functionalist paradigm endorsed in American business schools. The researcher's experience reveals that students sometimes grapple with the complexity of philosophical concepts enshrined in ancient texts; they also find it difficult to accept values of detachment, enlightened ownership and guardianship in a global milieu. Communicating the need to imbibe ethical and sustainable values in a world that valorizes capitalist and materialistic ambitions will always be a challenge when it comes to preparing young managers for the professional world. Nevertheless, the researcher believes that it is necessary to at least create a safe space for reflecting on these values through mature discussions on based on familiar, timeless classics of Indian philosophy.

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Exploring the Concept of Well-being and Happiness Using Indigenous Approach and Indian Knowledge System

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Introduction

This paper explores the concept of happiness and well-being using an indigenous approach to build an understanding based on the Indian intellectual knowledge system and traditional texts. There are several approaches and perspectives to define well-being and happiness and the factors that contribute to it. Happiness is culturally conditioned (Diener & Suh, 2000), so it would be appropriate to understand the concept of happiness in a culture-specific context. It will help in developing a new perspective to define happiness. Psychologists started thinking about happiness and well-being with the movement of positive psychology (Peterson & Seligman, 2003). The stereotyped analytical assumptions and interpretation of well-being were based on the grounded theories of psychology. Positive psychology focuses on subjective experiences of positive feelings and human strength. The study of positive traits based on self-rating reports was termed "subjective well-being" (SWB). There is a need to understand, test, and promote those factors that encourage individuals and communities to be happy. Researchers explored the meaning and sources of subjective well-being (SWB) (Chekola, 1975), considering it as more of a consumption-oriented behaviour seeking happiness.

Western psychology views happiness from a pragmatic perspective limited to the pursuit of personal gratification (Gilbert, 2006; Helliwell et al., 2012; McMahon, 2006). The theoretical constructions and empirical shreds of evidence identified three primary metaphors to define happiness: Subjective experiences, Positive and negative effects of life, and overall life assessment (Denier, 1999). The Western approach to happiness is based on the hedonistic philosophy of avoiding pain and maximising pleasure (Griffin, 2007; Ryff, 1989). It focuses on need satisfaction, health, and material conditions, which people use as an index to define and measure happiness. The subjective aspects (cultural ideologies, connectedness, relationships, positive thinking) and physical aspects (good health, education, income, and achievements) are considered well-being components. (Ogilvie, 2002; Sinha and Kumar, 2004). Thus, terms like "quality of life, wellness, life satisfaction, and health" were used interchangeably (Nussbaum & Sen, 1993; Bryant et al., 2001; Diener & Suh, 2000). Mitchell et al. (1995) suggest a "considerable lack of consensus amongst quality-of-life researchers regarding definitions, terminology, and methodology'. Wilson (1976) indicates that happy persons are young, wealthy, well-educated, well-paid, extrovert, optimistic, worry-free, and religious. Thus, happiness is an evaluation of what is experienced and its impact on life. In other words, emotional appraisal of objective circumstances and information, based on self-appraisal of people, is termed an indicator of subjective well-being (Diener, 1984).

Indian psychology advocates understanding and regulating the metaphysical aspects of life but logically (Dalal, 2002; Mishra & Mohanty, 2002). It discusses the methods of detachment from sensory perceptions and subjective interpretation of reality. It believes in experiencing pure consciousness, a transcendental reality (experiencing things /objects as it is without interpreting them through heuristic experiences) (Rao, 2008). Furthermore, the traditional texts of India stressed the archetypal relationship of the self with the individual and the environment,

considering the "self" at the centre. Therefore, it prescribes strategies to experience permanent bliss (Rao, 2014). Indian psychology focuses on the structural and conditional interaction of sensory motors (the gateway of input), mind (the central processor) and emotions (the portal of expression). It encourages the transcendence of the relationship between mind, body, and emotion to attain peace. It also believes in the universal well-being of the entire humanity.

The Indian intellectual system talks about the ignorance of the mind to understand the real self, locus of control, emotional instability, and contextualising the response as causes of suffering (Pandey, 2004; Rao,2008). The Indian ethos focuses on a regulated and disciplined mechanism over the contextualised system. It recommends the principles of complete non-attachment (understanding reality beyond sense) as an approach and a systematic tool to break the glass ceiling between the materialistic ego and the authentic self. The complete non-attachment refers to non-attachment with the action itself, non-attachment with the ownership of the action, and non-attachment with the outcome of the action. Thus, the goodness of a man is significantly related to his happiness, and the pathway to this goodness is self-cultivation.

Western psychology focuses on the hedonistic aspects of life in defining happiness. It believes in logical spectrum to understand reality (Dalal, 1990, 1996, 2002; Misra & Gergen, 1993; Sinha, 1996; Sinha, 1993; Misra, 2010; Salagame, 2010; Misra, 2010; Salagame, 2008; Paranjape, 2006). The therapeutic values of Indian Psychology to attain permanent happiness could not find a place in mainstream psychology. It was due to intuition that has driven a logical system to understand reality, lack of operational definition between mind and brain, and finally, complementing the role of spirituality and religion. A non-supportive socio-cultural environment, poor intellectual climate, and fragmented schools of thought obstruct empiricism in Indian psychology. Despite these inadequacies, Indian Psychology views the widely accepted concept of "having" (possession) as happiness. It is the reason for all suffering. It also conceptualises well-being as a universal phenomenon and is sensitive to context contrary to the conditional view of happiness of the West. The concept of self in Western psychology contradicts the idea of self in Indian psychology. Against the backdrop of diversity in conceptualising the construct, the study aims to understand the concept of happiness based on traditional Indian texts.

Methodology

We conducted a comprehensive search in databases such as PsychoINFO, Science Direct, PubMed, EBSCO, ProQuest, and Shodganga to locate research on well-being. Keywords such as "well-being and Indian psychology," "happiness studies and Indian psychology," Indian perspectives of well-being," and "subjective well-being" were used. We adopted the snowball technique (Ridley, 2012) to go through the references of the related and relevant articles to locate more relevant research publications. We explore certain metaphors of Indian psychology (IP) to understand the phenomenon of happiness, its meaning, and its sources based on the ontology and epistemology of Indian psychology.

The metatheoretical concept of the Indian psychological system

Indian Psychology emphasises understanding the eternal (Nitya) and permanent (Satya) rather than impermanent (Mithya) or momentary (Khainika), which is subject to destruction (Khara) (Kumar, 2004). Indian psychology applies this principle to define various bio-psycho-social aspects of the universe as good or bad and uses the same thumb rule to determine happiness (Kumar, 2004, 2008). The entire gamut of concepts in Indian psychology revolves around the body, mind, and spirit. The journey to realise the single abstract principle (Brahma) is regarded as the ultimate goal of life and well-being is treated as the path, not the goal. Desires, the reason for all physical, emotional, and cognitive suffering, must be eliminated to have a life without

attachment and expectations. Indian psychology considers the concept of self and its interaction with the environment to define and conceptualise happiness (See Table 1).

Table 1: The characteristics of the ego" and the "Self."

Characteristics	Ego	Self
Quality	Agitated	Calm /Peaceful
Essence	Attachment	Non-attachment
Means of Knowledge	Sense dependent Mind Driven	Sense independent Intuition Driven
Identity	Ego assorted	Contentment
Driving force	Sense Gratification	Truth-seeking

(Authors interpretation based on literature Review)

Table 2: Eastern approach Vs. Western approach to understanding well-being

Meaning of happiness	Indian	Western
Relationship (between self and happiness)	Attain	Achieve
Orientation	Internal	External
Condition of happiness	Unconditional	Conditional
Sources	Subjective	Objective
Approach	Synthesis	Analytical
Understanding	Opinion driven	Data-driven
System	Belief	logical

(Authors' interpretation based on the literature review)

The understanding of the existential metaphors

The study operationalises "understanding the existential metaphors" to understand the essential functions of emotions, mind, and self, including how to regulate them to attain mental and physical well-being. It has four crucial components: understanding its relationship with emotion, Prakriti, self, and Brahma. These are discussed below.

(I)The concept of emotion and well-being

Classical Indian thought defines emotions as part of the personality (Prakriti). It focuses on experiential rather than physiological responses and associated cognitive aspects to understand human nature and its impact on well-being. It believes that desires back emotions and are the reason for all mental agitations and are caused by a sense of unfulfillment aroused within the self (Ram Prasad, 2013). So, understanding the underlying desires will help to regulate the emotions. The Yogic philosophy considers happiness materialistic and related to the fulfilment of desire. Whereas rationalistic thoughts are related to getting rid of worldly desires. Emotions strongly influence people's thoughts, actions, and functions. It helps people to pursue happiness or well-being (Frawley, 2001). In addition, the Yoga–Sutra viewed emotion in the context of ego (ahamkara) and the real self (Atman) (Ramprasad, 2013). Emotions are concerned with the mind or Manomaya Kosa and have a synergetic effect on both Vignanamaya Kosa and Anandamaya Kosa. In sum, Vedantic psychology believes in factual experiences, a steady mind, a sense of

detachment, control of emotions, and anger to attain permanent happiness. It summed up happiness in three forms: Physical (Bhautika), Mental (Manasika), and Spiritual (Adhyatmika). It focuses on emotional regulation and sensory control through Vivek (Conscience) and Vairagya (detachment). The doctrine of Dama (controlling and regulating the sense organs) and Sama (controlling and regulating the mind) is also encouraged.

(II) The concept of Prakriti & well-being

Prakriti is related to the nature of the individual and is connected to Jnana Intellect, Bhavana, and Vivek (Hitopadesha). Jnana emphasises the path of knowledge and self-realisation. Buddhi brings accomplishment to make us emotionally intelligent. "Bhavana" generates a sense of belongingness. "Vivek" (conscience) differentiates between wrong and right. These elements and their influence on cognitive functioning and emotional disposition determine the human personality or "Prakriti" (Szentagotai & David, 2013). Ayurveda has used the term Prakriti to denote personality, representing the psychosomatic constitution of an individual (Jain et al., 2007). The Sankhya yoga philosophy denotes that Prakriti consists of physiological humour or Tridoshas (Pitta-Vata-Kapha) and psychological components or Trigun (Sattva-Rajas-Tamas).

(III) The concept of self & well-being

The attachment to the world generates Pratyasha (expectation) from "karma" (actions). It encourages them to follow a certain series of actions again, which infuse them in a spider web of this world known as "Samsara." The "Karma" (actions) driven by emotions and agitations leads the self to expect satisfaction, but the world's objects do not have the power of permanent satisfaction. The soul comes under the canopy of "Moha" (attachment) and "Maya" (illusionary infatuation). It acts as a cover and restriction to realise the real "ME" and causes misery and suffering in life. Therefore, the Indian seers and sages indicate that the ultimate purpose of human existence is the realisation of inner potentialities or the realisation of the self. It is done to free oneself from the life cycle to obtain "Moksha" (Liberation), the ultimate well-being. Thus, awareness about the self and its modification is important for pursuing happiness. The major dimensions of understanding the self include self-control regulation and self-realisation.

(IV) The concept of Brahma and well-being

The Brahma-sutra defined Brahman as the fundamental reality. It is the supreme intelligence and self-illuminating state beyond any articulation and form. The Upanishads define it as "Turiya" and "Samadhi" per yoga tradition. It is a state of mind in which the person (Jiva) remains unaffected in any circumstances (Cornelissen et al., 2014). Taittiriya Upanishad talks about self-introspection (Aatma Saksshatkara) beyond the concept of time, space and causation. This supreme intelligence is nothing but the Brahma, the subtle of all elements of life. Furthermore, it describes the five coverings or (Sheaths) of the soul known as (Panchakosha) like "Annamayakosha" (Physical body), "Pranamayakosha" (vital energy), "Manomayakosha" (mental), "Vijanamayakosha" (wisdom), "Anandamayakosha" (bliss) keeping their importance in discovering the innermost identity (Kumar, 2004, 2008; Banavathy & Chaudhury, 2014). These coverings are acting as peripherals of the real self.

The interventional strategies to realise the existential realities

The "interventional strategies" refer to developing a steady mind by regulating sensory organs and controlling emotions and desires. By establishing a sharp dichotomy between natural and supernatural, Indian psychology makes it possible to develop the consensus from a natural plane to a higher plane through proper interventions like Yoga, meditation, and concentration. Indian Psychology regards self-knowledge as an agent, and learning is treated as the pathway. It

addresses the causes and elimination of suffering, the mechanism of experiencing pure bliss, and the development of the transcendental state to have a happy life beyond appreciation and criticism. The learning system is "indigenous" (based on experiences and not detached from self). It is of three types: Sense-driven learning (Sravana), intellect-guided understanding (Manana), and intuitively obtained realisation (Nididhyasana).

Reflections and Implications

Thus, integrating the hedonic and eudaimonic perspectives of happiness might resolve the issue. The epistemology of Indian psychology advocates a spiritual way of life to attain lasting happiness, which may provide the missing link in happiness research. Insights provided by Indian psychology could supplement our psychological, physical, and social understanding of happiness. Indian psychology believes in the wisdom of discovering the real self to bring happiness through emotional control, non-attachment, moving with the flow, self-regulation, control, a steady mind, transcendental intelligence, and freedom from desires. Indian philosophy also indicates nurturing a positive self, and a few symbols like Om and Swastika, as agents (Karaka) of well-being. The chanting and hearing of Mantras and shloka also bring peace of mind. Research on happiness is useful for economic policy and suggests ways to increase the quality of life. We need a thorough consideration of the contributions of other cultural traditions (Delle & Bassi, 2009). Eudaimonic concentrates on different constructs of life to access happiness at different levels. Finally, the dimensional integration of the indulgent and Eudaimonic concept of happiness will help to define happiness holistically and serve as an alternative intervention to enhance the well-being of people at the individual and collective levels.

Limitations

The study attempted a systematic review of well-being from the secondary literature of Indian psychology, like published articles, The Bhagavad Gita and the Upanishads. To decode the perspectives from these scriptures written in "Sanskrit" into English, sometimes translating the meaning becomes challenging as there is no equivalent. We represented the words in terms of their meanings in Indian psychology. This study discussed the constructions of well-being in Indian psychology in a specific cultural context, which may not be generalised to other cultural perspectives. Research on other positive constructs has yet to be specified to be connected to well-being perspectives.

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Vedik Rashtriy Prarthana: Importance and Relevance

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1. Introduction

The notion of *Rashtra* (nation in today's parlance) in its broader perspective and mature form is seen in the *Vedic* knowledge. The *Rashtra* is an open, benevolent, and inclusive entity. It strives for the *abhyuday* (aggrandizement, not limited in the sense of acquiring power or wealth) of each and every element of the Rashtra. Thus *abhyuday* is material and spiritual well-being of the individual and mankind at the same time. With the mantra of 'vasudhaiva kutumbakam' [Maha Upnishad 6.72], it respects diversity and considers the entire world as a family. *Rashtra* takes into consideration each animate and inanimate object of this world. It envisages each and every element of the entire cosmos to be connected through one thread as the divine *Consciousness*. *Rashtra* of the Indic civilization is the personification of a mother and god.

In the Vedic knowledge there are abundant prayers related to the welfare and other benevolent aspects of the *Rashtra* with deep meanings. *Vedic Rashtriy Prarthana* [Yajurved 22.22] is just one example of Vedic nation-building thought. This prayer is as relevant today for the nation as it was in ancient times. This prayer has been sung for the progress and welfare of the nation. This prayer is sung in *yadna* (ritual sacrifices) as an invocation of blessings and auspiciousness for the *Rashtra*. Even today, this prayer is recited in various *Gurukul* and schools in India. It expresses the wish for the well-being and prosperity of various components of the nation.

The Vedic thought process, which is deeply rooted in ancient Indian philosophy, encompasses several key motivations associated with nation-building aspects. It places a strong emphasis on the concept of dharma, which refers to one's duty and moral obligations. It encourages citizens to act ethically, thereby contributing to the moral fabric of the nation. Also leaders are duty-bound to govern justly ensuring the welfare of the nation and its people. The *Yajna*, in the form of Sacrifice and Social Welfare is another motivation that encourages citizens to participate in acts of charity, support social welfare initiatives, and work towards the betterment of the nation. It is also advocated to the people with assigned roles and responsibilities based on one's capabilities to fulfill obligations at each stage of life, fostering a sense of social harmony and collective progress. Vedic thought places importance on sustainable agriculture, environmental conservation, and the responsible use of resources. This motivation aligns with the idea of nation-building by ensuring the long-term well-being of the land and its people. This philosophy promotes spiritual and cultural unity as a basis for nation-building. It encourages the preservation of cultural values, traditions, and knowledge that unify the people of a nation, fostering a sense of identity and shared purpose. Not only the welfare of the life on earth is respected but our deep bonding with the five basic elements of nature and the celestial bodies is identified and cherished through our every act. Thus Vedic thought is deeply rooted in the idea of cosmic harmony and order fostering a sense of balance and stability within the nation, aligning the actions of individuals with the greater cosmic principles. To ensure the holistic balance, Vedic people put forth the *Sanskaras* (ethical values , dispositions, character or behavioral traits) at par. There comes the importance of education system! Vedic thought values education and the

dissemination of knowledge which are essential for the intellectual and cultural growth of the nation.

These motivations, drawn from Vedic thought, provide a holistic framework for nation-building, emphasizing ethical governance, social harmony, sustainable development, and the spiritual and cultural unity of the people, all of which are essential elements in the formation and growth of a prosperous and righteous nation.

2. Literature Review

Vedic knowledge is the earliest, oldest and divine knowledge that existed from thousands of years of period. This knowledge came to us in *shruti* form meaning it is passed on to us through numerous generations by recitation only. The *mantra* or the stanzas are the divine experiences by the sages of those periods. Vedic knowledge is divided in four Vedas, namely Rugved, Yajurved, Samved and Atharvaved. The Vedic knowledge system defined a comprehensive ideology for the collective well-being of the divine, material, and spiritual aspects of the entire world, and for the elevation of the whole society. Spiritually rooted life, truth, patience, self control, self-study, dedication to duty, awareness, austerity, practice, compassion, generosity, environmental preservation, etc., are the life forces of Vedic literature. Knowledge, wisdom, science, action, worship, *abhyuday* and liberation are the primary subjects of the Vedas, which present practical applications for humans through spiritual science, space science, science of creation, architecture, science of well being, medicine, anatomy, political science, and the sociology among others which were well designed and defined during that era. These variety of topics based on different sciences connected to our lives show the integrity and inclusiveness of the thought process of those sears that experienced the Vedic wisdom.

It is from this integrity of thoughts and action that the establishment of a healthy society and a powerful nation is possible. The concept of the nation as *Rashtra* is intricately expounded in Vedic wisdom [S. K. Agarawal, Rashtra and Nation, The Vedic Path : Vol.no. XCIV(no.2) Apr-Jun 2019]. It possesses a rich and profound heritage that sets it apart from the Western notion of a nation. Rooted deeply in the Vedic literature, it signifies the collective identity of the people residing in *Bharatvarsha*, a vast expanse stretching from the towering Himalayas in the north to the boundless seas in the south. This sacred land, adorned with the blessings of the Seven Rivers, the *Sapt Sindhu*, is steeped in spirituality, divinity, sanctity, and a nurturing essence akin to motherhood. *Rashtra* embodies benevolence and strives for the welfare and prosperity of all its living and non living inhabitants. It transcends its physical boundaries, representing more of a creed than a mere political entity. As articulated by Sri Aurobindo, our *rashtriyata* or the nationalism is akin to a divine religion, a sacred calling from a higher source, demanding a spiritual approach. In Yajurved, it is mentioned, "*Vayam raastre jaagrayaam purohitaah,*"[Yajurved 9.23] which means that we will keep the nation alive and awake.

From an individual to a family, from a family to a village, from a village to a region, and from a region to the nation, this is how the construct of *Rashtra* is! Each individual is a fundamental pillar of the nation and is connected to society. Human life cannot envision completeness without society. Therefore, the foundation of the nation is built upon the structure of social order as emphasized in the Vedas.

Crucially, the *Rashtra* has an open, inclusive, and holistic thought process. Guided by the principle of *vasudhaiva kutumbakam,* it embraces diversity and views the entire world as one big family. This notion of one family is drawn from the ancient Sanskrit text of the Maha Upanishad (6.72) as mentioned earlier, which is associated with Samved. Essentially, the theme

affirms the value of everybody's life, be it human, animal, plant, or any microorganisms and their interconnectedness on the planet Earth and in the wider universe. Hence whenever the well being of nation is talked about, there should be the assurance of all these fundamental entities of the   planet earth. This theme is well resonated in the G20 summit 2023 as its logo theme of the discussion sessions.

Rashtra assumes the form of a compassionate and nurturing mother and a god-like entity as the Atharvaved in its *Bhumi Sukta* mantra (12.1.12) proclaims, *mata bhumiputroahamprithvyah*, signifies the Earth as our mother and us as her children. The Vedic knowledge further reinforces this idea, proclaiming that the people are the beholders of the *Rashtra*, benevolent to the gods, and are held in high reverence. The sense of collective welfare is what makes the nation strong and united [https://timesofindia.indiatimes.com/blogs/beyond-occident/hindu-nationalism-and-hindu-rashtra/].

In another *RashtraSabha sukta* (Atharvaveda 7.12.1-4) the norms were set for the sabha, samiti and their members and leaders, about how the leader should be well-educated and capable that all members of the assembly unanimously support the organization's success and assist it by adhering to his righteous words, where the leader and all members of the assembly, united in purpose, enhance their valor and wisdom and their subtle understanding, there all become prosperous. Thus it is also advised to follow the path of the Vedas, staying unified in purpose and enhancing their intellect, strength, valor, and other excellent qualities.

One finds many such verses about the *Rashtra* and associated subject matters as described above. The amalgamation of these verses is seen in the *Rashtriy Prarthana* (prayer) mantra which appears in the Yajurved, one of the four early scriptures, some thousands of years back.

3. Vedic Rashtriy Prarthana

The *Rashtriy Prarthana* is associated with the Shukla Yajurved, part of the Yajurved (22.22).

This prayer beautifully depicts all pervading aspects of the exemplary nation!

The original Sanskrut script, i.e. the mantra is-

ओ३म् आ ब्रह्मन् ब्राह्मणो ब्रह्मवर्चसी जायतामाराष्ट्रे राजन्यः शूरऽइषव्योऽतिव्याधी महारथो जायतां दोग्ध्री धेनुर्वोढाऽनड्वानाशुः सप्तिः पुरन्धिर्योषा जिष्णू रथेष्ठाः सभेयो युवास्य यजमानस्य वीरो जायतां निकामे-नः योगक्षेमो पच्यन्तां नऽओषधयः फलवत्यो वर्षतु पर्जन्यो नः निकामे कल्पताम् ॥

Each line of this prayer is carrying deep meaning and philosophy in itself. It also addresses each and every aspect of life and their interdependence in making the *Rashtra* a strong and united entity. *Brahm* is a significant word and it holds various meanings and perspectives. This word is used in different contexts among different lineages and philosophies in society. It is often associated with the highest self or the ultimate reality known as *Brahman*. In the Vedas, it is said that *Brahm* is of the nature of bliss and is described as *Sat-Chit-Anand*, which means that it represents infinite joy and is associated with boundless knowledge and existence. Thus describing or explaining *Brahman* goes beyond mental and linguistic boundaries, and it is an experiential reality that cannot be expressed in words.

4. Importance of Rashtriyata and its Prarthana

The transliteration of the above mentioned prayer goes like this –

May there be learned Brahman in our land with radiant knowledge.

May there be warriors in abundance skilled in archery who are fearless and able to defeat mighty enemies with heroic strength.

May there be cows that yield abundant milk, and animals and horses swift as the wind. May they be the support of our nation, and may women be virtuous and ever auspicious.

May there be abundant clouds producing abundant rainfall and may the harvest be bountiful.

May the land be laden with fruits and flowers for our well-being.

And may there be an abundance of medicinal herbs.

May we have the means for well-being, and may our independence our prosperity be secure.

Thus it can be seen that these are numerous wishes made for various qualities, resources, and individuals to thrive in the nation, ensuring prosperity and happiness emphasizing the thoughtfulness, generosity, and righteousness of those sears who envisioned the mature form of the ideal nation.

5. Implications and Relevance of Rashtriyata in Managerial Context

The implications of the ancient Vedic period's concept of '*Rashtriyata*' lie in its profound influence on societal organization, emphasizing a sense of national unity and collective identity. This concept underscores the importance of a shared cultural and moral framework, promoting harmony and cooperation among diverse communities within the broader civilization. '*Rashtriyata*' serves as a foundational principle for fostering a cohesive and integrated society, reflecting the ancient Vedic ideals of social order, ethical conduct, and the pursuit of collective welfare.

Nationalism or *Rashtriyata*, when encountered in a managerial context, carries several noteworthy implications. Nationalism in management studies encompasses various aspects that explore the intersection of national identity, culture, and organizational dynamics. Nationalism highlights the importance of understanding and managing cultural diversity within the workplace. It requires leadership qualities fostering business. Diverse talent is needed with ethical working norms. Adequate supply of goods needs to be ensured. Legal and regulatory compliance with conflict Management are essential for maintaining a harmonious workplace. Some organizations promote a sense of global citizenship among employees. This involves fostering a corporate culture that values diversity, inclusion, and a global perspective.

And surprisingly all these aspects are found in abstract forms in the *Rashtriya prarthna,* in the realm of the society that existed some ten thousand years back.

6. Conclusions

The Vedas advocate righteousness as the foundation for building a strong nation. The notion of *Rashtra* in its mature form is seen in the *Vedic* knowledge as seen by the various verses cited here in. This national prayer is intended for the well-being and happiness of everyone, along with prosperity in the form of knowledge, wisdom, power, abundance in livestock, and an abundance of produce. It emphasizes the prosperity, both material and spiritual, of every individual who contributes to the *abhyuday*.

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7. Yajurved 9.23.
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Biological Bootstrapping: Eclectic Knowledge Systems

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Introduction and Literature Review

While the concept of bootstrapping is studied in various domains like statistics (leveraging small datasets) and entrepreneurship (leveraging limited resources), there has been a paucity of studies in its application in the domains like biology, nutrition, medicine, surgery and genetics (Efron & Tibshirani, 1993; Mooney & Duwal, 1993; Rao, 2010; Garvin, 2013). This paper endeavours to plug these research gaps by elaborating on various existing practices and upcoming technologies that embrace the concept of biological bootstrapping in various domains including the healthcare sector. As a matter of fact, the origins of bootstrapping go back in time by at least five chiliads or millennia. In the epic Mahabharat, *Ekalavya* had to truncate and offer his right hand thumb as a putative honorarium to his ostensible Guru *Dronacharya*. However, a relentless warrior like *Ekalavya* did not give up on his passion to master archery. He has started using his three middle fingers and practised archery with an unflinching commitment. Over time, he was able to emerge as a ferocious archer even in the absence of his right thumb. In the later times, as a lieutenant of king *Jarasandh*, he had to fight with Lord *Krishna*. No wonder, he got killed by the omnipotent Lord *Krishna* in that war between the latter and the king *Jarasandh*. Had it not been for his encounter with the Almighty, he could have survived, thrived and posed a severe threat to putatively formidable archers like *Arjuna* in the later times particularly during the *Kurukshetra* war. Thus, we can see that the story of *Ekalavya* is perhaps one of the first few examples of biological bootstrapping that the humanity has ever witnessed. As a matter of fact, the modern archery entails using of one's three middle fingers only, duly following the footsteps of *Ekalavya*. Thus, *Ekalavya* can be considered as the great grandfather of modern archery though our current yet distorted historical accounts mistakenly project *Ben Pearson* as the father of modern archery.

Methodology of Research

Inductive and interpretative method of research is adopted with a detailed discussion of apt, apposite and appropriate real-time cases from diverse industries with a pivotally common theme of biological bootstrapping in some form or the other by means of a boundary-spanning approach towards identifying and addressing horizon-spanning prospects of effectuating the entelechy of commercial, scientific and spiritual opportunities associated with various applications of biological bootstrapping. For defining the boundaries of such a research and fleshing out the related canvas, such a kind of inductive research becomes indispensable. While deductive methodology is relevant for confirmatory research, inductive methodology is appropriate for exploratory research. Hence, as an indispensable precursor to deductive approaches to research, inductive approach sets the ground, defines the contours and elaborates on the canvas for subsequent confirmatory research. Moreover, common sense and human intuition constitute the fulcrum around which the rudimentary canvas of a research theme can be established for subsequent rigorous research, if any. After all, practical relevance, contemporary and futuristic scope of application of a topic have to be addressed and established first. Only then, subsequent rigour can augment the clarity of the research topic in all possible ramifications and repercussions. Otherwise, a researcher may end up climbing a wrong hill and hence relevance

should precede rigour. Obviously, any such detail-crunching effort makes sense only as a sequel to related direction-clinching exercise and not otherwise. Thus, it is foolish to put the cart before the horse. Indisputably, foresight is a necessary harbinger to meaningful research while forecast could be a useful follow-up action. While foresight provides details about the directional trend or the emergence of a new paradigm, forecast is limited to furnishing details about the magnitude associated with the existing paradigm. If at all any guesstimate is available regarding the emerging paradigm, it should be because of ballparking attempts by experts (via methods like Delphi) and by no means these guesstimates constitute systematic forecasts through structured algorithms and mathematical or statistical models. It is indeed sacrosanct to follow such a sequence (direction-clinching first and detail-crunching next) towards doing research that matters. Such an inductive approach to research makes it a pragmatic herald particularly when there is no readily available spreadsheet of objectively quantitative data. Obviously, in all such situations, authentic and objectively qualitative data from the environment makes more sense than any perceptual and subjectively qualitative data unless experts' insightful opinions might add value to the topic of scrutiny. Till such an objectively quantitative and substantial data sheet becomes available, inductive, interpretative and substantively intuitive approaches are the only way to expand our mental horizons, embrace new vistas of learning, carry the noetic flambeau aloft and thereby take the pertinent frontiers of research forward. Last but not least, certain phenomena may remain unamenable to objective measurement for a long time for want of appropriate tools and instruments. In all such cases, perhaps inductive and interpretative methodologies constitute the Hobson's Choice to researchers to study such phenomena till the development of pertinent tools of measurement. No wonder, we often hear a popular dictum: '*Not everything that counts can be counted and not everything that can be counted counts*'.

Discussion and Inductive Reasoning

This paper strives to bring out a blend of occidental and oriental perspectives to the concept of biological bootstrapping in real time and practice. Sprouts or germinating seeds constitute a live example of botanical bootstrapping in generating or multiplying the inherent vitamins hundreds of times. This is perhaps the simplest illustration of botanical bootstrapping. As a matter of fact, there are far greater *nay* profound applications of such a scintillating concept of botanical bootstrapping.

Few firms like Memphis Meats have already come up with 'clean meat' from the stem cells duly eliminating the need to breed or slaughter animals. Looking at such real-time case studies from the world of business, no wonder if someone comments that while festivals may or may not happen without festoons, carnivals can happen without any carnage whatsoever. They could grow meat of chicken, beef and duck *sans* breeding and slaughtering with concomitant fortification of nutrients. This is yet another example of biological bootstrapping and specifically speaking zoological bootstrapping in the nutritious food industry. Even plant-based meat is being experimented in the recent times. Obviously, this stands for botanical bootstrapping.

The paper makes a horizon-spanning attempt to furnish a panoramic snapshot of various kinds of biological bootstrapping in general and specifically in the global healthcare industry. Even the so-called bio-waste is being incidentally processed into biogas and pure water with the help of a bacterial Inoculum via practical application of the concept of bio-toilet mode of biological bootstrapping. In fact, we, often notice some intellectuals referring to various perspectives and treating them as bull-shit as if bull-shit is utterly useless or junk. In such a context, it is not surprising if a common man thinks of few industries like fertilizer industry, fossil fuel (dried dung cake) industry, energy (biogas plant) industry and last but not least perfume industry. The excreta of prized animals like musk deer, civet cats, beavers (castoreum), hyraceum and some

whales (ambergris) constituting a critical ingredient into some world-class perfumes is a case in the point.

Consumption of traditionally fermented food items like yogurt, curd and boiled rice in countries like India highlight the importance of probiotics (in the form of good bacteria) and prebiotics like mushroom in ensuring the health of individuals. Now, firms like *Yakult* in the healthcare industry are making and selling fruit-based probiotics such as apple cider vinegar. These probiotic products are a result of microbiological bootstrapping of good bacteria via fermentation. Even the ancient Ayurveda recommends consumption of raw fenugreek and raw (and cut) garlic duly fermented in buttermilk to treat various health ailments like cancer, diabetes, hypertension and high cholesterol along with contribution of other concomitant benefits like betterment of one's teeth, bones, skin and other issues of vigour and rigour. Fermented pickles based on ingredients like raw mango, lemon or amla which are part of Indian traditional meals have their own gustatory appeal apart from health benefits in the form of anti-oxidants. The beauty about such fermented foods is that the inclusion of plant products makes it botanical bootstrapping while the inclusion of good bacteria makes it zoological bootstrapping and thereby the whole exercise can be called biological bootstrapping given the dual ingredients from the botanical resources on one hand and the zoological resources on the other hand.

Bootstrapping of botanical sources viz., medicinal foods and home remedies such as spices like cardamom, cinnamon, cloves, black pepper, fennel seeds, fenugreek, ginger, onion, garlic, ajwain seeds, asafoetida; phytonutrients from leafy vegetables like spinach, moringa, wheatgrass, corn silk and mint; ayurvedic (phyto-medicinal) herbs like ashwagandha, tulasi or basil and giloy; edible unpeeled or unpolished bean seeds and barley grains for building proteins and immunity; herbs like neem, turmeric, bitter gourd, aloe vera, nannari, triphala, punarnava, Indian nettle; fruits like avocado, dragon, papaya, oranges along with vegetables like radish, cabbage, cauliflower, carrot, beetroot, tomato and drumstick; alkaline foods like baking soda have been contributing to the health and overall well-being of Indian citizens. A proper traditional Indian meal embedded with so many such ingredients in the form of spices, herbs, vegetables, fruits, various home remedies and other medicinal foods has been proven to be a kind of panacea *sans* side effects to various medical ailments particularly in these modern times characterized by chronic lifestyle diseases. Even a simple solution like circadian and well-timed consumption of adequate amounts of water acts as a natural blood-thinner without any side effects. In fact, it is a natural lubricant to the human body *in toto* and this becomes obvious on dehydration. Chronic ailments right from constipation, blood clots or heart-blocks, hypertension to arthritis and clogging of toxins inside the human body could be properly addressed with such a proper intake of water by human beings. Modern medicine prescribes several drugs for all these ailments and the humanity has been witnessing several undesirable side effects due to repeated consumption of these synthetic pharmaceutical solutions. When proper consumption of water can alleviate so many health issues through timely elimination of toxins, what is the point in blindly and indiscriminately embracing pharmaceutical drugs unless they are used as a last resort?

Given the limited availability of organ donors to patients with severely injured or diseased or damaged organs, bioprinting technology is gradually emerging as a viable alternative to conventional organ transplantation. This bioprinting entails biological bootstrapping of the basic raw material viz., liquid cell culture or the bio-tissue or bio-ink extracted from the very same patient's body. Bioprinting is thus a scintillating way of handling the task of damaged organ replacement by bio-printed organs using the bio-tissue extracted from the very same patient's body. It is interesting to notice scintillating thoughts of the noumenon of *advaitham* (non-duality) from the domain of spirituality (or metaphysics) taking the shape of a phenomenon in

the domain of science (or physics). In the whole exercise, with the donor and the donee being the same patient in each case, what other metaphor would be more appropriate than *advaitham* (Balasubrahmanyam, 2017)?

Amongst many sources of inspiration from the flora and fauna in the Mother Nature, it is amazing to notice that salamanders can regenerate body parts, including their tails, upper and lower jaws, eyes (up to retina), and hearts. Salamanders have been constantly exhibiting some seemingly esoteric art of innate biological bootstrapping towards regeneration of almost any of its damaged organs (like kidney, pancreas, heart, lungs, liver and eyes) in their bodies. To some extent, liver is the only organ in the human body which has proven its inherent ability to regenerate itself, though partially. However, salamanders are the highest order of animals capable of organ regeneration. Salamanders can regenerate injured body parts because evolution has enabled them to immediately unleash stem-like cells to a wound site when damage is detected. When salamanders are wounded, skin, bone, muscle, and blood vessels at the site revert to their undifferentiated state. In essence, they go back to an embryonic state and start all over again, making pluripotential organ regeneration possible. Somewhere in the Nature's design, the nature and extent of catadromous memory has played different roles in the evolution of human beings and Salamanders, duly cascaded down across several generations. Scientifically speaking, with genetic manipulation of human DNA and that of Salamanders, the stunning prospect of organ regeneration of humans may become a reality in the decades ahead. Turns out the human evolutionary pathway traded off regeneration in favour of tumour suppression, unlike salamanders. Current stem cell research is promising and offers the future potential for a workaround to enable regeneration without turning off the molecular brake that prevents tumour formation and progression. Such a strategic flexibility in handling human genes can go a long way in the ambidextrous evolution of human beings. Tissue generation and regenerative medicine are both exciting fields to watch. Philosophically, the whole issue may just boil down to selective anamnesis (anadromous memory) as the recipe for elective anabiosis of the defective, diseased or the injured organ in the human body (Balasubrahmanyam, 2017). Who knows, what looks like an esoteric noumenon today may turn out to be an exoteric phenomenon tomorrow. When it transpires, the thin line between physics (characterized by genetic and mimetic reminiscence) and metaphysics (characterized by *Divya Smruthi* or cosmic flashback or divine memory) would disappear (Balasubrahmanyam, 2021a). Perhaps, tools like Neuro-Linguistic Programming (NLP) would help us bridge this "terrestrial-celestial" divide. Inherently, there is a subtle art and craft of genetic or even profoundly psychological bootstrapping of internal biological resources. Intense thoughts of human beings indeed contribute to such a scintillating feat of organ regeneration via psychosomatic bootstrapping of the inherent biological resources.

Bioremediation as a branch of biotechnology takes the shape of microbiological bootstrapping that employs the use of living organisms, like microbes and bacteria to decontaminate affected areas. It is used in the removal of contaminants, pollutants, and toxins from soil, water, and other environments. Some of the most common types of bioremediation are microbial bioremediation, phytoremediation, and mycoremediation. There are many live examples of ecological restitution via microbiological bootstrapping like those of treated bio-remediated sites like *Kalol, ONGC Ahmedabad*. Such a bootstrapping can comprise of employment of plants or microbes or both in such attempts of bioremediation.

Conclusions and Implications

Having gone through many such occidental and oriental perspectives of biological bootstrapping, it is time to explore and exploit several such prospects of solving many a human imbroglio by extracting hidden wisdom in all these phenomena and noumena into a unified body of knowledge for the benefit of the humanity at large. To achieve all these, there is a hectic need to syncretize

eclectic individual inputs of experts from various domains into synergetic *nay* acatalectic team outputs. To translate these concepts into practical realities, there is a pressing need to integrate wisdom from alternative schools of medicine like Ayurveda, Unani, Homeopathy, Siddha, Yoga, Pranayama, Reiki, Pranic Healing with that of the modern medicine, apart from applied psychology in view of the psychosomatic nature of many diseases and disorders that tend to hamstring the humanity in these modern times (Balasubrahmanyam 2013). It is a pleasant shock to notice related comments from spiritual masters like Osho that it was a kind of telepathic conversation between plants and ancient practitioners of spirituality and Ayurveda that led to the discovery of thousands of herbal medicinal solutions which have been found to cure various diseases, given the severe infrastructural voids of the ancient times vis-à-vis sprawling and well-funded drug laboratories of the modern times (Balasubrahmanyam, 2021b). Though paranoids of the current era fall a prey to curse of suspicion by doubting each and every such prospect, the humanoids of the yester-centuries or yester-millennia could successfully leverage the biological, psychological *nay* spiritual bootstrapping and thereby stood blessed by embracing the benefit of doubt. It is only through such a well-concerted and well-organized regimen that all-round alleviation and amelioration of human lives can happen at the earliest in right earnest. Thus, one can see diverse managerial implications of the multi-faceted concept of biological bootstrapping in the world of science, commerce and spirituality from a multi-pronged perspective for practitioners, empirical implications for doctors from the healthcare industry, conceptual implications for academicians and social implications for the citizens at large. While the occident primarily makes mundane and material (extrospective) contributions to biological bootstrapping, the orient predominantly makes ethereal and transcendental (introspective) contributions to the same. It is at this ambitropic intersection that an eclectically integrative wisdom can emerge for the benefit of the global mankind. It is only a burning candle that can ignite other candles. Thus, teachers are after all senior students though in a subliminal manner. All are students, some are senior students while some others are junior students. If we take the prospect of reincarnation into account, the spiritual seniority matters more than the earthly seniority. Spiritual ancestry is far more important than physical ancestry. For truly comprehensive learning, this intertwining mergence of the teacher and the taught in the spirit of *advaitham* is the need of the hour. In this context, it is not for nothing that a renowned philosopher *Lindagoodman* said: "*Every teaching endeavour in this universe is an attempt on the part of someone to help others recall what they knew already at a subconscious level, but somehow forgotten*".

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Corporate Administration cues from Kautilya's Arthashastra

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Introduction

Arthashastra, the timeless treatise on statecraft, economics, politics, and military has has had a lasting influence on Indian strategic thought and has been studied and referenced by scholars, leaders, and strategists throughout history. It continues to be a subject of academic interest and is considered a foundational text in the study of strategic aspects of political science and economics in India. Despite being a comprehensive volume on strategic administration, it has not received its well deserved traction unlike greek and latin literatures. Through this article it is expected to explore and appreciate the various aspects of strategic thinking in ancient times. Further assess their viability to address issues of modern day corporate administration.

Review of Literature

The text Arthashastra emerged during the Mauryan Empire, an era marked by significant political upheaval and administrative complexities. The text was written as a response to administrative and governance challenges to be addressed urgently during that time. The treatise attempted to provide pragmatic solutions to those problems. Kautilya addressed some of the serious issues such as the education of a king or prince where he mentioned how principles translate to knowledge and further into practice. The application, therefore, leads to self-possession (ATMAVATTA). A great amount of importance is assigned to self-control in the treatise. Good governance is considered of paramount interest, "The king who is well educated and disciplined in sciences, devoted to good Government of his subjects, and bent on doing good to all people will enjoy the earth unopposed".

The day-to-day operations and maintenance of the law is addressed by the Law rule (Dandaneeti) which is inevitable. Kautilya refers to trade as Varta and believes that the success of Varta depends on Dandaneeti (Rule of law). Delegation of authority by the king to his subordinates was found essential to ensure sovereignty, such delegation led to the appointment of ministers and counsellors whose duty was to safeguard the King from falling prey to dangers. The role is further extended to protect the king by striking the hours of the day as determined by measuring shadows (chháyánálikápratodena) to warn him of his careless proceedings even in secret.

The essence of Artha Shastra is that a king's true success lies in the well-being and happiness of their subjects (followers or team members). Kautilya emphasises that a King's happiness lies in the welfare and happiness of his subjects which leads to his welfare. The King should be more concerned about providing benefits to his subjects than those that make him happy.

Artha Shastra indicates that a person born in a high-class family and those who possessed wisdom, purity of purpose, bravery and loyal feelings became the qualification for appointment of ministers. Except for birth in a high family, all other attributes of competence can still be held valid even in modern Corporate Administration and Management. The corporate administrative activities were delegated amongst the ministers and the importance of delegation was to receive

instructions on the various spheres of ministers' powers and mention the place, and time of their work. The text mentions members employed ministerial officers (amátyah) and counsellors (mantrinaha). The Arthashastra outlines the structure of government, the roles and responsibilities of ministers, and the principles of efficient and effective administration

The text meticulously elaborates on strategies for acquiring and maintaining power. These strategies encompass espionage, diplomacy, military tactics, and the management of internal dissent. The chapter 'relating to war contains various combat tactics such as troop movement. Kautilya mentions that when the protective power of fortifications and stores (of the enemies) is on its decay, when it is thought that distress of the hired army or of a friend's army (of the enemy) is impending; when intriguers are not for a quick march; or when the enemy is likely to come to terms (with the invader), slow march should be made; otherwise quick march should be made. This effort of tactical intelligence is groundbreaking for that time.

Kautilya expresses various means of winning a combat, HE who is possessed of a strong army, who has succeeded in his intrigues, and who has applied remedies against dangers may undertake an open fight, if he has secured a position favourable to himself; otherwise a treacherous fight. The order and timings of the combats can also be seen in the treatise, The beginning of an attack is the time for treacherous fights. The best suggest location for war are desert, a dangerous spot, marshy places, mountains, valleys, uneven boats, cows, cart-like array of the army, mist, and night are called as sattras (temptations alluring the enemy against the invader). The commando may offer a night-battle to his enemy or he may strike during tafternoon when they are tired by making preparations during the forenoon; or he may strike the whole of the enemy's army when it is facing the sun. This indicates clear identification of one's own strengths and willingness to gain competitive advantage by utilising opponents weaknesses. Such kind of advanced military thinking is time-tested and is based on the SWOT Analysis as referred to in strategy of corporate administration.

There is also a mention of espionage in the Arthashastra-secret spies may slay from behind the chiefs of infantry, cavalry, chariots and elephants, or they may set fire to the chief residences of the enemy as a strategy to win over the opponent. Traitors, enemies and wild tribes, employed for the purpose, may destroy the enemy's rear or obstruct his reinforcement; or spies, concealed in forests, may enter into the border of the enemy's country, and devastate it; or they may destroy the enemy's supply, stores, and other things, when those things are being conveyed on a narrow path passable by a single man. The strategies to capture a fort are three folds SOWING THE SEEDS OF DISSENSION, ENTICEMENT OF KINGS BY SECRET CONTRIVANCES and THE OPERATION OF A SIEGE.

Kautilya dedicates a significant portion of the Arthashastra to economic matters. It delves into economic policies, taxation, trade, and the crucial role of wealth accumulation in sustaining a state's power and stability. The treatise provides detailed insights into the legal system, criminal and civil laws, judicial procedures, and the importance of upholding justice to maintain social order.. A substantial portion of the text is dedicated to foreign affairs, offering strategies for managing international relations, forming alliances, and responding to external threats. While advocating for practical and realpolitik policies, the Arthashastra does not neglect ethical considerations. It encourages rulers to uphold a sense of dharma (righteousness) and ethical conduct in their governance.

The enduring influence of the Arthashastra transcends time and geographical boundaries. While not widely recognized during its own era, the text's concepts and principles have reverberated across different cultures and epochs. One of the most renowned parallels is drawn between the

Arthashastra and Niccolò Machiavelli's "The Prince," a classic of Western political thought. Both works share a pragmatic approach to politics and leadership, emphasizing the necessity of power and the moral dilemmas faced by rulers. In the context of India, the Arthashastra's influence can be observed in the strategies and tactics employed by various states and leaders throughout history. Scholars and policymakers have sought to apply its principles in diverse contexts, including diplomacy, military strategy, and economic policy.

Maurya empire was founded in 4th century BCE by legendary Chandragupta Maurya. According four semi-legends, Mahavamsa , Parishishtaparvan, Kathasaritsagara and Mudrarakshasa Kautilya (also known as Chanakya and Vishnugupta) played a pivotal role in laying foundation of the biggest empire of the sub-continent. Two books are attributed to kautilya: Arthashastra,[45] and Chanakya Niti, kautilya is regarded as a great thinker and diplomat in India. India's former National Security Advisor Shiv Shankar Menon praised kautilya's Arthashastra for its precise and timeless descriptions of power. Furthermore, he recommended reading of the book for broadening the vision on strategic issues

STATEMENT OF PROBLEM

Before the Industrial Revolution took place, the process of strategy formulation and implementation and corporate administration had deeper applications in the areas of military, political and statecraft management.   Indeed, the word strategy has its roots in warfare. The Greek verb strategos means "army leader" and the idea of stratego (from which we get the word strategy) refers to defeating an enemy by effectively using resources.

Competitive advantage in the 21st century has evolved significantly due to advancements in technology, changes in consumer behaviour, globalization, and shifting market dynamics. To remain competitive, organizations must adapt and leverage these transformations. Out of all the challenges knowledge management and strategic building has emerged as one of the biggest challenges. Peter Sonergard of Gartner Inc. has famously said "Information is the oil of the 21st century and Analytics is its combustion engine. Despite the availability of data at an unprecedented scale and speed, unfortunately, many organisations especially start-ups have failed to leverage such information in formulating a sustainable strategy and implementing it. This demands revisiting the time-tested principles of the discipline of strategic management. Through this research, a humble attempt has been made to search for solutions for modern-day strategic management and corporate administration challenges in Indian state policy-making processes with a reference to Arthashstra.

OBJECTIVE

The objective of this work is to review the literature of 'Arthashastra'for identifying and appreciating different concepts relating to statecraft, knowledge management, organisational structuring, Economics and Taxation, information accumulation and Intelligence, Ethical Governance, diplomacy and negotiation. Further, this work also aims at finding the relevance of Treatise in building a point of reference in modern-day corporate administration with reference to Arthashastra.

Research Methodology

Research Design : Exploratory Research and conceptual study

Source of Data : The research is based on Secondary data sources including the original work translations and the modern authors' work in the related areas and various research articles based on Arthashastra

LIMITATIONS OF STUDY

This work may be limited by the scope and quality of available sources. Further, Arthashastra was written in Sanskrit language, the review may have linguistic translation limitations. **:** The interpretation of the included studies and their relevance to the research question may be subject to the reviewer's bias or perspective. Since the area of strategic management is widely applied across organisations of different industries and cultures, The findings of the included studies may not be generalizable to all populations, settings, or contexts, limiting the applicability of the review's conclusions. Further, the field is dynamic hence the observations made in this paper are subject any new findings in the field of strategic management.

Expected Outcomes

Despite the objectives and contexts of Mauryan policy making and business operations differ significantly, there are several pragmatic principles and concepts from Kautilya that can be effectively applied in strategic business management.

1. Competitive Analysis: Know Your Competitors: Similar to war intelligence gathering mentioned in the treatise, businesses should thoroughly understand their competition. This includes assessing competitors' strengths, weaknesses, and strategies.
2. SWOT Analysis: Many mentions of assessing self and enemy SWOT were mentioned in the work. Conducting a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis was found akin to assessing the battlefield during the time. It helps identify internal strengths and weaknesses and external opportunities and threats.
3. Resource Allocation: Kautilya's strategies to prioritise and allocate resources according to state priorities is very much relevant and practical. Despite the passage of 2,000 years the principles of resource management still remain relevant.
4. Fiscal responsibility: Kautilya emphasizes the importance of financial prudence for a ruler. He advises against wasteful expenditures and extravagance in the administration of the state. The Arthashastra stresses the need for a ruler to keep a close watch on state revenues and expenditures, ensuring they are balanced.

CONCLUSION

Developing corporate administrative policies which can be adopted in the 21ˢᵗ century based on the guidelines of Kautilya's ArthaShastra. The research would like to recommend such policies to modern businesses for efficient corporate administration

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Yog-Sutra: A transformative route from consumerism to minimalism

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Introduction

We have entered an alarming epoch of environmental crisis, the 'Anthropocene' where environmentalists, civil society activists, and a growing section of individuals are vehemently raising concerns about ecological grief, growing risks to health, food, biodiversity loss, and environmental hazards (United Nations Environment Programme, 2020; Clark, 2020). Systematically promoted mass consumerism is said to be the root of the unprecedented challenges of the present world, which not only adversely impact health and the environment but also lead to horrific consequences such as violence and dehumanization (Lambert, 2019; Conversi, 2021). Minimalism, a recent global phenomenon in consumer behaviour that is trending against the dominant forces of consumerism, indicates how a growing chunk of consumers across the world are transforming their lifestyle and consumption habits in search of health, wellbeing, and ecological sustainability. Many people have started resorting to their ancient philosophies, religious morals, and cultural practices to find a solution to consumerism (Lambert, 2019). For instance, the tenets of minimalism in Japan are claimed to have their roots in the Edo era (1603–1876), which guides the ideas of voluntary simplicity in lifestyle (Masuda, 2021). The current work aims to present a scoping review of Patanjali's Yog-Sutra, which is culturally embedded and has certain transformative principals and perspectives to understand why and how to switch away from consumerism and how to look at modern consumer behaviour in general and minimalism in particular through the lenses of the yogic traditions of India.

Consumerism and 'Self-Identity' Construction:

The western thoughts on consumer culture hinge on the powerful claim that 'we are what we have', which indicates that the consumer's self is formed by their types and quantity of possessions (Belk, 1988). Consumers choose and shape their identity(s) as per their consumption choice(s), and while doing so, they either reinforce their espoused identity(s) or switch across identities to get a better payoff. It is to be noted that all such juggling across consumer identities primarily plays within the influence of marketing campaigns that offer a limited choice of identities with a sole motive to inspire consumption of their preferred product or brand. Some of such identities are symbolically consumed (Wattanasuwan, 2005) and others conspicuously (Kumar, Bagozzi, Manrai, & Manrai, 2022); some identities are formed under an artificially created consumption pressure built into marketing messages that communicate a fear of missing out on FOMO (Zhang, 2020); and some identities get shaped by psychological impulses to buy (Rook, 1987). The foundational principle on which marketing strategies for influencing consumer behavior are designed generally rests on promoting the process by which consumer identities are created. Consumer behavior researchers have coherently advocated that a consumer's identity is created as a result of accumulating possession, i.e., the process of 'buying-having-being' (Belk, 1988; Solomon, 2018). This identity is further reinforced to encourage buying more than the genuine needs. A subtle idea that 'we are what we have', and further that 'wellbeing lies in having more' have also got glued together in fabricating consumers' self-identity, which marketers have enforced and exploited by investing in marketing campaigns for promoting consumption.

On a critical observation, Lambert (2019) explicitly argued that "marketers prey on consumer weaknesses—their irrational, instinctual, and appetitive desires—which influence them to yield to ploys in advertisements" (p. 197). Vulnerable consumers generally lack the essential capacity to rationally deal with the fictional aura that marketers create around consumer objects (often reflected in branding strategies). As a result, consumers get trapped in the self-reinforcing cycle of 'buying-having-being', i.e., a dynamic process of self-identity construction, without being aware of its long-term consequences. This kind of consumer identity is the most conducive to absorbing marketing strategies that create an unsatiable thirst for artificial wants, which is well celebrated in consumerism.

Minimalism

Minimalism is a consumer movement that defies the marketing forces of consumerism while aspiring to achieve an alternative approach to life. Customers from all over the world are embracing the idea of minimalism in some way, considering it a key to health, well-being, and sustainability (Joshua Becker, 2019). Cutting back on consumption and acquiring fewer stuff are among the key behaviours observed in minimalists. According to Woodheah (2021), the core tenet of a minimalist lifestyle is the concept that "less is more," made popular by architect Ludwig Mies van der Rohe. Being simple and owning fewer things out of conscious choice allows one to be free from the obsession with acquisition. Such consumers prioritize an uncluttered and simplistic life and cut back on materialist consumption's instant gratification (Pangarkar et al., 2021). The current trends are demonstrating that it is a lifestyle that is both innately appealing and genuinely accessible.

Academic efforts have been underway to pay attention to ancient religious principles and cultural practices to find a way out of consumerism (Lambert, 2019). For example, Ohira and Masuda (2021) reported that the traditions of voluntary simplicity in Japan are said to have their origins in the Edo period (1603–1876). The authors identified backward consumption as one of the minimalist practices where consumers tried to emulate the consumption habits of their prehistoric ancestors. The concept of minimalism was found to be readily integrated into the ancient Indian religious systems and practices at a much deeper level. The beliefs and activities geared toward minimalism are mentioned in Buddhism, the Bhagwad Geeta, the Yoga Sutras, and other religious texts as self-imposed limitations on those seeking spiritual development. Indian yogic traditions have the potential to explain the possible ancient roots of 'minimalism' by offering insights on the basis of spiritual principles, particularly the concept of 'self', where all sorts of identities are dynamically constructed.

Contrary to the ideas of consumerism, minimalism practices apparently rest on an entirely different paradigm that prioritizes consumption choices based on cultural values, genuine needs (instead of wants for accumulation), health and wellbeing, and environmental concerns. It won't be irrational to think that the consumer identity formation process is working very differently for minimalists. Not much is known about how minimalism works at the level of self-identity construction (or de-construction) and how consumer self-identity processes are different in minimalism as compared to those in consumerism. A set of principles of Yog-Sutra is presented to offer a new perspective on the consumer's self-identity that has the potential to drive minimalism in the Indian cultural context. These principles shouldn't just be looked at as an authoritative instruction manual of a religion; instead, they should be looked at as a source of knowledge about what composes an individual 'self', what are its constituents that make it vulnerable to consumerist ideas, and what elements of 'self' are likely to drive anti-consumerist (or minimalist) behaviour. A pictorial representation of how Yog-Sutras can intervene in transforming the existing conception of consumer behavior and further guide the ways of minimalism for a sustainable progression of human life is depicted in Figure-1.
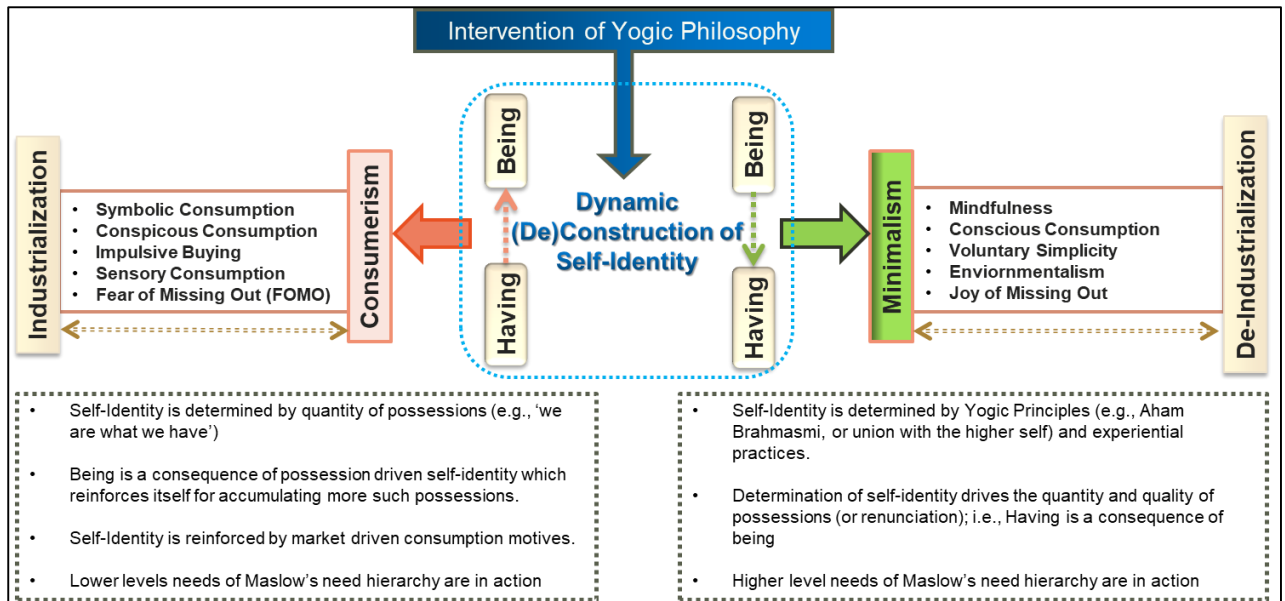
Figure 2. Positioning Yogic Philosophy in Consumer Behavior

Positioning Yog-Sutras in Consumer Behaviour

Out of four chapters of Patanjali's Yog-Sutras, the first chapter, 'Samadhipada' offered a much deeper explanation of the constituents of self, its vulnerabilities (that have been exploited by the wave of consumerism), and the possibilities of de-identification with the consumerist identity. For example, the gist of Yog-Sutra's overall purpose is summarized in the second verse, "Yogashchitvrittinirodh (योगश्चित्तवृत्तिनिरोधः ||1.2||)," which starts with trivializing the mind-stuff (i.e., Chitta), as if it is a separable element of an individual 'self' where identity constructions take place through a various combination of compulsive (as opposed to consciously performed) cyclical activities (or Vrittis) that occur in an aspect of mind called Chitta, and those Vrittis can be brought to a cessation by which the true sense of self, that is aware of (as a witness) of those activities or forms, is realized. The assumption over here is that Yog is a tool to realize the true self, which keeps witnessing the various identities and forms that a mind may create (तदा द्रष्टुः स्वरुपेऽवस्थानम् ||1.3||). Individuals identify with various objects, products, brands, individuals, institutions, social relationships, etc. throughout their lifetime as a result of cyclical activities (Vrittis) in the absence of the yogic efforts required to bring about the cessation. Thus 'self' may be assumed to be an entity that may identify with any (one or many) external identity objects, and the compulsive cyclical actions keep fortifying the identification process. This principle can be related to consumers' buy more or have more tendencies, according to systematically theories such as the self-extension model of consumption by Russell Belk (1988). Consumer identities are thus created by strategically crafted promotional messages for branding and loyalty programs around the object of consumption. It can be deduced that the process of consumer identity creation relies on 1) the external objects (goods, services, brands, etc.) of consumption and 2) the absence of awareness of the true self that keeps witnessing those internal Vrittis that keep the compulsive cyclical actions reinforcing the espoused identity with the object of consumption (वृत्तिसारूप्यम् इतरत्र ||1.4||).

Belk's (1988) theory of consumer identity construction (the self-extension model) may explain how and to what extent consumers may attach themselves to the consumption objects or possessions (i.e., the frequency and duration of possession or consumption) or how competitive forces of the market may change the identification across similar objects (e.g., brand switching behavior). However, it can't explain the anti-consumerism trend, which is trending in the form

of minimalism, where consumers are dropping off their possessions to live a simpler life. In other ways, Belk's self-extension model of consumer identity fails to explain why consumers feel happier about dropping their possessions or like to 'declutter' their spaces.

The reasons why consumers may turn minimalists may either be attributed to an awareness of the uncomfortable consequences of their current lifestyle, which is pushing their health, society, biodiversity, and environment at risk; or they may be attributed to individuals categorically seeking a higher-level being within, i.e., a quest for enlightenment, which is positioned at the top among the human needs in Maslow's need hierarchy. Whatever the reasons, the first principle of Yog-sutra, i.e., cessation of the mind from taking various forms, keeps its worth as a guiding light that proposes that any form of identity, e.g., consumer identity in this context, can be controlled, reconfigured, or deconstructed by practice (अभ्यास) and de-identification (वैराग्य) from the object of identification (अभ्यासवैराग्याभ्यां तन्निरोधः ॥1.14॥). Here, de-identification doesn't essentially mean dropping possessions, but just a separation or detachment of the individual self from the object of consumption, which stops the compulsive cyclical actions of accumulating more and more possessions that drive consumerism. Proponents and practitioners of minimalism essentially need to go through the de-identification of their loved possessions, which they desire to drop off. One of the reasons that may drive de-identification from possessions may be the perceived risk to health, wellbeing, and ecological safety that calls upon broadening awareness from unlimited and overgrowing needs of individual-level possessions to collective wellbeing and environmental sustainability. Yog, is not just a state of union (or Samadhi) but also a process involving practice and de-identification by un-bounding or disassembling the 'Vrittis' (क्षीणवृत्तेरभिजातस्येव) to cleanse the mind-stuff to an extent that becomes aware of 'the consumer or the perceiver (ग्रहीतृ)', 'the act of consumption or perception (ग्रहण)', and 'the consumed or the perceived (ग्राह्येषु)', the three separate entities that always remain in mutual transaction (क्षीणवृत्तेरभिजातस्येव मणेर्ग्रहीतृग्रहणग्राह्येषु तत्स्थतदञ्जनतासमापत्तिः ॥1.41॥). A similar manifestation of this yogic self is also found in 'Nirvan Shatakam' by Adi Shankarcharya: अहं भोजनं नैव भोज्यं न भोक्ता… ॥4॥, i.e., the true self is beyond (or witness) of the three entities, i.e., the consumer, the object of consumption, and the one who consumes. Overall, the yogic approach to self-identity offers deeper insights on the factors responsible for consumer identity, involving the dynamic interaction of the three constituents: the consumer self, the object of identification (or consumption), and the process of consumption. The level by which Chitt stays cleansed from mind Vritties creates opportunities for the true self to be aware of its three constituents. The level of awareness (द्रष्टुः स्वरुपेऽवस्थानम्) is likely to cause the process of shifting the drive away from consumerism and moving towards minimalism.

Conclusion

The contrasting trends of minimalism as compared to consumerism shows obvious transformation of the ways consumers construct their self-identity. The emergence of "minimalism" as a lifestyle movement demonstrates ambitions to address the global threats of human health, environment overall wellbeing from the demand side of the market because the issue is directly related to the individual's lifestyle. A very fundamental idea that lies at the heart of minimalism is that the sense of 'self' is apparently getting retrieved back from the influence of market-controlled consumer culture narratives e.g., "I shop, therefore I am" to a more consciously controlled decision-making process, often attributed to the new narratives of consumption which are reflected in the new consumer narratives built around conscious consumption, green consumption, mindfulness (Gentina, Daniel, & Tang, 2021), etc. This work is an attempt to integrate such ancient Indian philosophy of Yog-Sutra to offer a contrasting philosophical foundation for understanding consumer behaviour in general and minimalism in

particular to offer insights on how minimalistic approaches can be adopted further to foster health, wellbeing and further progression of life by consuming less.

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Employer Branding- An Insight from Bibliographic Review: Capturing the Future Research Scope

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Abstract:

Organizations today have to deal with increasing competitiveness in the global economic sector while still attempting to maintain their status as exemplary employers. Therefore, employer branding refers to the recruitment, engagement, and retention initiatives aimed at boosting your company's employer brand. Through bibliometric analysis, this study seeks to identify and evaluate the significant research advancements made in the area of employer branding. The investigation was done using the Scopus database. Taking into account the time period 2002 to 2023, a total of 447 papers were inferred from Scopus. The study's findings provided insight into the importance of employer branding research by revealing patterns of prolific authors and co-authors, frequently used keywords, country-specific analyses, research themes, theoretical underpinnings, and straightforward statistics. This thorough investigation has shed important light on Employer Branding, its goals, and its potential advantages for enterprises and society.

Key words: Employer Branding, Talent Management, Bibliographic Review, Branding.

Introduction:

In management science, we believe that 'if you are unknown, you do not exist'. And therefore, crafting a cult brand has always been one of the topmost priorities of businesses. It does not only help them create a unique identity, distinguishing them from the competitors, but also helps in creating an organizational persona. Branding, however, in most of the academic research done so far has been primarily associated with a product or service. However, industry research is trying to expand it further, beyond marketing by exploring the concept of employer branding, demanding equal attention towards talent management. Because, attracting a new employee and retaining an existing one is equally important as attracting and retaining the customers and other stakeholders of an organization.

Employer Branding represents the image as well as reputation of an employer, defining the totality of the employment experience with an organization. The concept of Employer Branding was introduced long back in 1990s, however it has caught the attention of researchers in recent years. As per Minchington, Employer Branding can be described as "the image of your organization as a 'great place to work' in the mind of current employees and key stakeholders in the external market (active and passive candidates, clients, customers, and other key stakeholders). The art and science of employer branding is therefore concerned with the attraction, engagement and retention initiatives targeted at enhancing your company's employer brand."

The study revolves around the Employer Branding trends, capturing evolving definitions of the concept, evolving antecedents as well as associated factors affecting the building blocks of employer branding, moderating elements, and its impact on the expected outcomes of the

employer branding. It also highlights the recent developments in the area on Employer Branding research, capturing the trends post covid work life scenario.

Literature Review:

The term, Employer Branding was introduced and defined by Simon Barrow and Tim Ambler, in 1990s. It was the first attempt in the history of management science that intended to test the brand management theories and concept in the area of human resource management and talent management. As per Simon and Tim, Employer Branding can be defined as "the package of functional, economic and psychological benefits provided by employment, and identified with the employing company". Later these benefits were also categorized as tangible (also called as instrumental benefits) and intangible benefits (also called as symbolic benefits) (Barrow, S. and Mosley, R.,2005).

The concept caught the attention of the industry in early 2001, when the conference board in North America conducted a survey of 138 leading corporate organizations and confirmed that 41% of them were actively involved in some or other activities related to Employer Branding. (Dell, D and Ainspan, N (2001)). The concept was gaining popularity in industry, in a survey conducted by the Economist in 2005, revealed that 61% of the HR professionals and 41% of non-HR professionals were aware of the concept and importance of Employer Branding (The Economist, 2005)

However, the concept was still yet to be explored by the academia. As per (Barney, 1991), employer branding can be predicted with an underlying assumption that human capital adds value to the organization, therefore, employer branding activities can be perceived as an investment to talent management, which further leads to sustainable competitive advantage. Some of studies explored the components and building blocks of Employer Branding such as: Perceived Organizational Image, Identity, Employer Familiarity and Reputation etc. (Cable & Turban 2001, Collins & Kanar 2013)

In some of the studies Employer Branding was closely associated with the Employer Image and Reputation. Employer Images can be defined as perception about the company in the minds of employees, associates, and other stakeholders such as public, government, investors, and nonprofit organizations. (Highhouse et al. (2009)). Studies also tried to differentiate between the concept of Employer Image with Employer Familiarity and Employer Reputation. Employer familiarity addressed the awareness about the organization, which also acts as a predecessor to the Employer Image and Reputation. Employer Reputation on the other hands, was described as the evaluative judgement at a global level from the viewpoint of all possible stakeholders of the firm including employees, public, investors, government, and non-profit organizations. (Highhouse et al. (2009)).

A recent report by 'Universum's Employer Branding NOW 2023', highlights the growing popularity of the Employer Branding concept, with 78% of the survey respondents considering it as their top priority. The report also marks Employer branding as a one of the critical areas of research, with its potential impact not only on the employees but also on the investors of the companies as well.

This paper, therefore, attempts to capture the inside out of the Employer Branding concept with the help of systematic and scientific bibliographic review. It captures the research work done in last two decades (2002- 2022) revolving around employer Branding, exploring the existing frameworks, concepts, antecedents, expected outputs and future research scope.

Methodology:

The current study is structured as a bibliometric analysis using Scopus database publications from 2002 to 2023 that were published within the previous 21 years. The related articles were found using the search term "employer branding." This database was chosen because it offers a greater range of excellent journals that adhere to the standards of the scientific community for quality. However, in addition to Scopus papers, Google Scholar was employed for the literature review. The process of locating, compiling, and analyzing a given field's key elements constitutes the research analysis's foundation (Cobo, 2011). Only papers with "employer branding" restricted in their title, keywords, or abstract were identified by the search filter utilized for this study. After limiting the results to the field of study, the year of publication, the document type (final publication stage), and the language (English), 447 research publications were inferred. The data was plotted, visualized, and studied. The data interpretation was based on the publication increase year over year, the most prolific authors, and the most frequent keywords. Figure 1 depicts the process for article search, data visualization, and mapping. The bibliographic search was carried out in August 2023, covering a time period of more than twenty years. The analysis was made possible by the VOSveiwer1.6.16 software. It is a tool for creating, displaying, and exploring maps using network data.
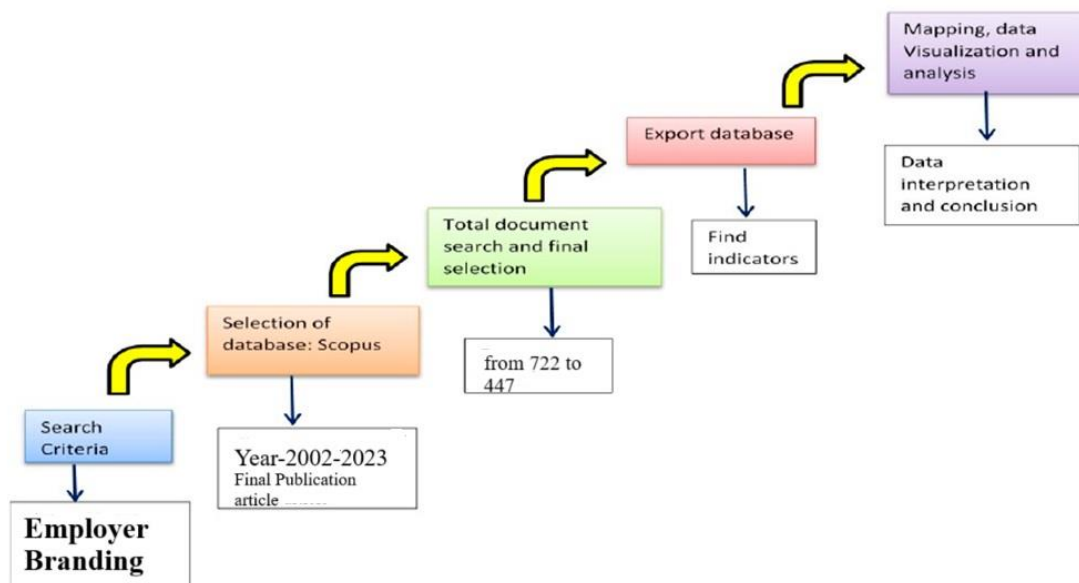
Figure-1: Steps for article search, data visualization, and mapping

Data Analysis and Interpretation

As shown in figure 2 the growth slope increased gradually from 2002 to 2011, considerably from 2012 to 2016, and dramatically from 2017 to 2023. It shows how businesses have been more aware of employer branding over the past ten years.
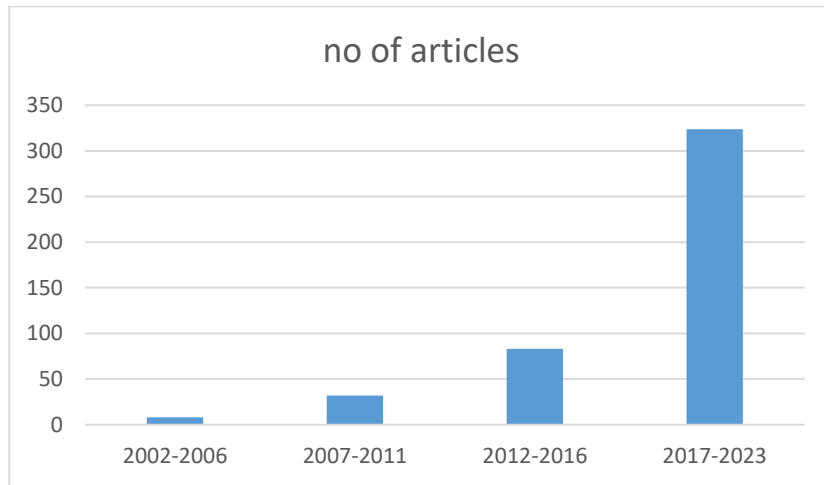
Figure 2: year wise publication on Employer Branding

The most productive authors who have contributed the most significant number of papers (most cited one) to the Scopus dataset over the past 20 years on the topic of "employer branding," from the data calculated from the VOS viewer software, is shown below in the figure 3.
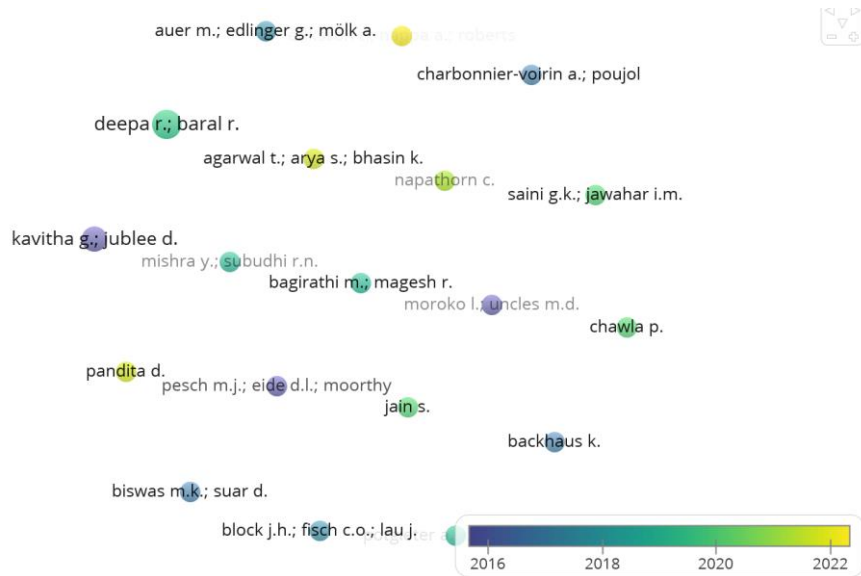
Figure 3: Most Productive Authors

The worldwide collaborations map on employer branding shown in Figure 4 shows the leading countries and the countries that have partnered with them to create at least five articles. The map displays the major countries out of all the collaborating nations found in VOS viewer.
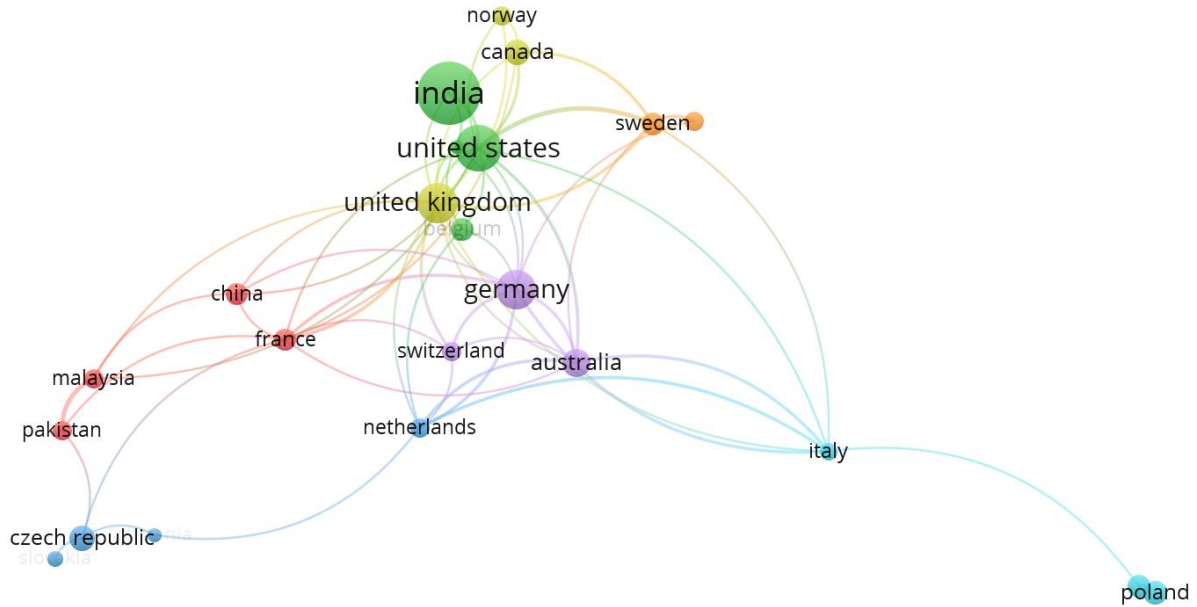
Figure 4: worldwide collaborations map on Employer Branding

The study of keyword co-occurrences in numerous research papers is done to keep track of all the keywords employed. This analysis aids in providing insight into the types of subjects, themes, associated variables, and objectives that the researchers have placed the greatest emphasis on. Figure 5.1,5.2 and 5.3 displays a network map of all keywords, author keywords and index keywords analysis respectively that appeared in the various research publications on "employer branding."
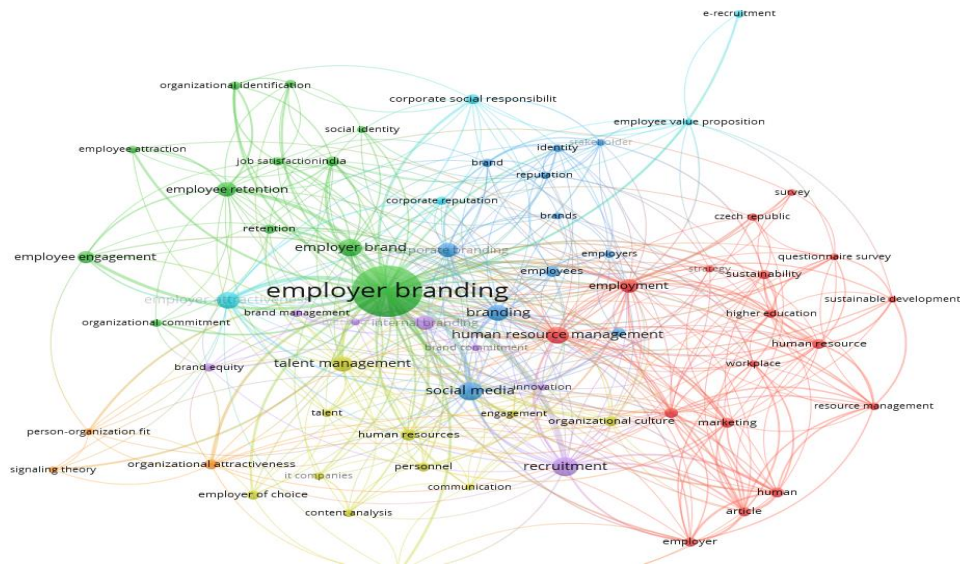
Figure 5.1: All keywords analysis
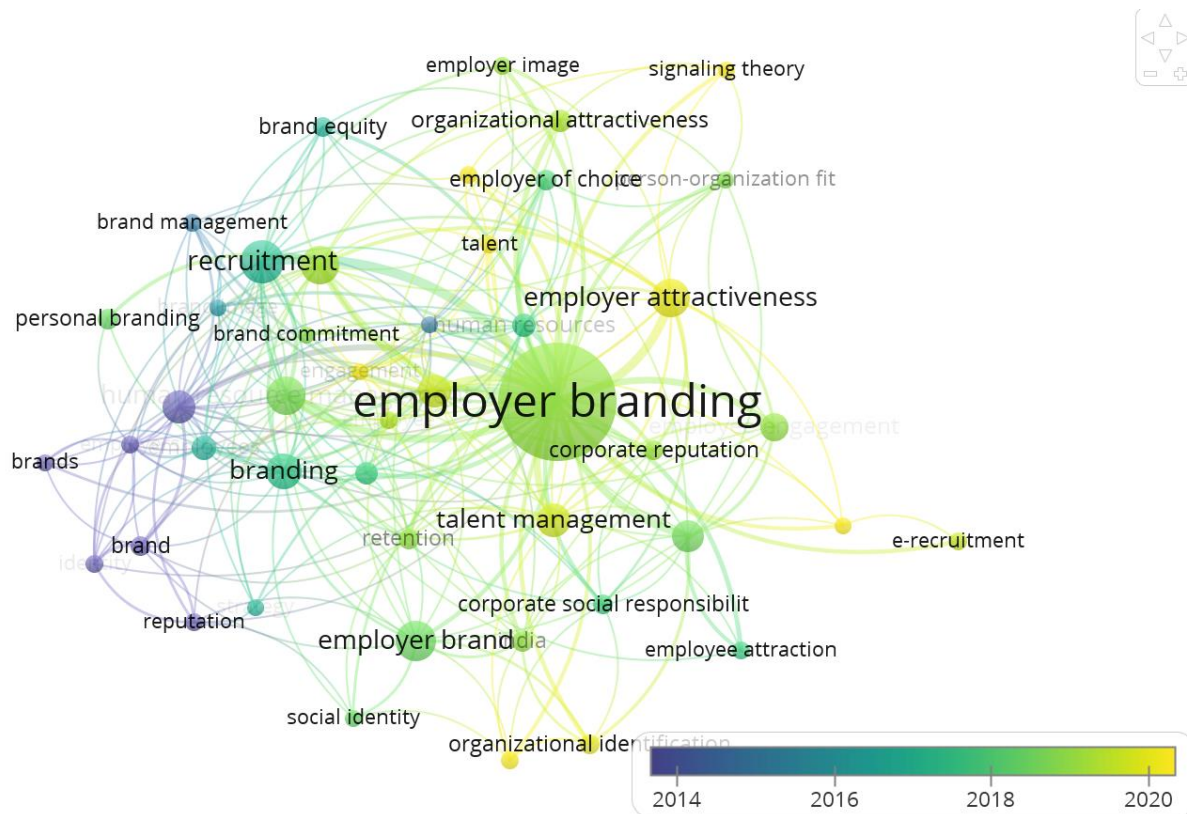
Figure 5.2: Author keyword use
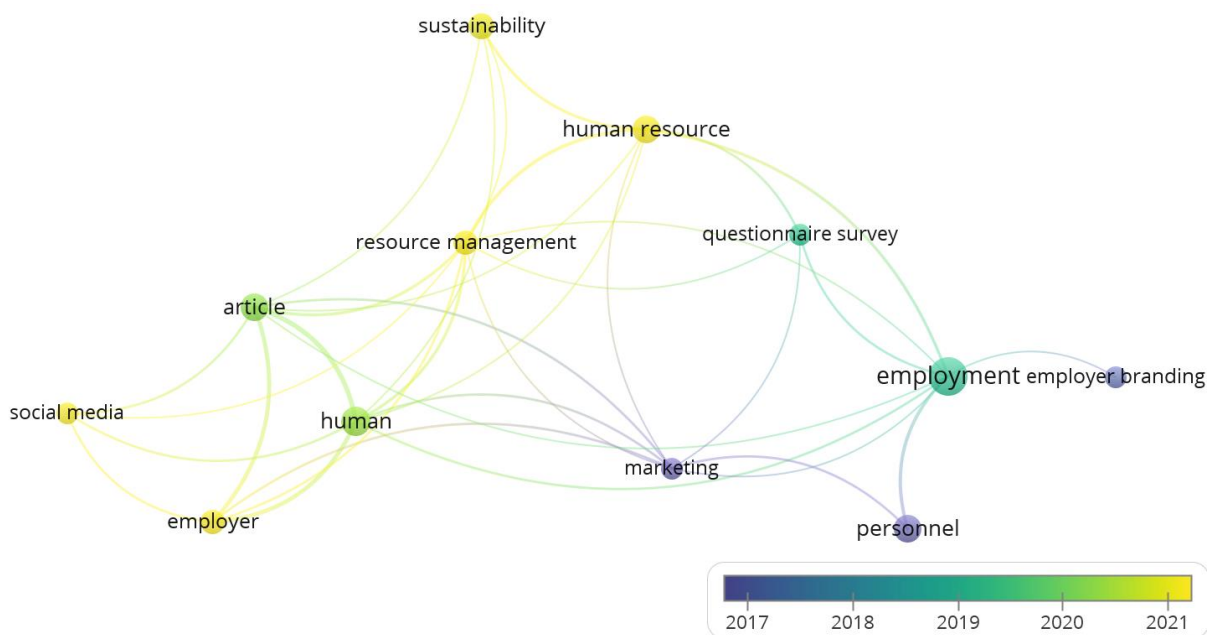
Figure 5.3: Index keyword wise

Results & Discussion:

- Employer Branding concept has been gaining traction in last two decades (2002-2023). The results represent an incremental growth in terms of number of articles published on Employer branding from 2002 to 2023.

- However, results also highlight the significant rise in the research work done in last 5 years (2017- 2023) in the field of Employer Branding.
- India, US, UK, Germany, and Australia are amongst the topmost research collaborators for Employer Branding, worldwide.
- Some of the most popular keywords associated with Employer Branding are Talent Management, Employer Image, Employer Attractiveness, Employer Reputation, Recruitment and Retention.
- Sustainability, Human Resources Management, and social media are amongst the trending indexed keywords in recent years.

Conclusion

Employer branding concentrates on the perceived organizational image, identity, familiarity, and reputation, which improves an employer's reputation. This study has examined the developments and research done in employer branding using bibliometric analysis. 447 research publications published between 2002 and 2023 were analyzed using the Scopus database. The most prolific author and co-authorship of highly cited research articles, frequently used keywords, country-by-country reviews, research themes, theoretical underpinnings, publication trends, and straightforward statistics are all used to determine the research's eminence. This article has examined the idea of employer branding, recent developments in the field, and its goals and positive effects on society and business. Therefore, this paper on employer branding will aid in developing a strong employer brand, making the company a top pick for industry professionals. This can, therefore, result in lower hiring expenses and higher operational effectiveness.

Managerial Implications:

This article represents and reflects upon some of the major trends in Employer Branding. It also highlights the gap, seeking researchers' attention towards sustainability, social media and Employer Branding. Which further can be used as a base to develop a sustainable framework linking the application of social media to reach out to the Employees and other stakeholders, to get deeper insights. Results show the absence of work done in the context of post covid work scenario, such as massive layoffs, extensive work hours, High Employee turnover, quiet quitting, quiet firing etc. and associated changes in the Employer Branding Practices.

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Trust: In Indian Knowledge System and its Modern Interpretation

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Abstract

There are two concerns- why trust is betrayed and how to lower the probability of being betrayed. The Indian thought system uses two constituents to define trust- Intention and competence. Every human being has the same intention whereas the competence of each individual may be different. In this paper, we analyze definitions of trust from extant literature in four disciplines- sociology, philosophy, economy, and organizational management using this definition of trust. Our analysis reveals reasons for the betrayal of trust and a possible remedy for it.

Keywords: Betrayal, Intention, Competence, Assessment, Utility

1.   Introduction

Social science, philosophy, economics, and organizational management have defined and analyzed trust. Bhagavad Gita also addresses the topic wherein the trust of an individual in herself has been emphasized. The Vedas, part of the Indian Knowledge System (IKS) put effort into the cultivation and proper combination of faith and reason. An individual's domestic, social, national, and global duties are clearly mentioned in the Vedas. The Vedas put equal effort into developing individuals' physical, mental, and spiritual faculties. This idea of harmony is also unique in the Vedas. Taitreya Upanishad (which is associated with KrushNa Yajurved) in its Brahmanand valli (Chapter 2), includes a shloka shown in Table 1. The shloka, known as Shanti patha, presents a beautiful aspect of the aspirations of the teacher (the Guru) and the disciple (the shishya) together. Although the shloka refers to student and teacher behavior, it is equally applicable to two entities e1 and e2.

With these teachings in mind, there is little scope for distrust or unfaith. The trust between e1 and e2 requires that e1 and e2 both must trust themselves. In the extant literature, trust is primarily explored involving trustor e1 and trustee e2. Trustor e1 makes an assessment before making a decision to trust entity e2. If an over-assessment is made, e2 may not hold the trust and if an under-assessment is made, e1 may not trust e2. In both cases, e1 incurs a cost. Following is a comprehensive definition of trust [Cho et al, 2015] referred to as TrustForm1 and we quote,

"Trust is the willingness of the trustor (evaluator) to take a risk based on a subjective belief that a trustee (evaluatee) will exhibit reliable behavior to maximize the trustor's interest under uncertainty (e.g., ambiguity due to conflicting evidence and/or ignorance caused by complete lack of evidence) of a given situation based on the cognitive assessment of past experience with the trustee."

Table 1: Shanti Patha, In sanskrit, In English transliteration and its meaning

ॐ सह नाववतु । सह नौ भुनक्तु । सह वीर्यं करवावहै । तेजस्वि नावधीतमस्तु मा विद्विषावहै । ॐ शान्तिः शान्तिः शान्तिः ॥	Om Saha Naav[au]-Avatu | Saha Nau Bhunaktu | Saha Viiryam Karavaavahai | Tejasvi Naav[au]-Adhiitam-Astu Maa Vidvissaavahai | Om Shaantih Shaantih Shaantih ||
Om, Together may we two Move on our path, Together may we two Relish, Together may we perform our duties with Vigour, May what has been performed by us be filled with the Brilliance (of Understanding, leading to Knowledge); May it Not give rise to Hostility (due to lack of Understanding), Om Peace, Peace, Peace. By enchanting Peace thrice, it is meant for peace for Natural, physical, and spiritual contentment.	

Entity e1 who trusts, aka trustor, has an objective that will bring a benefit u1. The trustor e1 trusts entity e2 who is being trusted, aka trustee. Entity e1 makes an assessment of Entity e2 before trusting. The trustor also makes an assessment of the risk involved should the trustee betray the trustor. Trust has been discussed in various ancient Indian texts. The following is a very popular verse from Mahabharat.

न विश्वसेदविश्वस्ते विश्वस्ते नातिविश्वसेत्, विश्वासाद् भयमभ्येति नापरीक्ष्य च विश्वसेत्।।

Don't trust one who is not trustworthy, don't overtrust a trustworthy person. Over-trust may cause a feeling of vulnerability. Hence, trust after due diligence. This may directly be mapped to TrustForm1 wherein there are two entities- trustee and trustor, and the trustor is advised to assess the trustworthiness of the trustee. The advice is to be conservative.

We present another formulation of trust (Gaur et al, 2016) referred to as TrustForm2. Trust forms the foundation for any interaction. There are two constituents of trust: intention and competence. Intention can be broken up as follows.

I1: I want to make myself happy.

I2: The other person wants to make herself happy.

I3: I want to make the other person happy.

I4: The other person wants to make me happy.

Assertions I1 and I2 are very easy to verify. We interviewed over 100 people and asked if they wanted to make themselves happy or unhappy. When we did this exercise, people started smiling as if we were asking a question with an obvious answer. At our request, everyone confirmed that they wanted to make themselves and others happy. Most people gave affirmative answers to I3 but sometimes there was a negative response based on their history. When we asked people, what do they really want in spite of their history with another person- to make the other person happy or unhappy, there was mostly a pause and a bit of discomfort. Our follow-up question was- When you contemplate making the other person unhappy, do you feel happy within or unhappy within? Our participants were able to see that the intention to make others unhappy was a cause of their own unhappiness. It turns out that everyone wants to make the other person happy. However, not many people were sure of I4. A basic question to ask is the following- Is the other person the same as me or different? If we assume that at the level of intention, we all are the same, then I4 holds as it is a reflex of I3. Is there any other possibility? The reader is welcome to explore and verify for herself. Following is the breakdown of competence.

C1: I am able to make myself happy.

C2: The other person is able to make herself happy.

C3: I am able to make the other person happy.

C4: The other person is able to make me happy.

If we understand that everyone has the same intention whereas competence may be different, a relationship of trust exists. If e1 is more competent, she will help e2 to enhance her competence. A relationship exists where there is no doubt on intention and, e1 and e2 are willing to work towards enhancing their collective competence. Such a relationship may simply be called a humane relationship.

2. Analysis

We will use formulation using TrustForm1 and point out the challenges faced by trustor e1 and trustee e2. We will then show the challenges that can be resolved using TrustForm2.

2.1 Trust in Sociology

Trust is defined as the subjective probability that the trustee e2 will perform an action that will not hurt the interest of the trustor e1 under uncertainty and ignorance [Gambetta, 1988, Cho et al, 2015]. The implication is that if the trustee doesn't conduct herself as the trustor expects, the interest u1 of the trustor will be compromised. We will leave uncertainty out as it is not within anyone's control. The trustee e2 may be ignorant of interest u1 of trustee e1 or e2 may not have the competence required to conduct herself in an expected manner. If e1 makes a wrong assessment of the competence of e2, then e2 alone cannot be held responsible. Both e1 and e2 need to work on improving their competence. When it comes to interest u1 of e1, we need to also consider the interest u2 of e2. Are u1 and u2 in conflict or is e2 or another resource directly or indirectly being exploited? TrustForm2 helps in resolving the impact of ignorance.

2.2 Trust in Philosophy

Trust is looked at as a personal phenomenon that helps maintain moral relationships between individuals [Lahno, 1999, Cho et al, 2015]. Let us look at the relationship of trust of an entity e1 with itself and with entity e2. An example will help. Say, e1 breaks a glass or breaks a promise made to self (such as I will get up at 5 AM). In the case of a glass, e1 externalizes the event and asserts that the glass broke. In case of a promise, e1 asserts the intention is there and one day I will be able to keep the promise. Entity e1 doesn't suspect her intention. We extend the examples and include entity e2 whose evaluation would be that e1 broke the glass and e1 never had the intention to get up at 5 AM. When we evaluate ourselves, we hold on to the fact that our intention was right and our competence was lacking. When we evaluate others, we doubt the intention. This is what leads to breakdown of moral relationships. If we understand that everyone has the same intention whereas competence may be different, a relationship will not break down. If e1 is more competent, she will help e2 to enhance her competence. A relationship where there is no doubt on competence and, e1 and e2 are willing to work towards enhancing their collective competence is a moral relationship. Such a relationship may simply be called a humane relationship.

2.3 Trust in Economics

Trustor e1, when she trusts e2, has an objective that is measured in terms of utility u1 [James, 2002, Cho et al, 2015]. In the present economic system, the utility u2 for e2 is not conducive for e2 to cooperate so that e1 can realize the utility. The disparity between u1 and u2 is disproportionate to the level that e2 feels exploited. We have over-evaluated the utility of physical facilities and learned to accumulate. If everyone learns to evaluate her need for physical facilities, the focus will shift from the accumulation of physical facilities to the right utilization of physical facilities. The disparity between u1 and u2 can be consciously reduced which will encourage e2 to cooperate (Coursone and Nettle, 2021).

2.4 Trust in Organizational Management

The trustor makes an assessment of the ability, integrity, and benevolence of the trustee that results in willingness of the trustor to take risks and be vulnerable [Mayer et al, 1995; Cho et al, 2015].

An organization generally has a hierarchy where the goal or interest of the organization is at the top. These goals are translated into different goals of different agents in the organization. Trust is one possible outcome of cooperation. Can two entities cooperate without a feeling of trust? Literature focuses on studying trust from the perspective of the trustor. Is it even possible to study trust only from the perspective of a trustor? What is the role of the trustee? The focus is on the interest of e1. This definition can be analyzed using the principal-agency theory- the agent may have her own interest that may be different from the interest of the principal. In order to increase the probability of protecting your interest, e1 may ensure that the interests of e1 and e2 overlap. On the surface, it may appear that it is not possible. As per the TrustForm2, everyone wants to be happy and make others happy leading to mutual happiness. In an organization, everyone is expected to work towards the goal of the organization. However, if the organization's goals translate to individual goals that involve exploitation, individuals may not cooperate. For instance, a company that manufactured alcoholic beverages (name of the company withheld) wanted its employees to induce eligible youngsters to consume their products. Such a goal asks employees to exploit others. The trustor may exploit the trustee. If I3 and I4 don't hold, the trust will break down.

3. Conclusion

Trust has been discussed in various ancient Indian texts. Bhagwat Gita defines trust in verse 17.3. Trust is a feeling that is within oneself. Trust is unconditional. The first person to trust is oneself. We face many problems when trust is betrayed. Many times, the trustee is not aware that he has betrayed the trustor. Some of these problems crop up because of inadequate formulation of trust. The basic aspiration of a human being is to be happy and make others happy which leads to mutual happiness. But sometimes in spite of proper intention, e1 or e2 or both lack the competence to make each other happy. Happiness itself has been defined by keeping the body in focus. If we rise above the level of the body and rise to the level of self (consciousness), happiness is being in a state of harmony. Entities e1 and e2 will both be happy when each one is in harmony and their interaction is also harmonious. However, if happiness is defined in terms of physical facilities and their accumulation, the objectives of e1 and e2 are likely to be in conflict. If e1 and e2 both realize that the need for physical facilities is limited, the focus will shift from exploiting to cooperating.

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Business Organizations in Ancient India: An Institutional Perspective

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Introduction

Historical organizational forms have received relatively less attention in organization studies (Kroezen et al., 2020). Organizational scholars have analyzed the historical organizational forms, such as European guilds and craft organizations (Kieser, 1989; Kroezen et al., 2020). The current paper contributes to this scholarly interest in historical organizational forms by analyzing the role of business organizations in ancient India. India accounted for 32.9% of the world economy and was the largest economy at the beginning of the Common Era. This share reduced to 28.9% during the next 1000 years but India still remained the largest economic power in the world (Maddison, 2007). This paper analyses the role of ancient business organizations in sustaining this economy. The paper adopts an institutional perspective to study these organizations and the reason behind their persistence and sustenance.

The paper is divided into three sections. The first section presents a brief review of organizational literature on historical organizational forms. The second section describes the data and method used in this study. The third section elaborates upon findings related to the functions and processes of business organizations in ancient India. The last section discusses the reasons behind formation and persistence these business organizations.

Literature Review

The business organizations in ancient India have received some attention in social science disciplines such as history and law (Khanna, 2006; Roy, 2008). However, organization studies has not paid much attention to the business organizations in ancient India. This might be due to the perception that ancient business organizations represented archaic organizational forms with little relevance in contemporary context. However, recent research on historical organizational forms conceptualizes these organizations as alternative ways of organizing work (Kroezen et al., 2020). These alternative organizational forms can provide new insights and perspectives to study organizations.

The current paper analyses *sreni* – a business organization in ancient India – from an institutional perspective. It analyses the reasons for emergence and persistence of this organizational form in ancient India.

Data and Method

Data

The study draws upon archival sources such as epigraphs and secondary sources such as historical works published on business organizations in ancient India. Majumdar (1918) published the first historical work on business organizations in ancient India was in his book *Corporate Life in Ancient India*. At around the same time Mookerjee (1920) published his monograph titled *Local Government in Ancient India* which also brought to light the various forms of business organization in ancient India. Bhargava's (1934) monograph about indigenous banking practices in ancient and medieval India contains a chapter on guilds and association of bankers. Kuppuram (1956) refers to the existence of potter's association and their well organized

guild in his account of the industries in primordial Tamil Nadu (i.e. the Sangam Era). More recently historians have published historical monographs that deal exclusively with the subject of business organizations in ancient India (Jain, 1990; Thaplyal, 1996).

Method

The author drew upon qualitative techniques to analyze the data and glean salient themes related to business organizations in ancient India (Gioia et al., 2012). These themes were then analyzed using the theoretical perspective of institutional theory.

Findings

The organization of craftsmen and artisans are referred to by a variety of names - *sreni*, *puga*, *nigama, gana*, *vrata, samgha* and *sambhuyasamutthanam* - in the ancient texts and epigraphs. This paper focuses on the business organizations of *sreni*, *puga* and *nigama*.

Incorporating the business organization

The term *sreni* denoted a business organization whose members usually inhabited the same place and pursued the same occupation (Jain, 1990). The first step in the formation of a *sreni* was the coming together of a group of persons and the establishment of mutual confidence and agreement among them. Three methods - *kosha* (oath), *lekhakriya* (written agreement) or *madhyastha* (mediator) - of establishing confidence among the members are mentioned in the *smriti* literature (*Brihaspatismriti* as quoted in Majumdar, 1918).

The *kosha* was a form of sacred oath taken by the members which bound them together as a group. *Lekhakriya* referred to the agreement incorporating rules, regulations, functions and duties of the *sreni* to which all the members needed to subscribe. The Arthshastra and later *smriti* writers (such as Katyayan) stress on the necessity of reducing the agreement among the members to writing. It seems that initially it was sufficient to take a verbal oath to form an association. This was later systematized and the writing of the agreement became necessary. *Madhyasta* was a practice where a well known person guaranteed the faithful conduct of another person.

The members after agreeing among themselves were required to register their organizations with the state. The registration document was known as *sthithipatra* (*Brihaspati* and *Katyayana smriti* as quoted in Jain, 1990) and contained the rules and regulations regarding disputes, profit distribution, distribution of labor and other activities that the *sreni* was to undertake. The process of registration is also mentioned in one of the epigraphs of sixth century (Jain, 1990) where a group of merchants approach the king with an *acarasthitipatra*. *Sukraniti* also informs us about the necessity of acquiring state sanction for establishing any organization (Jagdishwarananda, 2008).

The *sreni* followed an apprentice system for training the newcomers. A newcomer could join the *sreni* as an apprentice after seeking the permission of his relatives. The apprenticeship required the student to live in the *sreni* and learn the craft under a master craftsman. After the end of the apprenticeship period the student could either continue working with the same *sreni* or look for job outside (Khanna, 2006).

Organizational Structure of Sreni

The *sreni* followed a three-tiered structure. The head of the *sreni* was in general known as *sreni pramukha*. Alternative names for *sreni* head that find mention in the literature are *setthi*, *sresthi*, *jetthaka*, etc. The *sreni* head looked for and located markets for *sreni's* products liaised with head of other *srenis* and acted as a representative of the *sreni* at the king's court (Thaplyal, 1996).

The second tier of the *sreni* consisted of a group of executive officers who looked after the day to day affairs of the organization. The *Brihaspatismriti* mentioned two, three or five as the tnumber of executive officers (Thaplyal, 1996). The Nagardhan inscription of the Gupta age however, refers to an organization of elephant drivers which had twelve executive drivers (Chakraborti, 1978). This signifies that the number of the executive officers was not fixed and varied depending on contextual factors such as *sreni* size.

The third tier of the *sreni* was the general assembly of all the members (Jain, 1990). It was the most powerful body of the *sreni* and had the sole authority to induct or dispel a member. The general meeting of the *sreni* was held at regular intervals in its assembly hall. All the members were free to speak in the assembly and any attempt by the head or executives to stop the members from speaking reasonably was punishable by a fine. Each member, including the head and the executive officer, was responsible to the general assembly. The assembly had the right to remove the chief and the executive officers. However if the chief, executives or general member punished by the assembly was not satisfied with the decision he could approach the king for hearing.

Organizational Goals and Processes of Sreni

The main function of the *sreni* was to produce goods, to look for markets, train newcomers and provide congenial working atmosphere to its members. However the activities of the *sreni* were limited not just to its business but included a variety of economic, social, judicial and political roles.

The *sreni* also functioned as banks. The *Arthsastra* mentions that a reputed *sreni* could accept deposits from other *srenis* and lend money to merchants. There are numerous inscriptions referring to the *sreni* accepting endowments from common people and kings and agreeing to pay perpetual interest on them (Chakraborti, 1978; Jain, 1990). The endowments were mostly in cash and the interest paid was mostly in kind. As part of the interest payment, the *sreni* undertook activities such as planting of trees, providing oils or garlands to the temple and providing provisions to the monks.

The *sreni* undertook numerous charitable and philanthropic works. The nature of the philanthropic activities is elaborated in the *Brihaspatismriti*. It states that a portion of profit of the *sreni* was to be donated for construction and maintenance of traveler sheds, temples, ponds and gardens. The *sreni* was also supposed to help the poor, diseased, old women, orphans and others in need. Numerous instances of *sreni's* philanthropic activities are also found in the inscriptions and epigraphs of the period (Majumdar, 1918; Thaplyal, 1996). These philanthropic activities enabled the *sreni* to gain respect and legitimacy in the eyes of the general public.

Discussion and Conclusion

The *sreni* was an important business organization in ancient India. It had mechanisms to formulate, enforce and incentivize members to abide by the rules. However the state had a minimal interference in the affairs of the *sreni* so the formal rules in the sense in which (North, 1991) were not applicable to the *sreni*. However the regular meetings of the assembly and punitive action taken against deviants in such meetings enabled the members to form mutual expectation about each other's behavior. This led to the necessary behavioral responses of individual members to reproduce the institution of *sreni* (Grief, 2006). The equal share of all the members in the *sreni* property and the provision of incentives and privileges such as that of bailment in legal cases would have provided additional motivations for the members to reproduce the structured behavioral responses.

There, however, were exogenous political and religious factors as well which influenced the *sreni*. The rise of a strong Mauryan Empire circa 300 B.C.E. led to various measures to improve the infrastructure for traders and commerce. The state built towns and roads which led to an increased economic activity. On the flip side, however, a number of industries were monopolized by the state (Shastri, 1925). The increased power of the state motivated the individual traders and craftsmen to organize themselves into *sarttha* and *srenis* so that they could be in better negotiating status vis-à-vis the state.

The *sreni* though being localized was a mobile institution and instances of *srenis* moving from one place to another are found in the epigraphic sources (Thaplyal, 1996). The disintegration of the empire led to an increase in power of these institutions and they were able to secure various concessions from the state. With increasing number of small kingdoms the cost associated with interstate mobility of the *sreni* became less. The small kingdoms needed to keep the *srenis* in good terms so that they did not move away. Thus the waning power of the state enabled the *srenis* to consolidate their position in the society.

An important factor in the persistence of *sreni* as an institution was the legitimacy that it acquired through its philanthropic activities and association with religious institutions. It undertook various philanthropic activities and built public utility infrastructure. The endowments that it received from kings and general public were mostly for rendering services to temples and Buddhist monasteries. The association with these institutions reinforced the legitimacy of *sreni* and enabled it to survive over a long period of time.

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ANCIENT INDIAN WISDOM IN MODERN MANAGEMENT
Integrating Etical Principles and Cultural Values

Razat Guptaa & Thomas Nishan Jacob

INTRODUCTION

Ancient Indian wisdom, rooted in the Upanishads, Vedas, and Bhagavad Gita, holds profound insights into moral behavior, integrity, and the holistic integration of traditional values with modern management practices. In contemporary India, strategic planning and technology coexist with age-old principles, creating a unique management landscape that values diversity and inclusivity. However, navigating through bureaucratic and hierarchical structures poses challenges in adapting to the global economic environment. This study explores the transformative potential of ancient cultural values and wisdom in shaping modern corporate practices, striking a balance between innovation and tradition.

The 20th century witnessed significant Western management advancements fueled by science and technology, often emphasizing materialism and financial incentives at the expense of individual well-being. In stark contrast, the Arthashastra, authored by Kautilya and dating back to 400 BC, laid enduring foundations for management and governance. The principles of dharma, karma, and equality embedded in Indian management challenge the Western paradigm.

Companies such as Infosys, Godrej, and IOCL exemplify the successful integration of ancient Indian wisdom into modern practices. Adopting Spirinomics, a philosophy emphasizing selfless work and humanitarian welfare, these businesses merge spirituality with economic and administrative principles. Tolerance, liberty, equality, and intercultural understanding are paramount in responsible Indian companies, reflecting a commitment to ethical leadership.

Mahatma Gandhi's 'Swadeshi Dharma and Trusteeship in Management' introduced the concept of karma capitalism, prioritizing stakeholders and environmental concerns over mere financial gains. Encouraging self-reliance, regional production, and indigenous industries, Gandhi proposed a trusteeship approach where wealth is viewed as a means for societal welfare. It resonates with the ethos of businesses supporting ethical projects, positioning them for sustained prosperity.

Motivating this study is the conviction that organizations, economies, and societies must embrace ethical knowledge and behaviors to tackle global challenges effectively. Introducing Ancient Indian wisdom into modern management practices holds the promise of a more moral, progressive, and sustainable world. This research seeks to unveil the untapped potential of these ancient principles in inspiring ethical leadership, promoting innovation, and positively impacting the global business landscape.

2   LITERATURE REVIEW

Ancient Indian wisdom, encapsulated in the Upanishads, Vedas, and Bhagavad Gita, provides profound insights into relevant management concepts in the contemporary business landscape. These insights, combined with principles drawn from other ancient Indian texts, create a comprehensive foundation for understanding management practices deeply rooted in India's rich heritage.

2.1 Ancient Indian Wisdom in Upanishads, Vedas, and Bhagavad Gita

Upanishads

• Self-Management (Atman): The concept of Self-Management urges individuals to understand their true selves (Atman). In a management context, it translates to self-awareness, self-motivation, and aligning personal values with organizational goals.

• Knowledge and Wisdom (Vidya): Promoting knowledge (Vidya) aligns with continuous learning, knowledge sharing, and intellectual growth within organizations.

Vedas

• Teamwork and Collaboration (Samuhya) Teamwork and collaboration (Samuhya) highlights principles echoed in modern management by valuing cohesive teams, collective problem-solving, and the synergy from effective collaboration.

• Leadership and Decision-Making (Raja Vidya) The knowledge of rulership provides insights into ethical leadership and decision-making, emphasizing the responsibility of leaders to consider the well-being of all stakeholders.

Bhagavad Gita

• Duty and Ethics (Dharma): The Bhagavad Gita emphasizes duty and ethics (Dharma), translating into ethical leadership, responsible decision-making, and commitment to societal and environmental well-being.

• Detached Action (Nishkama Karma): Nishkama Karma, performing duties without attachment to results, encourages a focus on the process and quality of work in management, promoting a resilient and adaptive organizational culture.

• Mindful Leadership (Sthita-prajna): Mindful leadership (Sthita-prajna) suggests the importance of emotional intelligence, a steady mind, and remaining focused in challenging situations.

• Equal Vision (Samadarshana): Samadarshana, the ability to see inherent equality, encourages fair treatment, diversity, and equal opportunities for all, aligning with modern notions of inclusive leadership.

• Leadership by Example (Yad yad ācarati śreṣṭhas): The emphasis on leadership by example (Yad yad ācarati śreṣṭhas) translates to leaders setting high standards of behavior, work ethics, and professionalism, inspiring others to follow suit.

2.2 Ancient Indian Management Principles

Chanakya's Arthashastra, dated around 400 BC, is an ancient treatise on statecraft, governance, and economics. Scholars (Gupta, 2015; Bhatt, 2018) highlight its relevance in strategic planning, organizational structure, and economic policy. It echoes contemporary corporate governance principles, emphasizing ethics, governance, and holistic planning.

2.3 Gandhian Philosophy: Swadeshi Dharma and Trusteeship

Mahatma Gandhi's philosophy of "Swadeshi Dharma" and "Trusteeship in Management" underscores the importance of self-reliance and social responsibility in business and management.

Swadeshi Dharma promotes using indigenous resources and expertise to benefit local communities, advocating for local production and reducing reliance on foreign goods.

Trusteeship, on the other hand, encourages business leaders to view their wealth as a responsibility for the welfare of society and all stakeholders. This Gandhian philosophy promotes ethical and socially conscious business practices.

2.4 Spirinomics and Spiritual Integration

Spirinomics, a concept by Subhash Sharma, draws from ancient Indian wisdom, advocating sustainable and ethical business practices. Sharma (2010) explores parallels between Spirinomics and contemporary sustainability and ethical management models. Leading Indian companies, such as Infosys, Godrej, and IOCL, align their practices with Dharma, Karma, and Seva (selfless service) principles, fostering a harmonious coexistence with nature.

2.5 Ethical Initiatives and Future Outlook

The literature reviewed indicates that businesses that proactively embrace ethical initiatives based on ancient Indian principles are well-positioned to thrive. Ethics and practice at all organizational, economic, and societal levels are imperative. Addressing global challenges, particularly in ethics, requires adopting more ethical and forward-thinking behaviors.

These ancient Indian management concepts, integrated into modern management practices, offer a holistic and timeless perspective on leadership, teamwork, ethics, and personal development. Implementing these principles can create sustainable, ethical, and socially responsible organizations, aligning with the dynamic and evolving needs of the contemporary business landscape.

3 CONCEPTUAL MODEL

This conceptual model harmoniously integrates traditional Indian management practices from the Upanishads, Vedas, and Bhagavad Gita with contemporary management theories, creating a robust foundation for practical application in organizational contexts. It unfolds across several key components:

3.1 Ancient Indian Wisdom Integration

• Dharma (Duty and Ethics): Emphasizes ethical and moral responsibilities, guiding decision-making with fairness and righteousness, aligning with principles from the Bhagavad Gita.

• Karma (Action and Responsibility): Underscores responsible actions and accountability in management decision-making, drawing inspiration from the Bhagavad Gita's teachings on duty and responsibility.

• Trusteeship: Champions consider wealth and resources as entrusted assets for growing stakeholders, underlining social responsibility reflecting Gandhian philosophy.

3.2 Synthesis with Modern Management Theories

• Strategic Management: Incorporates tools like SWOT analysis and balanced scorecards, drawing from Arthashastra and contemporary strategic planning.

• Leadership Theories: Aligns with diverse leadership theories such as transformational, servant, and ethical leadership, reflecting the leadership principles found in ancient Indian texts.

• Human Resource Management: Accentuates employee engagement, talent development, and diversity and inclusion strategies, integrating with the values of teamwork and collaboration (Samuhya) from the Vedas.

3.3 Nurturing Organizational Culture

• Cultivates an organizational culture rooted in Indian principles of ethics, responsibility, and trusteeship: Promoting mutual respect, trust, and social responsibility, enabling an inclusive environment inspired by the ancient concept of equal vision (Samadarshana).

3.4 Ethical Decision-Making Framework

• Provides a model for ethical decision-making: Aligning with Dharma and Karma principles, enabling ethical dilemma analysis and stakeholder impact assessment, integrating Upanishadic teachings on self-awareness and self-motivation.

3.5 Balanced Performance Metrics

• Employs quantitative measures, including key performance indicators (KPIs), assessing financial and ethical/social performance, such as employee satisfaction and sustainability, combining Vedic principles of knowledge and wisdom (Vidya).

3.6 Practical Model Implementation

• Alignment and Awareness: Evaluate existing values and practices, enrich employee awareness, and draw on the Upanishads' self-management concept (Atman).

• Training and Development: Provide extensive training to equip leaders and employees with essential skills, reflecting the continuous pursuit of knowledge (Vidya) from the Upanishads.

• Integration: Incorporate traditional principles and modern theories into strategic planning, leadership development, and human resource approaches, drawing inspiration from the concept of Spirinomics.

3.7 Anticipated Objectives

• Ethical Leadership: Cultivate ethical leadership, illustrated by integrity, honesty, and a solid moral compass, enabling trust and responsibility, aligning with Bhagavad Gita's teachings on duty (Dharma).

• Organizational Culture: Promote an organizational culture ingrained in mutual respect, trust, and social responsibility, integrating Vedantic principles of teamwork and collaboration (Samuhya).

- Social Responsibility: Facilitate responsible business practices contributing to societal welfare, aligning with the Gandhian philosophy of trusteeship.

- Sustainability: Illustrate promising performance metrics encompassing financial prosperity, employee well-being, community engagement, and environmental sustainability, reflecting the holistic approach championed in ancient Indian wisdom.

This comprehensive framework not only effectively integrates traditional Indian management values with modern theories but also provides practical guidelines for implementation and anticipated results. Beyond academia, it serves as a valuable guide for organizations looking to infuse their strategies with the timeless principles of ancient Indian wisdom, encouraging sustainability, ethical leadership, and social responsibility in today's evolving business landscape.

4   METHODOLOGY

A Case Analysis of the Integration of Ancient Indian Management Wisdom with Modern Management Theories

4.1   Case Selection

The case study focuses on Infosys Limited, a global IT and consulting company known for its commitment to ethical practices and sustainability, aligning with the principles derived from Upanishads, Vedas, and Bhagavad Gita.

4.2   Document Review

A comprehensive review of Infosys's historical documents and records was conducted, analyzing mission statements, leadership messages, and past initiatives. This revealed the organization's commitment to incorporating traditional Indian values and contemporary management principles post mid 2000s.

4.3   Integration Framework Validation

The integration framework, synthesized from the case study, was presented to Infosys's leadership/employees for validation and feedback. Leadership perspectives were gathered through structured interviews to enrich and refine the framework based on practical experiences.

4.4   Data Analysis

Collected data, comprising historical documents, leadership insights, and the validated integration framework, underwent rigorous qualitative analysis. Thematic analysis identified patterns, trends, and correlations, providing a nuanced perspective on ethical leadership, sustainability, cultural integration, and employee-centric approaches.

4.5   Expected Outcomes

Anticipated outcomes include a detailed understanding of how Infosys has practically applied ancient Indian wisdom in its modern management practices, providing insights organized according to the conceptual framework.

5   DATA ANALYSIS

Integrating Ancient Indian Management Wisdom with Modern Management Theories - Case Analysis with Real-World Examples

5.1   Thematic Analysis

5.1.1   Integration of Traditional Indian Values

•   Infosys - Ethical Leadership: Infosys, under its leadership exemplified by Narayana Murthy, has upheld ethical leadership by consistently adhering to the principles of Dharma and Karma. The organization's commitment to ethical conduct is deeply embedded in its core values and business practices. For instance, Infosys emphasizes environmental sustainability and responsible business operations, aligning strongly with the concept of Karma.

5.1.2   Alignment with Modern Management Theories

•   Infosys - Strategic Planning: As a global IT services company, Infosys seamlessly integrates modern management tools like SWOT analysis into its strategic planning process. While embracing technological innovation, Infosys maintains its ethical foundation, reflecting a harmonious integration of modern management theories with Indian values.

•   Infosys - Leadership Development: Infosys places a significant emphasis on leadership development programs rooted in contemporary theories like transformational leadership. Simultaneously, it instills ethical leadership principles inspired by Indian values, fostering a holistic approach to leadership development.

•   Infosys - Human Resource Management: The company promotes a culture of employee engagement, talent development, diversity, and inclusion. This people-centric approach reflects modern HR practices and traditional Indian values, creating a supportive and inclusive work environment.

5.2   Quantitative Data Compilation:

5.2.1   Ethical Metrics

•   Infosys - Employee Satisfaction: Infosys consistently achieves high employee satisfaction scores, affirming the positive influence of ethical principles on employee well-being and the organizational culture.

•   Infosys - Community Engagement: The company actively engages in community initiatives, contributing significantly to its reputation as a socially responsible organization.

5.2.2   Sustainability Metrics

•   Infosys - Environmental Sustainability: Infosys is committed to reducing its environmental footprint through sustainable practices, including green infrastructure and energy efficiency measures.

6   RESULTS AND DISCUSSION

Integrating Ancient Indian Management Wisdom with Modern Management Theories

6.1   The Implementation of Traditional Indian Values

6.1.1 Ethical Leadership (Dharma and Karma)

•	Infosys exemplifies ethical leadership congruent with the principles of Dharma and Karma, cultivating a culture of trust and accountability within the organization. This ethical framework increases employee satisfaction and fosters trust among stakeholders.

6.1.2 Social Responsibility (Trusteeship)

•	Social responsibility is a significant aspect of ethical behavior within society. Infosys actively participates in social responsibility endeavors, perceiving its resources as entrusted assets for the betterment of society. This dedication enhances the organization's standing and fulfills its ethical responsibilities.

6.2 Alignment with Modern Theories

6.2.1 Strategic Planning

•	Infosys integrates contemporary strategic methodologies such as SWOT analysis with cultural principles, enabling evidence-based decision-making while upholding ethical standards.

6.2.2 Leadership Development

•	Infosys cultivates individuals with leadership potential by implementing programs that incorporate modern and ethical leadership theories, fostering proficiency and a sense of ethical obligation.

6.2.3 Human Resource Management

•	Infosys has implemented a human resources strategy that strongly emphasizes the well-being and development of its employees. This approach encompasses various aspects such as employee engagement, talent development, and diversity and inclusion, fostering a supportive work environment conducive to high performance.

6.3 Overall Impact

•	The overall impact of integrating ancient Indian wisdom with contemporary management principles at Infosys is significant. This amalgamation has yielded favorable results, encompassing ethical leadership, social responsibility, and management practices deeply rooted in culture.

6.4 Discussion

•	This approach facilitates the success of Infosys by integrating conventional values with contemporary theories, bolstering its reputation, fostering stakeholder relationships, and contributing to sustainable and socially responsible business practices. The conceptual model provides a framework for organizations seeking to incorporate traditional knowledge into contemporary management practices.

### 7	CONCLUSIONS

Exploring ancient Indian management practices and their integration with contemporary management theories reveals profound insights for modern organizations. This study concludes:

- A Return to Ethical Foundations: Ancient Indian wisdom emphasizes ethics, honesty, and transparency, principles embraced by contemporary Indian businesses for trust and ethical leadership.

- Balancing Tradition and Innovation: Harmoniously integrating traditional values with modern practices reinforces the resilience of Indian management in a changing world.

- Diversity and Inclusivity: India's cultural diversity contributes to holistic management approaches, recognizing the value of diverse perspectives.

- Lessons from Ancient Wisdom: Ancient texts like the "Arthashastra" continue to guide contemporary organizations for effective management.

- The Rise of Spirinomics: Companies like Infosys adopt Spirinomics, integrating spirituality into economic principles, signalling a shift toward values-based capitalism.

- Social Responsibility and Trusteeship: Gandhi's 'Swadeshi Dharma and Trusteeship' philosophy challenges individuals to use wealth responsibly for societal welfare.

- The Future of Ethical Management: Ethical initiatives are crucial in an interconnected and ethically conscious world. Proactive engagement with ethics at every level is essential for a prosperous future.

In conclusion, ancient Indian wisdom and modern management offer a roadmap for thriving in a changing world, emphasizing ethics, diversity, and social responsibility while harnessing technology and innovation. This fusion, shapes a brighter, more ethical future for businesses worldwide.

8 MANAGERIAL IMPLICATIONS

Managerial Implications: Guiding Ethical Leadership

The synthesis of ancient Indian management wisdom and modern management theories offers profound managerial guidance:

- Ethical Leadership: Prioritize ethical principles like Dharma and Karma in leadership, fostering honesty, accountability, and fairness.

- Social Responsibility: Embrace Trusteeship, view resources as a means to enhance societal welfare, and prioritize corporate social responsibility (CSR).

- Strategic Integration: Seamlessly merge traditional values with modern management tools like SWOT analysis, ensuring ethical integrity guides decision-making.

- Holistic Employee Development: Nurture leaders through programs rooted in ethical and servant leadership theories, enhancing competence and ethical responsibility.

- People-Centric HR Practices: Prioritize practices like employee engagement, talent development, and diversity and inclusion to foster a supportive work environment.

- Values-Driven Organizational Culture: Reflect traditional Indian values of ethics, responsibility, and Trusteeship in the organizational culture, promoting mutual respect, trust, and social responsibility.

- Ethical Decision-Making: Implement a structured ethical decision-making framework to guide leaders in aligning actions with Dharma and Karma principles.

- Balanced Performance Metrics: Extend performance metrics beyond financial indicators, incorporating measures like employee satisfaction, community engagement, and sustainability.

By embracing these implications, organizations navigate the path of ethical leadership and values-driven practices. Moreover, it aligns with the harmonious integration of ancient wisdom and modern management, forging a brighter future for responsible leadership.

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Flywheel Marketing: a shift from funnel to flywheel

Dr. Ruhi Bakhare

Abstract:

Purpose: The purpose of this study is to identify the need of flywheel marketing in post pandemic era.

Design/Methodology/Approach: Combined view of valence and values framework were integrated together to develop a parsimonious model comprising of perceived benefit, perceived risk, value compatibility, openness to change, environmental concern and customer engagement. The model was tested by using SEM with a sample of 362 consumers from India.

Findings: The relationship between benefit and customer engagement as well as value compatibility and customer engagement were found to be strongest amongst all factors.

Research Limitations / Implications: The constructs presented in the model successfully explains the factors influencing customer engagement. The overall understanding about the flywheel concept was found to be a great contribution in the literature.

Practical implication: The study provides a guidance to the marketers to develop an understanding about the applicability of flywheel concept in the marketing and how the approach of market has changed from funnel marketing to flywheel marketing.

Originality / value: The study provides a unique integration of valence and values framework for developing a brief understanding about flywheel marketing and how its role in customer engagement.

Keywords: Flywheel marketing; Funnel marketing; customer engagement; Valence framework and Values framework

The concept of Flywheel:

The Flywheel is a model which is modified by HubSpot to explain the phenomenon of momentum which is gained when the entire organization has its complete focus on delivering extraordinary customer satisfaction, which is beyond the customer expectation to such an extent that the customer himself is bound to share his experience with his friends or relatives or nearer and dearer ones. This activity will speed up the process of product / service / organizational promotion process. The more the impact on customers the more energy they will put in promoting the product by themselves and the wheel will get more momentum. With

the flywheel the organization uses the momentum of the happy customers to drive more customer contacts, references and repeat sales. This will keep the business wheel spinning (Dave Kustin, 2021).

The invention of Flywheel model was made in 2018 with an idea to find out another way for experiencing the faster organizational growth. It was closely studied by HubSpot that though the traditional marketing funnel model could easily push the customers towards end of the funnel which signifies getting the customer order but unfortunately it didn't focus much on the buying experience of the customers. Whereas Flywheel model talks about continuous customer engagement. The more customer engages into company activity the more he will be eager to share his experience with his loved ones and the more will be the momentum to the wheel of communication. This unique customer engagement experience leads to customer delight.
Stages of Flywheel marketing:

Stage 1: Activate

It is the stage where the company wants to attract maximum prospects, wants to convert the non-users into users by informing them about the product attributes, benefits and value. It includes the marketing activities like distributing free gift coupons, gift vouchers, free samples, discounts etc.

Stage 2: Adopt

This is the stage where the company must focus on the new users and take efforts to convert the m into regular users. Since these are those customers now who have found value in the products offered by the company and looking for more such opportunities and value prepositions. This is the stage wherein the company should share tutorials, some important resources so that the newly acquired customers should be retained.

Stage 3: Adore

This stage involves the creation of such users who adore the company products and services and wish to continue their usage in future. This is the stage wherein it is expected that the company should conduct certain surveys or customer feedback to ensure customer satisfactions, identify areas of improvements, future scope, customer expectations etc.

Stage 4: Advocate

In this stage the customers become advocate for the company and its products. They feel like sharing their personal experiences with their nearer and dearer once. These delighted customers help in bringing up new customers and they only create awareness and help people in taking the decisions related to product and services about which they have got experience.

How Does Flywheel Relate to Marketing?

Momentum is the centre of everything. The effectiveness of marketing flywheel depends on the velocity. A cyclic process is represented by the sales flywheel, where the focus is on the consumer and they are used as an input rather than an output for marketing and sales. The customer engagement is the wheel which has to be kept rotated effectively, efficiently and on a continuous basis to get the expected momentum to generate revenue for the firm. Thus, in this study it has been kept as a moderator.

When more force is transmitted to locations where it may have a greater impact, the flywheel'sspeed rises i.e. when more customer engagement happens the could generate more value prepositions for the customers and impacts positively on his intent to purchase.

As in marketing funnel concept, every effort was made to draw in and convert prospects. In theflywheel system, greater effort is made to satisfy those consumers by making their purchasingmore pleasant and encouraging them to make additional purchases, which is a step in the customer engagement process. In the flywheel instance, the final step of inbound, delighting consumers, is given the most weight. Excellent customer service increases the spinning speed,lowers friction, and speeds up the growth of your firm with satisfied clients.

Theory and hypotheses development:
Valence Theory (VT)

Peter and Tarpey (J. Paul Peter and Lawrence X. Tarpey, Sr., 1975) first suggested the Valence Theory (VT), which has roots in both psychology and economics. It investigates the function of valence in comprehending customers' desire to engage in a service, product or behaviour (Warren J. Bilkey, 1953) and suggests that consumers weigh the associated advantages and disadvantages in a holistic manner to attain a net valence. Unlike the stand-alone perceived riskand perceived benefit models, which believe that consumers desire to maximize the perceivedpositive utility of a behaviour or activity, Peter and Tarpey's (1975) net valence model presupposes that customers also seek to limit its perceived negative utility. As a result, Peter and Tarpey (1975) hypothesised that VT could account for greater variation in behaviour intention than the other two models, demonstrating the effectiveness of their framework.

According to VT, consumers prioritise this perceived net valence while making decisions. VTdistinguishes itself from other behavioural theories by taking into account

both perceived gainand perceived danger. As a result, it more accurately assesses a person's intents to engage in anactivity (Peter and Tarpey, 1975). According to VT, perceived benefit is made up of two mainelements: utility and convenience (Ahmet Bulent Ozturk, Anil Bilgihan, Saba Salehi-Esfahani,Nan Hua , 2017). The consumer's impression of the time and effort needed to carry out a behaviour is referred to as convenience, while their evaluation of the action's functional characteristics is referred to as its utilitarian value (Xiuhong He, Wenjie Zhan, Yingying Hu, 2018). As a result, a consumer might be inclined to recycle e-waste because it is simple, takes

little time, and is good for the environment and their health. According to Ozturk et al. (2017), perceived risk, on the other hand, refers to consumers' perceptions of the unpredictability and unfavourable outcomes of attempting to engage in a behaviour. Examples of perceived risk also include high price of recycling, the risk of personal data being stolen from laptops and mobile devices, and the mishandling of discarded electronic devices.

VT is appropriate for examining behavioural concerns, but it does not take into account the customer's subjective psychological perceptions, which are reflected in consumer values(Xiuhong He, Wenjie Zhan, Yingying Hu, 2018) A consumer's perceptions serve as the foundation of their mental processes and are regarded as the main tenets of human existence (Vivek Kumar Verma, Bibhas Chandra, SumitKumar, 2019). Based on the degree to which they are judged essential, values can, in comparison to other characteristics, help characterise the similarities and differences between groups and individuals (S.H. Schwartz, 2012). Thus, people's intents to participate in a behaviour or conduct might be governed by their values. Researchers have also noted that customers' values are a significant predictor of their readinessto engage in sustainable activities, such as staying at green hotels and switching to electric vehicles (Vivek Kumar Verma, Bibhas Chandra, SumitKumar, 2019)

Additionally, values are seen as an essential part of a person's personality and identity as well as a key driver of conduct (S.H. Schwartz, 2012). According to earlier research, values have adirect and indirect impact on consumers' intentions since people are more inclined to choose toperform behaviours that satisfy their needs (L. Han, S. Wang, D. Zhao, J. Li, 2017). As a result,the current study expands the VT-based framework by incorporating new perceived values into the original model, including value compatibility, openness to change, and environmental concerns. Value compatibility is

the degree to which an innovation or service satisfies the user'sstandards and values (Deborah Bunker, Karl-Heinz Kautz, and Anne Luu Thanh Nguyen, 2007).

While the customer's liberty in thinking and acting, as well as their readiness to change and adopt the habit, are indicators of openness to change (Camilla Barbarossa, Patrick De Pelsmacker, Ingrid Moons, 2017). Environmental concerns, in contrast, are the user's assessment of both their own as well as others' attitudes toward environmental activities or behaviours (I.C.Nnorom, J.Ohakwe, O.Osibanjo, 2009). The integrated perspective of valenceand values is shown in the following figure 1.
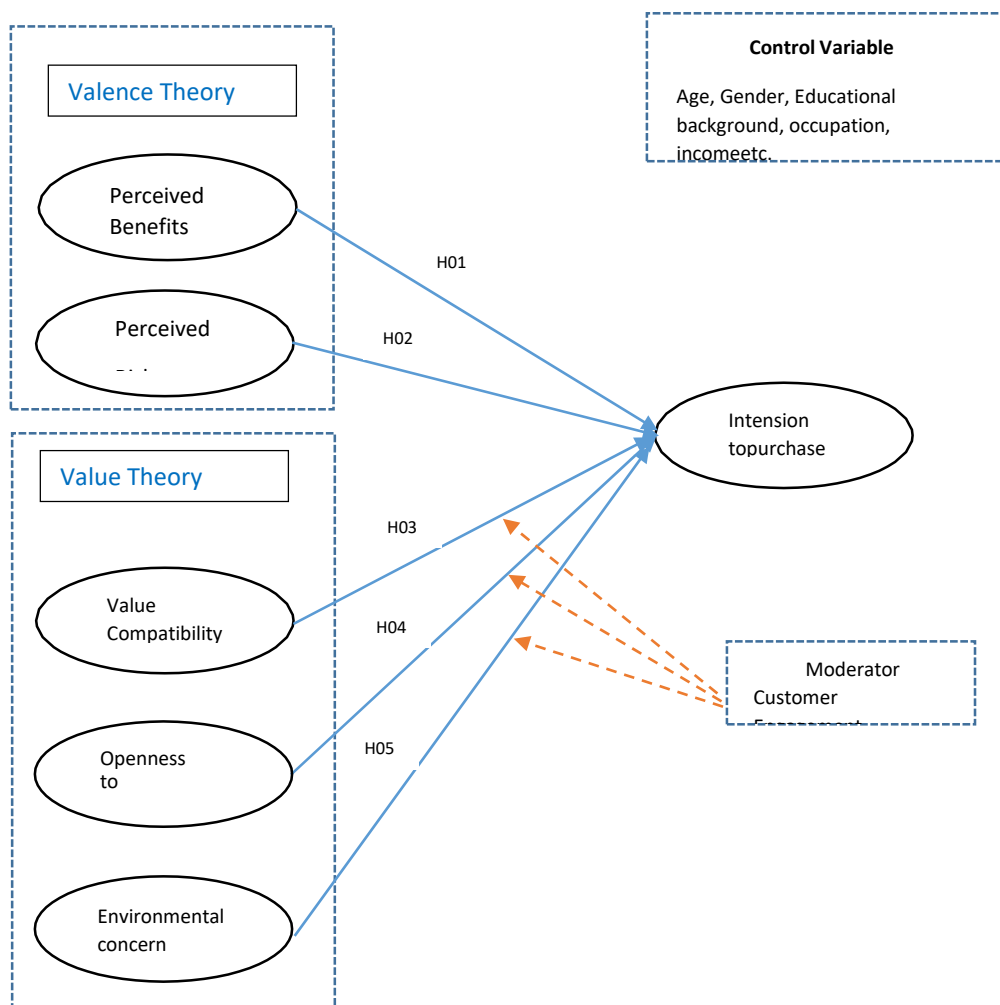
Hypothesis development

➤ Perceived benefit and Intension

The term "perceived advantage" refers to the belief that a certain activity would have favorableresults (Yvonne Leung, 2013). For all consumers, the perception of profit is crucial. Accordingto Smith & Colgate (Smith, J. B., & Colgate, M., 2007) perceived

benefit is what customer gets after acquiring a good and paying for it. Discounts, coupons, cash back, and the quality of goods are just a few of the perceived benefits that buyers expect. Generally speaking, consumers will be more interested in bigger discounts than things without any offer. Price reductions can influence consumers' inclinations to spend money (Biswas, A. & Blair, 1991). Alford (2002) continued by saying that when consumers indicate a desire to purchase anything, the value of prices is evaluated. People are drawn to making purchases online because they are more affordable than purchases in stores because goods are typically distributed directly from agents or producers, rather than through retail merchants, in online purchases. Customers are

given a wide range of options by sellers, including different types of packages and prices. Customers can reduce the cost of typical distribution as a result. From the above literature review, the following conclusion is drawn:

H1: Perceived benefit shares a positive association with the intention to purchase.

> **Perceived risk and Intension**

One of the primary factors that customers take into account when making decisions is the concept of risk. This risk is based on the perceived risks related to the characteristics that makeup a customer's profile as well as the risks related to the product and channel that he uses. When two factors—uncertainty and (bad) consequence are present, customers are starting to notice it(Cox, D. F., and Rich, S. U., 1964) People with greater risk perceptions are less likely to do anact, whereas those with lower risk perceptions have stronger behavioral intentions as a result. This is because consumers often try to reduce the unfavorable and unknown outcomes of theirdaily decision-making processes (Y. Wang, B.T. Hazen, 2016). In comparison to traditional businesses, customers' perceptions of risk are significantly greater in e-commerce. Since, theyare unable to view, touch, or test the goods or services they would purchase. Broadly the perceived risk is categorized as financial, performance, physical, psychological, and social risk (Jacob Jacoby and Leon B. Kaplan, 1972). A sixth type of danger has been recognized by Roselius (1971): Time loss: When some things malfunction, we lose time, convenience, and effort trying to get them fixed, replaced, or altered. On a conceptual level, these five dimensionsmay be thought of as functionally independent, meaning that if one risk variety grows, the others may also grow, shrink, or stay the same. Thus, despite the fact that psychological and social risks are frequently combined and

discussed as a single concept (i.e., psycho-social risk),the former should likely only apply to circumstances involving how an individual perceives himself, whereas the latter is typically used to describe the consumer's perception of how otherswill react to his purchase.

From the above literature review, the following conclusion is drawn:
H2: Perceived risk shares a negative association with the intention to purchase.

➢ **Value compatibility and Intension**

Perceived value refers to "consumers' overall judgement of the usefulness of a product (or service) based on perceptions of what is received and what is provided" and captures the trade-off between perceived benefit and perceived risk (Zeithaml, V.A., 1988). The natural matching of two people's lifestyle preferences and values is known as compatibility. Value Compatibilityis one of the aspect of Diffusion of Innovation (DOI) Theory, developed by E.M. Rogers in 1962. According to him compatibility is associated with innovation, he further says that

compatibility is the alignment of innovation with the requirements, values, and experiences ofpotential adopters. Also as per Lin and Lu, utilitarian value and hedonic value are important components of value compatibility and have significant effects on intention to purchase (Lin,

K.Y. and Lu, H.P. , 2015)

From the above literature review, the following conclusion is drawn:
H3: Value compatibility shares a positive association with the intention to purchase.

➢ **Openness to change and Intension**

Openness to change can be defined as an individual's amount of acceptance and conscious understanding of the prospect that change may be required in a variety of settings and scenarios,together with the desire or drive to effect such change, are referred to as their level of opennessto change (Jadhav, E. D., Holsinger Jr, J. W., & Fardo, D. W., 2015). These are the primary elements of openness to change (Devos, G., Buelens, M., & Bouckenooghe, D., 2007):

a. Acceptance of the need for change

b. Willingness to support the change

c. Positive affect or emotions towards either the change or the potential consequences ofthe change

d. An appetite or drive to enact or be involved in the change

These are viewed as "an essential initial need for successful planned change (Miller, V. D., Johnson, J. R., & Grau, J. , 1994)"

According to the study of L. Piscicelli, T. Cooper, T. Fisher, the socioeconomic paradigm thatencourages sharing, collecting, exchanging, presenting, and renting is known as collaborative consumption, and consumers who are more receptive to altering their beliefs are also more inclined to adopt it. These actions are then viewed as more environmentally friendly forms of consumption (L. Piscicelli, T. Cooper, T. Fisher, 2015). Also, higher purchasing intentions were correlated with higher openness to change (T. Hansen, M.I. Sørensen, M.L.R. Eriksen, 2018).

From the above literature review, the following conclusion is drawn:

H4: Openness to change shares a positive association with the intention to purchase.

> *Environmental concerns* **and Intension**

The phrase "environmental concern" refers to people's concerns about current or impending environmental issues (Onurlubas, E., 2018). Different consumer behaviors are influenced by

environmental concern. Environmental concern is the customer's awareness of environmental problems and readiness to address such problems. This value dimension is linked to the guilt that customers feel when they don't do their part to preserve the environment. Concern for theenvironment is a crucial indicator that has received a lot of attention in the literature addressingconsumers' pro-environmental behavior. In the study conducted by M. Dwivedy, R.K. Mittal, it was found that Environmental concerns were proven to have a favorable impact on customers' willingness to buy (M. Dwivedy, R.K. Mittal, 2013). From the above literature review, the following conclusion is drawn:

H5: Environmental concerns share a positive association with the intention to purchase.

Moderating variable:

Customer Engagement:

The term customer engagement is not too old its evolved in the recent past as the need of innovative ways of attracting and retaining the loyal customer prevailed in the market. In the past the job of the company was simply to provide quality product and services on right time, in right place and to the right person. But today it is much beyond that.

Today customer engagement has become an ongoing process, which doesn't stop at one pointit starts from attracting the new customers goes on with every step from thereafter. It can alsobe said like it's an ongoing process of cultivating relationship between the company and the customer which helps in customer decision making process adding value at every step. This increases loyalty amongst customer (Cari Murray, 2021)

The contribution of consumer engagement in value creation to the growth of relationships. The majority of writers use the best value for customer creation throughout all phases of the customer life cycle as the foundation for establishing customer relationship strategies. This strategy is also supported by (C.K.Prahalad, Venkat Ramaswamy, 2009), who claim that modern consumers are not content just with the acquisition of a good or service. The authors claim that customers' access to information about goods and services and expectations of business transparency lead to customer involvement and the use of their unique experiences when generating value, which in turn transforms the traditional market.

The interaction between a business and a client is increasingly important in the process of creating value.

From the above literature review, the following conclusion is

drawn: H06: Customer engagement has positive effect on value

compatibility. H07: Customer engagement has positive effect

on Openness to change.

H08: Customer engagement has positive effect on value Environmental Concern.

Research Methodology:

The objective of the current study is to examine a conceptual model that affects consumer trustand purchase intent. In the study, four theories are put forth. With the use of a 14-item structured questionnaire, empirical data were gathered. The information was gathered in 2020 between October and December. Utilizing convenience sampling, the questionnaire wasdistributed to 1,078 email addresses. 362 people completed the survey out of the 534 replies that were received.

As a result, the study will use 362 replies as its sample size. The demographic breakdown of the respondents is shown in Table 1. In Figure I, the study's hypothesized model is shown. Responses were gathered using a 5-point Likert scale, with "l" denoting "strongly disagree" and "5" denoting "strongly agree."

Composite Reliability

According to Table 1, the internal consistency for reflective structures exceeded 0.70, indicating strong dependability.

Convergent Validity

A score of 0.5 indicates that the average variance that a measure has retrieved is acceptable (Fornell & Larcker, 1981). All reflecting measures' average variances, which have values largerthan 0.5, are deemed acceptable.

Discriminant Validity

It is possible to conclusively confirm the discriminant validity of the instrument by comparingthe average variance extracted (Fornell & Larcker, 1981). According to Table 3, the degrees ofcorrelation with other constructs are lower than the square root of the average variance retrievedfor each construct (AVE > MSV). In the inter-construct correlations' output, each construct exhibits a greater variation with its own measurements than with other measures.

Factors		Scale Item	Factor Loading	No. of items returned	Cronbach's Alpha
Value Compatibility (VC) Karahanna et al. (2006)	1	VC1	0.957	3	0.904
	2	VC2	0.966		
	3	VC3	0.955		
Table: 2 Reliability Estimates and Factor LoadingsOpenness to Change (OTC) Claudy et al. (2015)	1	OTC1	0.668	2	0.922
	2	OTC2	0.98		

Environmental Concerns (EC) Tarrant & Cordell (1997)	1	EC1	0.957	4	0.941
	2	EC2	0.944		
	3	EC3	0.702		
	4	EC4	0.651		
Perceived Benefit (PB) Wang et al. (2016)	1	PB1	0.668	3	0.901
	2	PB2	0.98		
	3	PB3	0.957		
Perceived Risk (PR) (Echegaray and Hansstein, 2017; H. T. T. Nguyen et al., 2018)	1	PR1	0.795	4	0.931
	2	PR2	0.789		
	3	PR3	0.869		
	4	PR4	0.696		
Intentions to purchase (ITP) Holland et al. (2006)	1	ITP1	0.651	3	0.911
	2	ITP2	0.847		
	3	ITP3	0.795		
Customer Engagement (Hollbeek (2009)	1	CE1	0.668	4	0.913
	2	CE2	0.748		
	3	CE3	0.778		
	4	CE4	0.817		

Table: 3 Evaluation of the Measurement Model

	CR	AVE	MSV	MaxR(H)	VC	OTC	EC	PB	PR	ITP	CE
VC	0.773	0.524	0.052	0.87	0.734						
OTC	0.757	0.554	0.061	0.89	0.542	0.722					
EC	0.818	0.564	0.654	0.88	0.554	0.512	0.812				
PB	0.893	0.654	0.642	0.87	0.356	0.541	0.542	0.888			
PR	0.859	0.656	0.665	0.85	0.457	0.325	0.525	0.745	0.745		
ITP	0.828	0.644	0.654	1.003	0.324	0.334	0.434	0.665	0.54	0.854	
CE	0.893	0.642	0.678	1.005	0.334	0.54	0.542	0.654	0.541	0.412	0.879

Table: 3 AMOS Goodness' of-Fit Measures for SEM

Absolute Fit Measures	CMIN/DF	2.261
	Goodness - of- Fit- Measure (GFI)	0.935

	Adjusted goodness-of-fit index (AGFI)	0.888
	Root mean square residual (RMSR)	0.031
	Root mean square error of approximation (RMSEA)	0.049
Incremental Fit Measures	Relative fit index (RFl)	0.92
	Tucker - Lewis index (TLl)	0.948
	Normed fit index (NFl)	0.904
	Comparative fit index (CFl)	0.928
Parsimonious Fit Measures	Parsimonious goodness of fit index (PGFI)	0.615
	Parsimonious normal of fit index (PNFI)	0.733
	Parsimonious comparative of fit index (PCFI)	0.733

Cronbach's alpha is the most often used measure of questionnaire reliability among all other techniques (Field, 2009). Determine the internal consistency of several datasets and discover how they are correlated using Cronbach's alpha (Leedy & Ormrod, 2014). For the data to be considered credible, Cronbach's alpha must be at least 0.6. (Hair et al., 2010). The data is deemed to be extremely trustworthy and ideal for the study if the value of Cronbach's alpha is higher than 0.8 (Nunnally, 1994) In this study, seven components were identified from the 23 variables.

Table 2 provides the Cronbach's alpha value for all the components and indicates that for all 23 items, the Cronbach's alpha value is larger than 0.98, which is within acceptable bounds. Table 2 shows that the factor loadings for the factors are more than 0.6 and that the Eigenvalues of these five extracted factors are greater than 1.

AMOS software is used to conduct a covariance structure analysis in order to evaluate the research model's goodness of fit metrics. Table 4 lists the absolute fit metrics that were used to assess the model's general appropriateness, including CMIN/DF, GFI, AGFI, RMSR, and RMSEA. The research model is assessed using the incremental fit measurements RFI, TLI, NFI, and CFI.
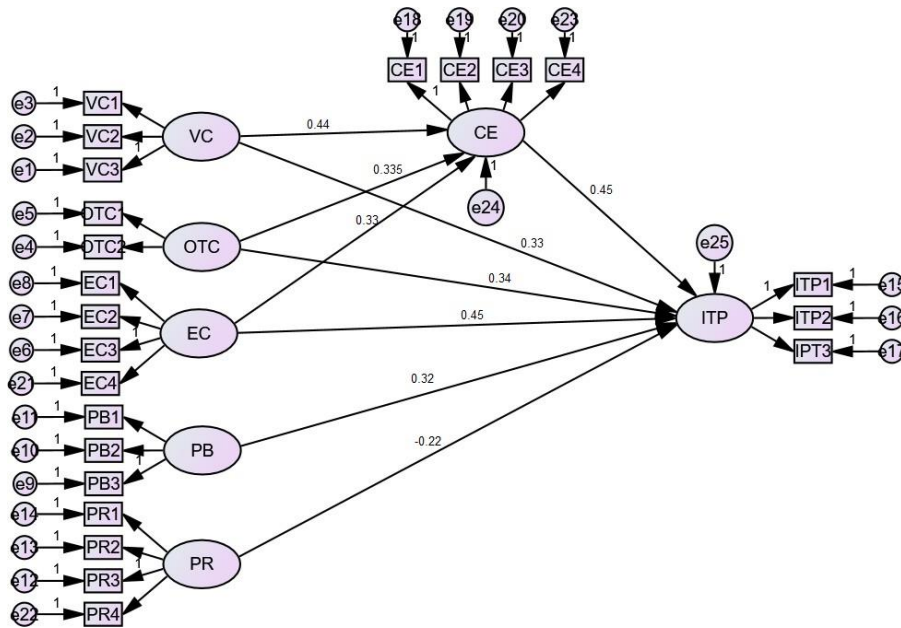
The following model fit table summarizes some of the most important parameters and theiraccepted values accordingly to the literature. (Uedufy, 2022)

Table: 5 Model Fit Table

Acronym	Explication	Accepted fit	Reference
Likelihood Ratio	P-value	**≥ 0.05**	Joreskog & Surbom (1996);
Relative X2	(X2/df)	**≤ 2** = acceptable fit	Tabachnick & Fidell (2007);
CMIN/DF	Chi-square divided by Degree of Freedom	**≤ 3** = acceptable fit **≤ 5** = reasonable fit	Kline (1998); Marsh & Hocevar (1985);
GFI	Goodness of Fit Index	**1** = perfect fit **≥ 0.95** = excellent fit **≥ 0.9** = acceptable fit	Kline (2005); Hu & Bentler (1998);
AGFI	Adjusted Goodness of Fit Index	**≥ 0.90** = acceptable fit	Tabachnick & Fidell (2007);
CFI	Comparative Fit Index	**1** = perfect fit **≥ 0.95** = excellent fit **≥ .90** = acceptable fit	West et al. (2012); Fan et al. (1999);
RMSEA	Root Mean Square Error of Approximation	**≤ 0.05** = reasonable fit	MacCallum et al (1996);

		≤ 0.05 = acceptable fit ≤ 0.07 = acceptable fit	Diamantopoulos & Siguaw (2000); Steiger (2007);
RMR	Root Mean Squared Residual		

Hypothesis Testing:

Following table shows the results of the hypothesis.

Table: 4 Standardized Regression weights

Hypothesis	Hypothesized Relationship	Estimates (Path Co-efficient)	Significant / Insignificant	Accepted / Rejected
H1	PB → ITP	0.32	Significant	Accepted
H2	PR → ITP	-0.22	Significant	Accepted
H3	VC → ITP	0.33	Significant	Accepted
H4	OTC → ITP	0.34	Significant	Accepted
H5	EC → ITP	0.45	Significant	Accepted
H6	VC → CE	0.44	Significant	Accepted
H7	OTC → CE	0.335	Significant	Accepted
H8	EC → CE	0.33	Significant	Accepted

Discussion

This study is the first to assess the robustness of the extended VT model in explaining consumer purchase intentions. The study model consists of three values—value compatibility, openness to change, and environmental concerns—as well as two perceptions of benefit and risk along with customer engagement having moderating effect.

Hypothesis H1 shows a positive association between perceived benefit with intention to purchase; as perceived benefit is more customer's intention to buy increases and perceived benefit decreases his intention to buy also decreases. Hypothesis H2 shows a negative association between perceived risk and intention to purchase. Since as the perceived risk increases the customer's intention to purchase decreases and vies – versa. Hypothesis H3, H4 and H5 shows a positive association of value compatibility, openness to change and environmental concern with customer's intention to purchase. Since if the customer could derive value from the product / services eventually his intension to purchase also increases.

Hypothesis H6, H7 and H8 shows the moderating effect of customer engagement on the valueproposition i.e. value compatibility, openness to change and environmental

concern.

This means if the customer is engaged in the activities like customers' access to information about goods and services and expectations of business transparency lead to customer involvement and the use of their unique experiences when generating value, which in turn transforms the traditional market. The interaction between a business and a client is increasingly important in the process of creating value according (C.K.Prahalad, Venkat Ramaswamy, 2009)

This study has also proved this fact through the Hypothesis H6, H7 and H8 showing positive effect of customer engagement on value compatibility, openness to change and environmentalconcern.

Theoretical Implications

The research makes an important contribution to our present corpus of knowledge on customerengagement and how it can be used for generating more revenues for the firm. The flywheel model was created during the 2018 Inbound event also with an intention of identifying a better method for businesses to expand, wherein the customer engagement plays a key role. This study makes an effort to highlight the concept of customer engagement through the concept of flywheel and could reinforce the importance of continuous engagement in the marketing process. It will also help in developing newer insights into the model of valence and value forincreasing customer's intension to purchase with the moderating effect of continuous engagement in the process of purchase.

Practical implications

The research explores individuals' purchasing intentions through valence and value prepositions and contains some insightful conclusions that may be made from the empirical model.

First, shows a positive association between perceived benefit with intention to purchase, seconda negative association between perceived risk and intention to purchase, a positive associationof value compatibility, openness to change and environmental concern with customer'sintention to purchase and fourth the moderating effect of customer engagement on the value proposition i.e. value compatibility, openness to change and environmental concern. Researchers from a variety of fields have shown the importance of perceived risk in the investigation of consumer behaviour.

According to (P. Kaur, A. Dhir, N. Singh, G. Sahu, M. Almotairi, 2020), acceptance of mobile payment systems was hampered by perceived danger.Further research by Li et al. (2018) revealed a negative correlation between perceived risk andusers' intentions to disclose personal data. Wang and Hazen (2016) also discovered a negativecorrelation between intentions to buy remanufactured goods and perceived risk. Through the use of the flywheel model, this study aims to emphasise the idea of customer engagement and might underline the significance of ongoing engagement in the marketing. Additionally, it willaid in the development of fresher understandings of the valence and value model, which will increase customers' buy intentions while mitigating the influence of continual engagement in the purchasing process.

Limitations of the Study and Scope for Future Research:

To fill up the gaps in our knowledge, the current study concurrently investigates perceived risks, perceived rewards, and consumer values. It does not, however, distinguish between the many environmental worries. Despite the fact that this study significantly advances both theoryand practice, sample restrictions limit its scope. The study's use of a cross-sectional online survey approach to gather self-reported data may have influenced the study's findings. Second,only people made up the study's sample. Finally, only clients who share similar values can be generalized by the study's conclusions. Therefore, it would be fascinating for future researchersto carry out a study across diverse social classes and economic statuses.

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Impact of Corporate Activism on Advancing Gender Equality in Advertisements: A Content Analysis of YouTube Videos and Viewers' Feedback

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Introduction

In recent years, corporations have demonstrated an increasing interest in championing social causes by engaging in corporate-sponsored social activism campaigns (McDonnell, 2015). A notable instance of this trend was seen when numerous Fortune 500 companies released official statements expressing support for the Black Lives Matter movement in 2020. Moreover, these companies promised substantial resources to combat systemic racism, emphasising their commitment to societal change (Chintagunta et al., 2020). Advertising has been a powerful tool for shaping societal norms and values. A recent trend can be seen in advertising that seeks to empower women and promote gender equality. Known as "femvertising," this approach to advertising aims to challenge traditional gender roles and stereotypes by portraying women in a more positive and empowering light (Sheknows Media, 2015).

However, in India, the prevalence of femvertising is not yet sufficiently impacting entrenched inequities. According to a 2016 UN report on gender inequality, India ranks 131st out of 185 countries overall. This highlights the existing gender disparities and the need for new initiatives to address gender discrimination. Other studies and indicators of gender discrimination in India also emphasize that significant work remains to be done, particularly in areas such as female entrepreneurship, where gender balance remains among the lowest in the world.

Indian femvertising ads, such as BIBA's #ChangeIsBeautiful, Ariel's 'Share the Load' campaign, and #BreakTheBias by Titan Raga, are gradually disrupting traditional gender stereotypes and norms. These advertisements aim to empower women, challenge societal expectations, and promote gender equality.

However, while femvertising commercials are praised for addressing realistic societal issues and attempting to overturn sexist notions, there is a need for further research to examine the impact of femvertising on viewers across genders, including its influence on attitudes of viewers towards the idea of gender equality and inclusion. This is important in the light of the United Nations seventeen sustainable development goals towards economic prosperity as well as protection of human social needs, one of which is achievement of gender equality and empowerment of women (Goal 5).

Yet, femvertising is not without its challenges. Critics argue that it is often used as a marketing ploy rather than a genuine attempt to promote gender equality. It can also be argued that it can be difficult for brands to strike the right balance between promoting gender equality and avoiding accusations of "pinkwashing" or "femwashing".

This paper will explore the rise of femvertising as a marketing communication strategy, and its impact on viewers, giving rise to the research questions:

1. What are the narrative strategies used by advertisers to communicate gender activist stances?

2. What is the impact of corporate gender activist stances in advertisements on viewers' perceptions?

Literature review

The topic of gender stereotypes in advertising has been extensively researched for over five decades. This line of literature was sparked by social and historical circumstances. Firstly, the feminist movement of the 1960s challenged the unequal opportunities for men and women, leading to gradual changes in occupational choices and domestic structures (Zotos and Lysonski 1994; Plakoyiannaki et al. 2008; Plakoyiannaki and Zotos 2009; Zotos and Tsichla 2014), particularly for women. Secondly, shifts in the labor force brought significant variations in male and female roles and subsequently influenced their representation in advertising (Zotos and Lysonski 1994; Zotos and Tsichla 2014). Thirdly, the changing structure of families has resulted in notable changes in the female role (Zotos and Lysonski 1994). During this time, women were often portrayed in a manner that undermined their potential and capabilities, although there was a gradual shift towards more positive depictions. Previous studies (Lysonski 1985; Corteze 1999; Kilbourne 1999; Lazar 2006; Plakoyiannaki and Zotos 2009) have suggested that advertising contributes to gender inequality by promoting sexism and presenting distorted body image ideals as legitimate and acceptable. Since then, women's roles have undergone significant transformations, and portrayals in advertising have also evolved. Advertisements frequently promote gender stereotypes by showing men and women in traditional roles and conduct (Goffman, 1979). Barthel (1994) states that the masculine gender role is associated with power; and, due to this gender role, products advertised for men are shown in conjunction with images of power. Interactions between a male and a female or a subordinate male in an advertisement involves some alleviation of potential distance, coercion, and hostility is quite likely to be induced (Goffman, 1979)

The Cultivation Theory, as conceptualized by Shrum (1996), provides valuable insights into the influence of media on consumers' perception of social reality. According to this theory, the portrayal of gender in media content cultivates a distorted representation of the actual social environment, by molding and shaping the consumer's reality, subsequently impacting consumers' buying behavior. Over the years, the media industry has harnessed the power of the Cultivation Theory to set a specific set of societal standards that women are expected to adhere to.

Corporate activism is a means by which companies involve themselves in social issues. Eilert and Cherup (2020) state, "Corporate activism refers to a company's willingness to take a stand on social, political, economic, and environmental issues to create societal change by influencing the attitudes and behaviors of actors in its institutional environment." (p 463)

Corporate activism often goes in tandem with other types of corporate social actions (DeCelles, Sonenshein & King, 2019), such as corporate social responsibility (CSR) and corporate political activity (CPA) initiatives. The latter may not directly target societal changes in public attitudes or behaviours, such as donating to a charity (Zhang and Luo, 2013) or developing political connections to influence industry regulations (Jia, 2014; Werner, 2017). Corporate activism is also distinct from employee activism which often targets the management and does not always represent the official positions of the firms (Briscoe and Gupta, 2021; Buchter, 2020; Kellogg, 2011). Corporate sponsored activism is an interesting area of inquiry because such actions

ostensibly deviate from firms' primary goal of shareholder value maximization (Zhang and Luo, 2013).

The United Nations Sustainable Development Goal 5 emphasises gender equality as one of the Sustainable Development Goals (SDGs) set by the United Nations to achieve a better and more sustainable future for all.

Methods of Analyses

We chose to analyse narrative structures and comments from viewers to examine the facts and answer research questions. Content analysis of ad narratives and viewers' comments were adopted as a method of analyses.

Four advertisements and viewer reactions from Tanishq jewellery and Sabhyata women's ethnic fashion were analysed. Content analysis helps identify new theories and patterns (Kolbe and Burnett 1991). The two brands were chosen because they target women. The ads were chosen from YouTube based on their popularity (number of likes per video) and release date (within five years). Since advertising use storytelling to develop brand image and distinguish out from competitors (Fog et al., 2013), the Freytag pyramid was used to analyse their narrative structure. Gustav Freytag (1893) recognised the basic dramatic aspects of a narrative: exposition, rising action, climax, falling action, and denouement/resolution. Freytag created Freytag's Pyramid diagram to represent these elements. This narrative framework helps academics visually assess narratives and identify dramatic or tragic components. Aristotle's "Narrative theory" and Russian theorist Tzvetan Todorov's "Narratology" are similar (Harun et
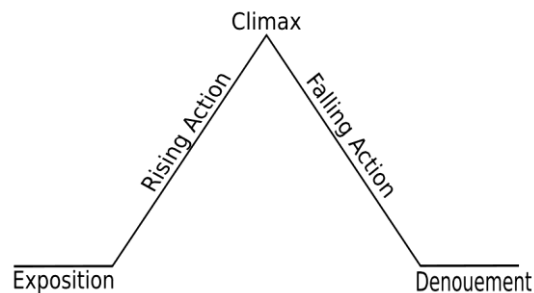
al., 2013).

Figure 1: *Freytag Pyramid*

The "Exposition," the first step of Freytag's Pyramid, introduces the scene, characters (hero, villain, and victim), and historical context. In this phase, the plot introduces key situations related to the problem, leading to the "Rising Action." This stage builds suspense. The Rising Action reaches a "Climax Point," where the conflict/problem peaks and the audience learns the main topic. The main characters may face person-versus-person, environment-versus-person, and self-versus-self problems at this point. The next phase, falling action, is the aftermath of the climax and covers how the characters resolve the issue. The final stage, resolution, ends the conflict and gives the audience a message or solution in the form of character repercussions. This strategy answered research question 1.

To answer study question 2, the comments were analysed to see how the audience reacted to the advertisement and whether corporate activism in ads affects viewers. Comments were classified as "yes" if they supported gender equity/activist, "no" if they were critical or disagreed with the message, "mixed" if they were unclear or mixed, and "irrelevant" if they had no relation to the video.

Analyses

Tanishq superwoman:

Release- March 3, 2023

 3.3 million views, 4.5 thousand likes

Duration: 2 minutes, 8 seconds

Transcript: In the exposition phase, we see that the film starts with the buzzing of an alarm clock which is placed next a jewellery set on the bedside table. The protagonist, a woman seemingly in her thirties, shuts the alarm, wakes up, puts on her slippers, jewellery and ties her hair up. She is then seen performing various chores with a female narrator describing her as a superwoman, effortlessly, even on her 52nd birthday. In the rising action, she's shown constantly managing her hectic schedule and putting others' needs before her own. However, she reaches a breaking point during the climax, expressing her desire for a break and revealing her human vulnerabilities. In the falling action, she finally acknowledges her limits, symbolized by her return home and a rejected proposal. The resolution highlights the question of whether being called a "Superwoman" is a compliment or an unrealistic expectation, emphasizing her humanity over her superhuman feats.

Comments

The comments to the videos were classified into four categories pertaining to their relevance to the contents of the ad film, as well gender activist stances.

Tanishq-superwoman:

Criteria	Yes	No	Mixed	Irrelevant
Number of comments	19	6	30	36

The comments in support of the message saw mostly women users empathising with the protagonist and her struggles.

Most comments to the video in general were posted by women, judging from the usernames, and while many expressed approval of the message some also expressed mixed views such as the

comment below which alleges that the ad subtly devalues the efforts of homemakers since the protagonist is depicted as a professional women juggling home and work.

Certain others as can be seen below are extremely critical, accusing the creators of engaging in virtue signalling for financial gains, without any real altruistic purpose.

Sabhyata Diwali'22 #RedefiningCelebration

Release: October 17, 2022

1.02 million views, 16.6 thousand likes

Duration: 3 minutes, 45 seconds

Transcript:

In the exposition, a nervous young female candidate is guided to the waiting room for an interview by an assistant or secretary. In the rising action, she encounters an older woman who offers her homemade paranthas and engages in conversation. The woman hints at typical interview questions for women, including marital status and family planning. During the climax, the protagonist reveals her pregnancy, leading to a discussion about her job situation. The woman gives her a Diwali gift and advises her to reveal her pregnancy later. In the falling action, the woman leaves, and the assistant returns to inquire about the interview. In the resolution, the protagonist opens her offer letter and realizes that the woman was the CEO and her interviewer. This revelation deeply touches her, and the story ends with a meaningful message from a Sabhyata ad jingle, emphasizing the empowerment of Indian women.

Comments

Criteria	Yes	No	Mixed	Irrelevant
Number of comments	30	6	100	70

Comments in support of the ad's message praise the empathetic stance displayed by the recruiter/organisation and the non-sanctimonious approach adopted in conveying the message.

Some were however critical of the approach to recruitment as depicted in the ad film. Since the interviewer urged the protagonist to hide her pregnancy, some respondents saw this a wrong signal, encouraging deception.

As in the previous ad, once again there is criticism regarding the supposed demeaning and devaluation of homemakers/ stay-at-home-mothers.

Shweta Mishra: Very nice advertisement but one way they define women independent (economically) and demeaning women who are at home..why they say 'ghar pe thore hi bhaithungi'. Why some people think women at home are not doing anything. Sometime we forget basic thing, at home they are preparing future for the country (kids). Because they are good at it.

Certain comments which disagreed with the message took issue with the employment of pregnant women on the grounds that maternity is often used as an excuse for underperformance, which aligns with the traditional view that mothers do not make good employees

Tanishq- The Interview

And anyway, I'll never really go off duty from there.

Release- May 3, 2022

3.84 million views, 5.33 thousand likes

Duration: 1 minute, 55 seconds

Transcript

In the setting of a job interview, Radhika, a female candidate in her late 20s or early 30s, discusses her work experience. In the exposition, she mentions her past roles at Texco International and Life Boot Camp Corp, highlighting her rapid rise to leadership. In the rising action, she explains her learning process on the job and how she trusted her instincts while receiving advice from seniors.

The climax occurs when the interviewer questions her short 14-month tenure at Life Boot Camp Corp. Radhika reveals her family, her husband, and child on her phone's lock screen, indicating

her maternity break. The interviewer understands her situation and expresses that she is ready for a more significant role within the company.

In the resolution, the text on screen acknowledges that a maternity break is not a gap in Radhika's resume but rather a leadership boot camp. It celebrates the leadership qualities in every mother. The Tanishq brand logo is displayed, and the story concludes with music, highlighting the message that motherhood doesn't hinder a woman's career potential.

Comments

Criteria	Yes	No	Mixed	Irrelevant
Number of comments	32	0	27	43

A surprising finding is that there were no comments that did not support the activist messaging, most comments were posted by women, with most of them resonating with it due to their own experiences.

Sabhyata- Diwali #celebratethechange

Release- October 22, 2019

Duration: 2 minutes, 22 seconds

819 thousand views, 14 thousand likes

Transcript

The ad is set in a family's living room, where a man, his mother, and his wife are present. In the beginning, the man requests someone to make tea while snacking on nuts. His mother is occupied with her prayers, and his wife enters the frame later.

In the rising action, the man becomes irritated when the TV remote doesn't work and contemplates calling someone for help. His mother encourages him to make the call.

The climax occurs when the man asks his wife to make tea, and she storms off. He prevents his mother from calling his in-laws and decides to make the tea himself. A conversation between

the mother-in-law and daughter-in-law ensues, discussing lunch plans and involving the man in making tea.

The falling action involves the mother-in-law and daughter-in-law making remarks about the man's presence and their perception of his abilities.

The resolution presents a message on screen, emphasizing the celebration of change. The ad concludes with the Sabhyata logo and its motto, promoting the true reflection of Indian women's wear, indicating that traditional gender roles are evolving.

Comments

Criteria	Yes	No	Mixed	Irrelevant
Number of comments	20	5	105	133

Discussion

The analyzed ads revolve around either domestic or professional settings, challenging traditional gender norms. Female viewers found the messages relatable, but the resolutions were seen as aspirational with limited basis in reality, with approximately 3-6% of comments expressing this view.

The Tanishq "superwoman" ad, with a flat narrative structure, received the lowest number of comments, suggesting it might be uninteresting or preachy. Lack of variety in audience responses, all from female usernames, indicates that this structure may not be effective in eliciting responses or promoting conversation about gender inequity. The superwoman archetype isn't rejected, and there's no clear resolution or direction towards positive change. The conflict appears mostly internal, possibly influenced by social conditioning.

One pertinent issue raised by viewers in response to the Tanishq "superwoman" and Sabhyata "#redefinecelebration" ads is the undervaluing of women's domestic labor, with a preference for working women. Aspirational messages in the ads aim to reach socially conscious, urban, professional women or present higher ideals related to personal aspirations or expectations from society, family, or the workplace.

In Tanishq's "The Interview" ad, the interviewer recognizes Radhika's leadership potential, concluding with a message that a maternity break is not a gap on a resume but a leadership bootcamp, celebrating mothers' leadership skills. The ad transitions effectively from one stage to another, showcasing the protagonist's journey.

In Sabhyata's "#redefiningcelebration," the conversation between the protagonist and the older woman reflects societal expectations related to marriage, family planning, and career choices for women. The ad emphasizes female solidarity and resilience in navigating challenges to achieve professional success.

Sabhyata's "#celebratethechange" ad received positive feedback for its non-didactic nature and inclusion of an active male character. However, some criticism centered on the perception of uplifting women at the expense of undermining men. Aspirational messaging in ads creates social expectations among viewers, aligning with cultivation theory.

Conclusion

This paper analyzes four advertisements, noting that three of them have identifiable climaxes, with the exception being the Tanishq "superwoman" ad, which has a climax but doesn't explicitly elaborate on it like the others. The variety of issues addressed in these ads affects their narrative strategies, particularly when female characters internalize gender stereotypes, potentially leading to inner conflicts. The ad depicting poor work-life balance raises concerns about the well-being of working Indian women, citing research showing that multitasking can lead to inefficiency and exhaustion.

The paper also emphasizes the importance of not alienating men in gender activist communication through advertisements, as highlighted by male commentators in Sabhyata's "#celebratethechange" ad. Additionally, it applauds the two ads addressing discrimination against mothers or expectant mothers in recruitment, as this challenges the perception of liability associated with hiring women during and after pregnancy. This could also lead to future research opportunities. The paper acknowledges that the nature of the products sold by these companies may influence their marketing communication strategies.

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Identity and Culture vis a vis Universal Perspective

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Government of Haryana
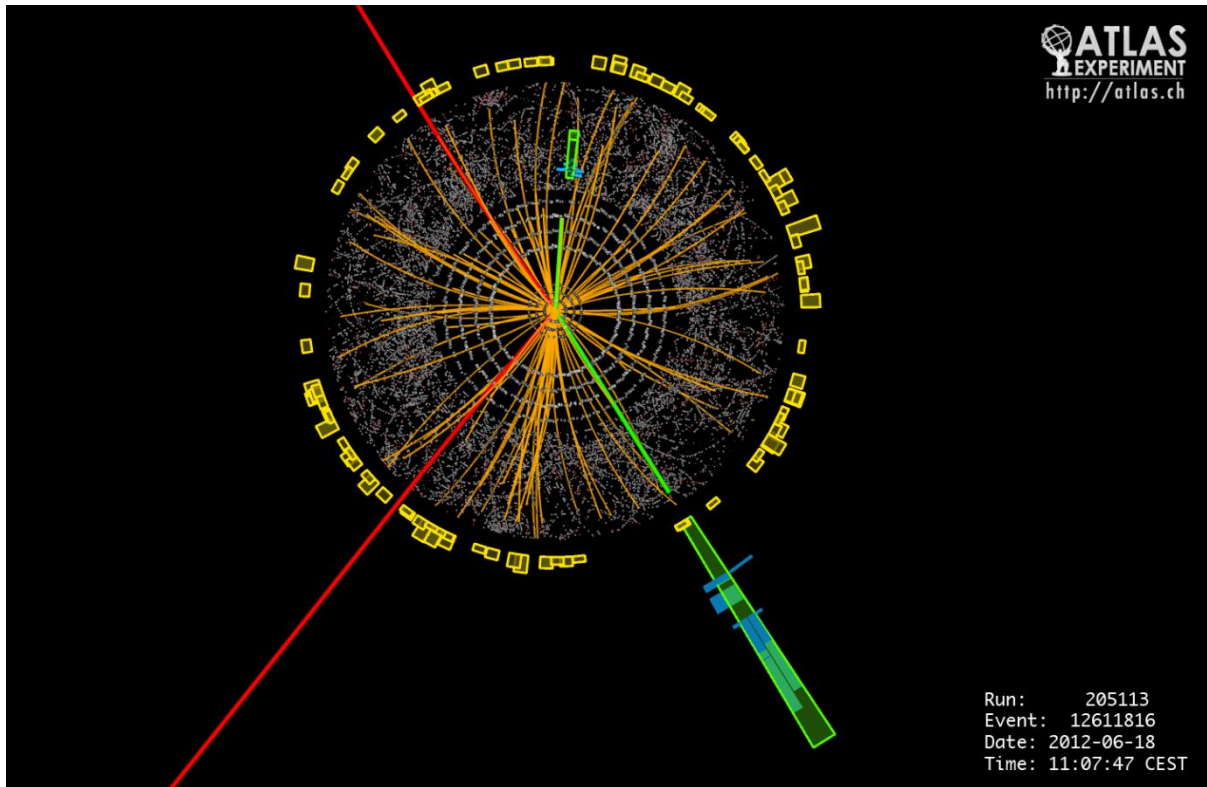
Image-1

 Abstract

Introduction: there is an ancient code (**the code**) travelling since the time immemorial and inception of the civilization which progresses from generation to generation and serves as a model code/standard operating procedure (SOP) for the governance of the state, civil way of life which includes social, cultural and economic progress. There have been prominent thinkers for the historiographical transcendence of the code who defined and conceptualised the code for their statesman and citizenry. The literature of the code is primarily based on anthropology, mythology, ideas on enlightenment, reformation, thoughtful understanding of the past and aspirations for the future. Concepts, methods and ideas are defined and structured as the model code on parameters of identity, culture, past and the future we wish to have at global and universal level. Presently, a race for space is going on and we are able to look deeper into the space through advanced technology. Identity evolves from grassroot to global to universal level and achieves a universal level. Culture is and would remain the basic of identity and all human affairs. The emphasis of any culture, therefore, is to make the code a platform for universal ascendance. This research paper may sound a work in the fields of philosophy or polity. Indeed, it is going to conclude that all human affairs are struggle for growth in economic sense and evolution to higher standards. Ancient literary works of Greek and Roman thinkers and naturalists Herbert Spencer, Darwin offer deep insights. The aim of any state is to monopolize and dominate the world order through the strategy and tactics

crafted on the code. This is not only the nature of the state but of human beings and reflected by most species and entities of the universe. Nature offers reference and signalling possibilities. We are indeed a part of the nature and universal whole system. Some concepts work as absolute criteria and some context specific. Buddha said the exact path is the middle path. Greek thinker Heraclitus asserts only constant is change and Chinese thinker Lao Tzu said that the words of truth are paradoxical. We need to chase the exact nature of the truth and be able to identify the truth that works for us in real set of circumstances in a given set of natural and universal space. Everyone pursues that consciously and sub-consciously from amoeba to CEO of an MNC to statesman of the powerful economic states. The quest of identities is such otherwise why would statesmen exist and what would they do with the enormous power or capital assets at disposal. I have read enormous in books and varieties of subjects.

The methodology: best analysis is multifarious in nature and best practices in the field of business and economy may come from the theories of naturalists or Greek thinkers. I will zoom-out to Indian thought after a raw expression of my **conceptual model** which may sound arbitrary. My tendency is to make this paper a purely conceptual out-come of my mind and therefore I restrict knowingly to refer to any literature on my ideas in this paper. All thoughts have a privilege value as Aristotle said and things inter-connect.

The quest for identity expression and enlargement would be basic to man's mind and his self. Identity makes culture and culture makes states and states fight for the dominance which reflects civilization progress from ancient to modern era. If you will observe the behaviour of ancient to modern civilization the tendency of monopolization is poignantly apparent. The tendency is based on religion. Religion is the oldest form of practice a man thought and conceptualized. On ideas on God, Christian thinker Augustine had firm belief and Laplace affirmed the existence of God with a one punch statement that there is no need of that hypothesis. All atheists died remembering God. God in the religious texts is a man's own idea for his own preservation and therefore religion will be the basis of man's thought process.

On Indian thought, I think Rig-veda is one of the fundamentals beside Gita and anecdotal and symbolic messages in Mahabharta and Ramayana. It is my strong assertion that it was the Rig-veda that offered the idea to the man to compete for the supremacy and it offers the conceptual framework to develop practices for globalization and universalization of one's thought, interest and position. Initial ideology of the Aryan and Bharat is mentioned in Rig-veda and Yajurveda.

Adi Shankaracharya conceptualized the Indian thought in Vivek-chudamani, Immanuel Kant for Germans, Charlemagne for Europe, Franklin for US, Ben-Gurion for Israel among others. We first need to identify the Indian thought which is capable of being a global thought with universal value system. Behind every thought is a belief and trust value that defines its standard.

Austrians trust Austrians, Americans trust Americans and Romans on Romans. The belief on the code is surreal and the eternal truth. This behaviour is reflected from the level of the family to the Board room of the MNC to the parliament of a nation that trust based thought is an intensely an identity-based phenomena and entity. The code exists, travels and tend to leap from local to universal domain. We are discussing it as a universal phenomenon not a global order. Man has started exploring universe more and more and universe being the ancient most to the existence of man provides the signalling possibilities to the man as man is a part of the universe and not vice-versa. The universe, therefore, is at its will to accept and dispose the code provided it has that competence that it comforts to universal thought process. Believe me, I am just talking about a simple philosophy although it may sound a conjecture or a day-dreaming of a mind in leisure.

Expected results and discussion: It may be perceived or appear to be a very philosophical analysis but mine is essential *'a growth and standard based concept'* for the purpose of evolution of a new perspective

and in fundamental relation with some very first requirement for man i.e. creative thought that may be utilized primarily as a tool for 'the policy' in governance, administration, in business and economy.

By the way, soul enriches itself in repose and leisure is the luxury we expect from money. I have divided my time categorically for that purpose of enrichment of my thought on writing this paper. Heart and mind are behind the creation of the thought which is subject to memory, knowledge and reflection of the past and epistemic influence. By globalizing the thought, we are expecting it to influence at large across its own geographic boundaries. For that matter the thought needs to appeal universal aesthetics. When it comes to India, the broad idea on India shows India's cultural influence on the world through its food, yoga and festivals etc., all those parameters which are based on soft-power. India's managerial prowess and advanced space technology have already altered and changed the way the West thinks about India. We are already globalizing and at which phase are we need to be assessed.

The renowned thinker on idea of soft-power Joseph Nye asserts that soft-power influence is based on hard-power. It means that if India is having an ability to dominate the world through its hard power of military and diplomacy to change the world order in its favour, then only the influence of soft-power can help in globalizing Indian thought. I was talking to a prominent figure of a religious ideologue and shared that I wish to write on Indian thought, he commented bluntly there is nothing called Indian thought, it has to be Hindu Thought. Without any hesitation he said it's not Indian thought, it is Hindu thought. Question further arises on:

What is the Indian thought?

What is its source?

How can it be globalised in present world order considering the challenges based on majority Hindu religious identity?

Globalizing Indian thought it a three-way procedure that involves:

1. First, developing the concept on Indian thought in a way that Kant did for German and Mark Twain did in case of US and like-wise.

2. Expressing it to the global level.

3. And assimilating to the universal level.

Caution points: it may sound a methodological task but it may lead to the outcomes quite contrary that anti-Indian thought forces may arise and collude. It is not a plan for one decade or a moment for jubilee celebrations as it may take centuries. So, there has to be a cost and benefit analysis also and may require a total re-structure of the whole set of policies and strategies.

There are already major results delivered by the present regime through its thoughtfully planned policy at all levels. Indian community throughout the world is already witnessing an ice-breaking moment or a sense of achievement on the moment of truth and moment of realisation that global Indian thought is already a phenomenon witnessed. We just launched Chandrayan-3 and that affirms also that globalizing Indian thought is already a realty and a process that can evolve further. For that matter, we need to minutely examine the perspective and orientation of the present regime's priorities. As Nye already said, the hard power is fundamental. Advanced technology based economic and diplomatic influence is the key to process of globalizing Indian thought.

Analytical sources: let's positively pursue the process of globalizing Indian thought in present world order and the strategy. The icons and iconoclasts who had profound effect in globalizing Indian thought in India's modern history are Swami Dayanand Saraswati, Rajaramamohan Roy, Swami Paramhans, the prominent youth motivator Swami Vivekananda among others. This paper analyses their contribution not on religious and spiritual domain but in strict economic and business context that must offer a new insight of understanding the basic undertaking of human way of life i.e. business and economy. Some major references are mentioned in bibliography.

The model framework: before Vivekananda, it was Kautilya who offered the economic thought in relation to religion:

The root of <u>happiness is dharma, the root of dharma is artha and the root of artha is right governance</u>, *the root of governance is victorious inner-restraint and root of victorious inner-restraint is humility and root of humility is serving the aged:* Kautilya, Chanakya-Sutra 1-6

Above directions of Kautilya to Chanakya provide a conceptual base for designing and defining for the process and the practice of globalizing Indian thought. This paper further connects the different aspects of the Indian thought through discourses of the prominent thinkers from ancient to modern era by critical examinations of ancient texts such as vedas to present time such as written by the prominent figures from India in Indian contexts.

The literature review: based on the reference from the ancient most to the logic proper in latest research-based perspectives of the Indian thinkers and the thinkers who wrote for India and who were mesmerised by the Indian thought such as Max Muller on the idea of Indian concept of language (Sanskrit) and Indian way be thinking though internal to universal level. British thinker James Mill father of John Stuart Mill also wrote on India that became a modus operandi for East Indian Company to rule India on statecraft designed by Lord Macaulay. This is affirmed that there has been an Indian thought which is why world craves for India. Western travellers such as Columbus of Spain, Baruni of Africa, De-Gama of Portugal et al were on their mission to locate Indian fairly land of fragrances, spices, stones, gold, beautiful women, exotic way of life etc. India indeed was a sparrow of gold and wherever, these explorers landed and observed black people with immensely rich way of life they named them as Indians. Natives of America are therefore called Indians and Indies of the Caribbean are similar discoveries of the Westerns in their attempt to reach of the dreaming land called India. Some key resources are mentioned in bibliography.

Managerial implications: one completely new thing this research paper offers are the understanding of Indian economic and business concepts from religious perspectives. So, the whole circle is now connected. To offer an example:

I am what I am: Saint Augustine in Confession

I am what I am: a punch line on Reebok's t-shirt.

Adam ate *'apple'* and humanity adopts *'indulgence'* as a way life. The same strategy is adopted by Apple I phones. This may sound tangential views but there is strong sense of connection between business and religion based on identity and culture. This research paper, thus, rest assured is a new method and system of enquiry in building the concept in globalizing India thought and challenges thereupon. The 'aim and objective' of any economic and business activity to actively <u>encourage a man to indulge.</u> Choice of luxuriate in the business activities by man may be his or consciously made for him.

Conclusion and outcome expected: I conclude that identity, religion, culture and country in that order are restlessly competing to globalize and universalize. Harvard professor Samuel Huntington in clash of civilization has already exhibited this continuous state of competition amongst different states on their

religious identities that they wish to control the global affairs essentially through control of business and economy; I, in that sense, explores *'the Indian way'.*

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The factors of artificial intelligence and industry 4.0 that influence waste management and the circular economy: a Study from emerging economy perspectives

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1.   Introduction

In recent years, the world has been confronted with environmental and societal challenges as a result of rapid industrialization and unsustainable human behaviors (Hariram et al., 2023). The enactment of "circular economy" (CE) principles has emerged as a promising strategy to mitigate waste generation and the depletion of resources (Govindan & Hasanagic, 2018; Patwa et al., 2021; Velenturf & Purnell, 2021). Within this specific context, the use of digital technology (i.e., artificial intelligence (AI), block chain, machine learning, Industry 4.0 (I4.0), and so on) has been extensively emphasized given its ability to facilitate the transition to a waste management and CE and promote sustainable business practices (Nandi et al., 2021; Nascimento et al., 2019; Rodríguez-Espíndola et al., 2022). As a result, the aim of this paper is to explore the identification of the influencing factors of AI and I4.0 on the waste management (WM) and CE of different leather and manufacturing enterprises in India. This comprehensive research paper also examines the interrelationship between the different factors of AI and I4.0 in WM and the CE. Further, this paper also investigates the potential factors that most affect the adoption of AI and I4.0 on WM and the CE in different manufacturing enterprises in terms of social, economic, and environmental sustainability.

2.   Literature review

2.1   Theoretical framework

This study used the "natural resource-based view" (NRBV), "critical success factor theory" (CSFT), and "dynamic capability theory" (DCT) as a theoretical framework. NRBV theory is a theoretical framework in strategic management and economics that focuses on the role of natural resources in creating competitive advantage for firms and regions (Samadhiya et al., 2023). It's an extension of the "resource-based view" (RBV) of the firm, which suggests that a firm's unique resources and capabilities can lead to sustainable competitive advantages (Chaudhuri et al., 2022). The theory used here is used to assess how AI and I4.0 technologies are used in WM and the CE to gain competitive advantage in business. CSFT is a management concept and framework that focuses on identifying and managing the key factors that are essential for the success of an organization or a specific project (Dora et al., 2022; Neri et al., 2023). CSFT is often used in strategic planning and performance management to help organizations achieve their goals and objectives (Govindan, 2023). Theory can be applied to pinpoint the pivotal factors crucial for the successful integration of AI and I4.0 technologies into sustainable WM practices and fostering a more environmentally conscious CE in emerging economies. DCT is a concept in strategic management and organizational theory that focuses on an organization's ability to adapt and change in response to a constantly evolving business environment (Herold et al., 2022). This theory examines how organizations sense, seize, and transform their resources and processes to adapt to the changing landscape of sustainable WM (Díaz-Chao et al., 2021). This framework can shed light on how firms in emerging economies develop the agility to integrate

advanced technologies and adopt CE practices, ultimately contributing to more efficient and environmentally sustainable WM systems.

2.2   *Role of digital technologies in WM and CE*

The integration of AI and I4.0 has brought about a significant transformation in the field of WM and the implementation of CE principles. AI-based solutions, such as intelligent sensors and advanced data analytics, permit the continuous monitoring of waste levels, therefore improving the selection of collection routes and ultimately leading to a reduction in operating expenses (Uçar et al., 2020). This practice reduces superfluous use of resources and environmental contamination. Moreover, AI has the capability to discern valuable components inside waste streams, hence enhancing the effectiveness of recycling and repurposing processes (Liu et al., 2022). I4.0 technologies play a crucial role in enabling the establishment of closed-loop systems within the framework of the CE (Fatimah et al., 2020). The use of AI in smart manufacturing processes enhances resource efficiency, product design, and customization capabilities. AI also plays a crucial role in the monitoring and tracing of goods throughout their entire lifespan, hence facilitating more effective management of operations related to reuse and end-of-life (Awan et al., 2021). The integration of AI with I4.0 has been shown to facilitate the reduction of waste, encourage the adoption of sustainable practices, and accelerate the transition towards a circular and environmentally responsible economy.

3.   Design/methodology/approach: To achieve the research objectives, this study adopts a six-phase research methodology. In the first stage of the methodology, the literature review and analysis were performed. In the subsequent stage of methodology, bibliometric analysis as well as content analysis are performed (Figure 1). In the next phase, the variables were finalized and segregated with the help of management theories (namely, "natural resource-based view" (NRBV), "critical success factor theory" (CSFT), "dynamic capability theory" (DCT), and expert opinion (modified Delphi techniques). Based on the literature review, theoretical framework, and discussion with experts (Delphi technique), the following factors were identified: environmental regulations and policies, technological infrastructure, financial resources, technology expertise, supply chain integration, digital literacy, market demand, competitive pressure, collaboration and partnerships, leadership commitment, consumer awareness and behavior, resource availability, technological interoperability, risk perception, cost-benefit analysis, government incentives, and social responsibility. In the next phase, the "Fuzzy Technique for Order of Preference by Similarity to Ideal Solution" (Fuzzy TOPSIS) method was used to prioritize. In the fifth phase of this study, we adopted "total interpretive structural modelling" (TISM), and in the last phase of this study "Matrice d'impacts croisés multiplication appliquée á un classment" (MICMAC), a "cross-impact matrix multiplication applied to classification" analysis was used to cluster the factors based on their "driving power" and "dependence power". This analysis aims to discern significant patterns, obstacles, and prospects linked to incorporating digital technology into CE frameworks in manufacturing enterprises. Moreover, this study mixed methodologies (qualitative as well as quantitative) from Indian businesses to evaluate the environmental consequences of digital technologies and their impact on CE endeavors.
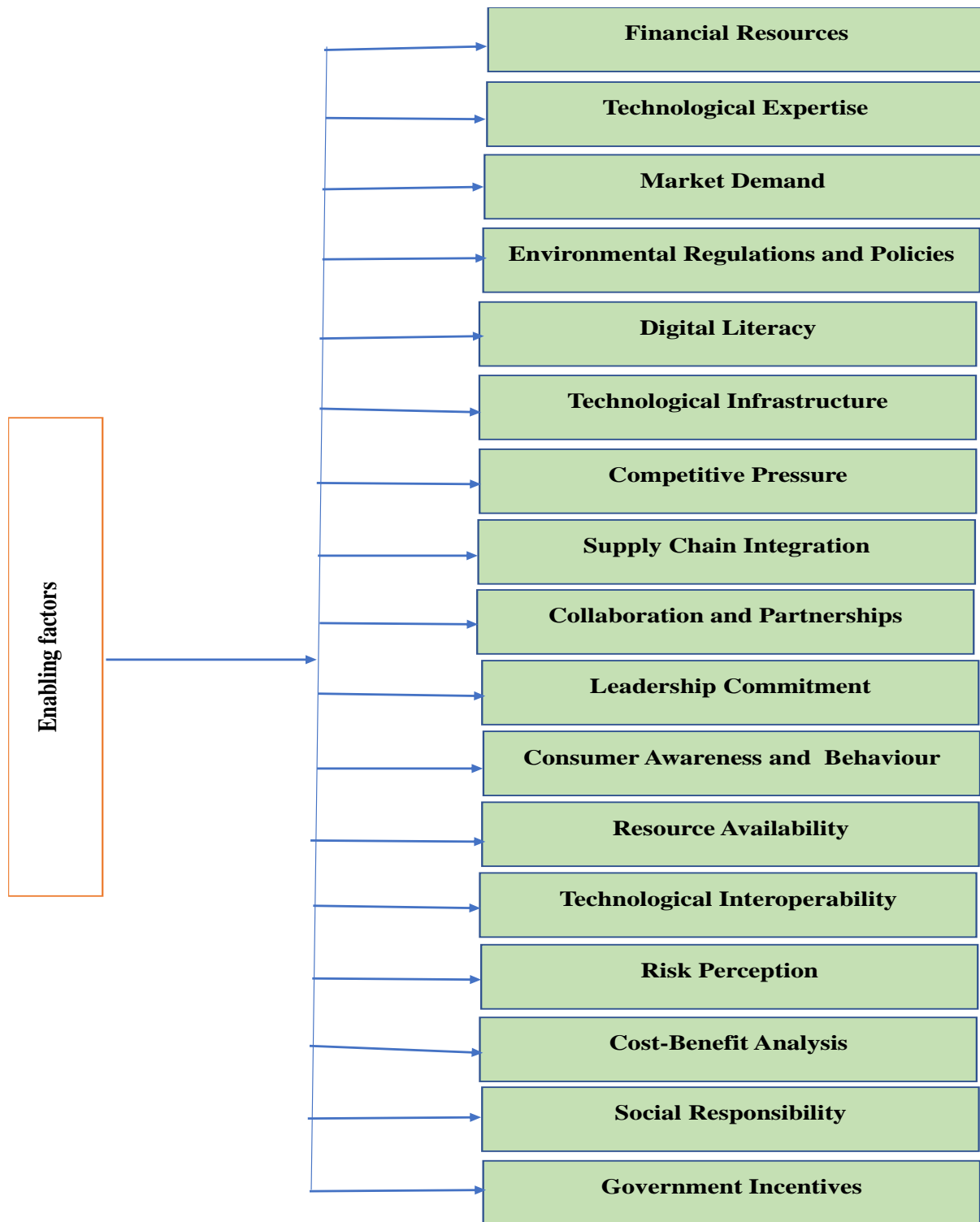
Figure 1: Identified factors (Author's compilations)

4.   Result and discussion

The findings of the research paper will enhance our comprehension of the role of AI and I4.0 in promoting sustainable practices within the CE framework. The main findings underscore the use of AI and I4.0 at every stage of the CE, and the findings also show that digital technology adoption and use also vary depending on the types, firm size, and level of sustainability activities. Finally, the findings also provide useful information about both digitalization and the CE from

the perspective of sustainable development. These findings will uncover potential avenues for utilizing technology to improve resource efficiency, minimize waste, and prolong the lifespan of products. This paper will additionally examine the factors associated with the adoption of digital technologies in CE models, thus creating a basis for the formulation of specific policies and strategies. The results obtained from the TISM and MICMAC analyses show that environmental regulations and policies, technological infrastructure, financial resources, technology expertise, supply chain integration, digital literacy, and resource availability are the driving factors. Whereas market demand, competitive pressure, collaboration and partnerships, leadership commitment, consumer awareness, and behavior are the linkage factors. Technological interoperability, risk perception, cost-benefit analysis, government incentives, and social responsibility are the dependent factors. The results obtained from this study also show that technological infrastructure obtained first rank for the development of WM and the CE. Further, financial resources, technology expertise, and government incentives obtained the second, third, and fourth ranks, respectively. This study offers a comprehensive analysis of the present condition of research and industry practices, thereby offering significant insights for policymakers, businesses, and researchers alike.

5.   Conclusions

The research paper aims to explore the influence of AI and I4.0 on WM and the CE in different leather and manufacturing enterprises in India. The study employs a six-phase research methodology to achieve its objectives. The methodology includes literature review analysis, bibliometric analysis, content analysis, variable finalization through management theories and expert opinions, prioritization using the "Fuzzy Technique for Order of Preference by Similarity to Ideal Solution" (Fuzzy TOPSIS), "total interpretive structural modelling" (TISM), and "cross-impact matrix multiplication applied to classification" (MICMAC) analysis. The research findings provide insights into the role of AI and I4.0 in promoting sustainable practices within the CE framework. The study identifies key factors influencing the adoption of AI and I4.0 in WM and CE efforts. The main driving factors identified include environmental regulations and policies, technological infrastructure, financial resources, technology expertise, supply chain integration, digital literacy, and resource availability. Linkage factors include market demand, competitive pressure, collaboration and partnerships, leadership commitment, and consumer awareness and behavior. Dependent factors encompass technological interoperability, risk perception, cost-benefit analysis, government incentives, and social responsibility. Based on the study's analysis, the research suggests that technological infrastructure plays a pivotal role in the development of WM and the CE. Financial resources, technology expertise, and government incentives also emerge as critical factors in this context. The research provides a comprehensive understanding of the current state of research and industry practices, offering valuable insights for policymakers, businesses, and researchers alike. Moreover, the study underscores the importance of adopting digital technologies like AI and I4.0 to enhance WM practices and promote CE principles. It highlights the multifaceted interplay between various factors that influence the adoption of these technologies. The findings contribute to the broader understanding of how digitalization can be harnessed to achieve sustainability goals and resource efficiency. Ultimately, this research paper serves as a valuable resource for shaping policies and strategies aimed at integrating digital technologies into CE models, thereby fostering sustainable development practices in the manufacturing sector. The findings of the research paper try to bridge the research gap between digital technology (AI and I4.0) and the CE. It provides recommendations based on empirical evidence for businesses to adopt sustainable practices and create a favorable environment for the implementation of CE principles. Through an examination of this transformative nexus, the research endeavors to make a substantial contribution to the pursuit of a more sustainable and resilient future.

6.   Managerial Implications:

The research findings presented in this study have significant managerial implications for leather and manufacturing enterprises in India, as well as businesses globally, aiming to enhance WM practices and embrace CE principles through the adoption of digital technologies like AI and I4.0. The study underscores the importance of strategic investment in technological infrastructure and technology expertise. Managers should allocate resources for upgrading and integrating digital systems that support WM and CE initiatives. This investment should be aligned with the organization's long-term sustainability goals. Further, environmental regulations and policies emerged as crucial driving factors. Managers should proactively monitor and ensure compliance with evolving environmental regulations. Aligning the organization's strategies with these policies not only mitigates risks but also contributes to the CE agenda. The study also shows that collaboration and partnerships with other stakeholders, including suppliers, industry peers, and government bodies, are essential. Managers should explore opportunities for collaborative initiatives that leverage shared resources, knowledge, and expertise to foster sustainable practices throughout the value chain. In addition to this, leadership commitment is pivotal for driving digital transformation and CE adoption. Senior management should champion the integration of AI and I4.0 solutions, communicate the benefits to the entire organization, and foster a culture of innovation and sustainability. Moreover, to fully capitalize on digital technologies, employees need to be digitally literate and skilled in utilizing AI and I4.0 tools. Managers should invest in training and upskilling programs to empower their workforce with the necessary capabilities. Managers should focus on understanding market demand and consumer behavior, which is vital for successful implementation. Managers should analyze market trends, identify consumer preferences for sustainable products, and tailor their offerings accordingly. While the benefits of digital technology adoption are significant, managers should conduct thorough risk assessments and cost-benefit analyses before implementation. This ensures that the chosen technologies align with the organization's financial capabilities and risk tolerance. Managers should actively explore available government incentives and support programs that encourage the adoption of digital technologies for WM and CE initiatives. These incentives can alleviate financial barriers and accelerate adoption. Further, resource availability and supply chain integration are key factors for successful CE implementation. Managers should optimize resource utilization, explore ways to reduce waste generation, and enhance supply chain collaboration to promote resource efficiency. On the other side, social responsibility emerged as a dependent factor. Managers should emphasize corporate social responsibility (CSR) initiatives aligned with CE principles. Communicating these efforts transparently can enhance the organization's reputation and stakeholder relationships. The findings highlight that technology adoption varies based on firm size and sustainability efforts. Managers should develop a long-term vision for integrating digital technologies and continuously assess their impact to refine strategies and ensure alignment with evolving market trends and technological advancements. In addition to the above, the managerial implications drawn from this study emphasize the need for a holistic approach to adopting AI and I4.0 technologies for WM and CE initiatives. By strategically addressing the identified factors and considering the interrelationships between them, leather and manufacturing enterprises can position themselves as pioneers in sustainable practices, enhance their competitiveness, and contribute to the broader goal of achieving a more environmentally and socially responsible future. Aside from the above, the study helps to solve real-life case problems in the manufacturing sector for manufacturing enterprises and also provides future direction in the field of sustainability.

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Revisiting Employment Relations in the Gig and Platform Economy

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Introduction

The contemporary world of work has undergone a profound transformation in recent years, spurred by the emergence and growth of the gig economy. This paradigm shift brought forth new forms of employment relations that challenged the conventional notions of employer-employee dynamics. The gig and platform economy, characterized by its focus on short-term, task-based engagements facilitated by online platforms, has redefined the organization of work and the character of the labour market, particularly in terms of the traditional employment relationship. This paper delves into the evolving landscape of the gig and platform economy, aiming to critically examine and revisit the dynamics of employment relations within this evolving and dynamic context.

Traditionally, the employer-employee relationship has been the cornerstone of labour markets, characterized by formal employment contracts, fixed working hours, and structured benefits. However, the rise of digital platforms has introduced an alternative model that emphasizes flexibility, decentralization, and the redefinition of the workforce. The gig and platform economy encompass a wide range of activities, from ride-hailing and food delivery to freelance writing and remote project work. Workers in this economy, often referred to as gig workers or independent contractors, engage in short-term tasks or projects, enabling them to take on multiple roles with different platforms concurrently. This departure from the traditional nine-to-five employment model raises fundamental questions about how we perceive work, engagement, and the obligations and responsibilities of both workers and platforms also known as aggregators.

The basic structure of the gig and platform economy disrupts traditional notions of employment stability and security. While gig work offers unparalleled flexibility, it also exposes workers to income insecurity and volatility and a lack of access to traditional entitlements like occupational safety and health, retirement benefits, and availability of paid leave under various labour legislations. This raises important concerns about labour rights, social security, social protections and the broader implications for income inequality and the overall well-being of workers.

Moreover, the rapid growth of the gig economy has led to discussions about the classification of gig workers as independent contractors rather than employees. This classification has significant legal and regulatory implications, affecting issues such as labour rights, collective bargaining, and the applicability of employment laws. As gig workers seek fair treatment, better working conditions, and access to benefits, policymakers and stakeholders are faced with the challenge of striking a balance between preserving the agility of the gig economy and ensuring the rights and protections of its participants.

This paper aims to provide a comprehensive exploration of the complex and multifaceted employment relations within the gig and platform economy. By revisiting the conventional understanding of the employer-employee relationship, we seek to shed light on the nuances, challenges, and potential solutions that define this evolving landscape. As the gig and platform economy continues to reshape the global labour landscape, understanding the dynamics of

employment relations within this context becomes not only a scholarly endeavour but also an essential step toward shaping a more equitable and sustainable future of work.

Review of Literature

The evolution of the gig and platform economy has sparked a growing body of literature that addresses the employment relations, regulatory challenges, and socio-economic implications associated with this transformative paradigm of work. Scholars from various disciplines have sought to dissect the multifaceted nature of the gig and platform economy, offering insights into the dynamic interactions between platform companies, gig workers, and the broader society.

Scholars have highlighted the conceptual boundaries of the gig and platform economy. Some of them emphasized the temporary and flexible nature of work facilitated by digital platforms. Krueger and Katz (2016) coined the term "alternative work arrangements" to encompass a spectrum of informal work, while Graham et al. (2017) introduced the concept of "microwork" to describe small digital tasks performed on platforms. This categorization serves as a foundation for understanding the diversity of platform-mediated work engagements.

One of the central debates in the literature revolves around the categorization of gig workers as independent employees or self-employed. Katz and Krueger (2016) argue that the categorization significantly impacts labour rights and social protections, while Revenelle (2019) examines the legal implications of misclassification. Scholars delve into the nuances of legal frameworks, discussing the difficulties in applying traditional labour laws to the context of the gig economy (Gandini, 2019).

The fallout of gig work on workers' well-being and income inequality has been extensively explored. Prassl (2018) analyzes the precariousness of gig work, emphasizing the lack of benefits and job security. Lee et al. (2018) examine the earnings differentials between gig and traditional workers, highlighting disparities and the inadequacy of wage determination in digital platform structure.

The tension between flexibility and precarity is a recurring theme. Roberts & Zietsma (2018) discuss the implications of "flexible work" on personal identities and societal norms. Wright (2018) addresses the dual nature of flexibility as both a positive aspect for workers and a mechanism for exploitation.

Collective bargaining in the gig economy has garnered attention. Vallas & Schor (2020) explore innovative models for gig workers' collective bargaining, while Tayal (2022) examine the role of digital platforms in fostering or hindering collective action.

The influence of technology and ethical considerations on gig work has been discussed. Vallas and Schor (2020) analyze the platform algorithms' impact on workers, while Kalleberg (2009) discuss the ethical dimensions of gig work and the platform economy.

Some scholars explore the potential for innovative models within the gig economy. Islam (2018) envisions a system of "crowd-based capitalism," while Joo & Shawl (2021) discuss the role of platforms as innovation intermediaries.

As the gig and platform economy continues to evolve, scholars endeavour to provide a holistic understanding of its various dimensions. This literature review underscores the interdisciplinary nature of research in this area, reflecting the need for nuanced analyses that encompass legal, economic, social, and technological aspects. By critically examining the existing literature, this paper contributes to the ongoing dialogue surrounding employment relations within the gig and platform economy.

The Theoretical Framework

The theoretical framework presented in this paper illustrates the intricate interplay of various factors that shape employment relations within the gig and platform economy.

The spectrum of platform-mediated work, ranging from microwork to project-based tasks, influences the nature of engagement and degree of freedom for gig workers. Terming gig workers as independent workers or self-employed has an impact on their legal rights as workers under various labour legislations. The dual nature of flexibility offers autonomy to workers while also contributing to precarity due to unpredictable income and lack of benefits. The struggle to apply traditional employment laws to the gig economy raises questions about labour rights, social protections, and the need for adaptive regulation. Disparities in wages and lack of benefits between gig and traditional workers contribute to income inequality and socio-economic stratification. Precarious work arrangements in the gig economy can lead to stress, instability, and challenges in accessing essential benefits such as healthcare. The decentralized nature of gig work challenges traditional forms of collective bargaining, prompting the exploration of innovative models for worker representation.

Platform algorithms shape task allocation, worker ratings, and earnings, influencing worker experiences and outcomes. The accumulation of digital reputation and data by gig workers affects their opportunities, earning potential, and access to tasks. Governments and policymakers are exploring approaches to ensure worker protection and labour rights within the institutional framework. The involvement of stakeholders, which include gig workers, platforms, aggregators and labour organizations, is crucial in shaping policies that balance flexibility and protections. In this context, it would be appropriate to introduce the concept of 'Uberization'.

The Concept of 'Uberization'

The phenomenon often referred to as the "uberization" of labour represents a specific form of capitalist accumulation. It introduces a novel mode of integrating workers into the production process, where workers take on the responsibility for the primary means of production in productive activities.

Starting in the 1970s, the development of productive forces in large industries began to incorporate microelectronics and network connectivity into their systems. Consequently, this shift led to a significant change in the capital structure of many companies. There was a reduction in employment, as less investment went into variable capital that is labour, and more was allocated to technology equipment and machinery.

Before the concept of "uberization" gained prominence, the online environment facilitated crowd-work, which directly or indirectly contributed to the process of value creation. This concept, often known as crowdsourcing, involved decentralized labour, where tasks typically performed by an individual or a small group were distributed among a large number of people.

Parallel to the development of crowd-work, the sharing economy emerged. This system involved the sharing of resources, such as goods or services, mediated through online platforms. It gave rise to various related concepts, including the collaborative economy, collaborative consumption, on-demand economy, and peer-to-peer economy.

In the context of widespread smartphone access and the growing participation of organizations in the crowd-work system, Uber, a company founded in San Francisco in 2008, revolutionized transportation. The idea behind Uber was seemingly simple: in cities, individuals with available time could work as freelance drivers, either as a supplementary income source or as their primary occupation. Passengers had various options for city travel, and choosing Uber allowed them to

summon a driver with a few taps on their smartphone. This straightforward business model propelled Uber to a market value of $70 billion by 2017.

These new collaborative economy models have left their mark on existing businesses, with examples including apartment rentals (e.g., Homestay, Booking.com, Oyo), ride-sharing (e.g., Uber, Ola), and the delivery of goods and services (e.g., Amazon, Flipkart, UrbanPro, Zomato). Surveys have uncovered significant economic potential within the collaborative economy. However, it also brings about uncertainty regarding rights and obligations, including issues related to liabilities, customer protection, regulatory frameworks, taxes, social security, and employment status. In the case of Uber, drivers are required to possess a car, a cell phone, and all the necessary physical resources for their work. So, how does Uber extract surplus value from its drivers?

To address this question, it's essential to remember that, as a commodity, labour power has a use-value. In the context of modern industries, workers are encouraged to exhibit greater creativity, invest in continuous training, stay technologically updated, and establish emotional connections with their organizations to maintain their use-value. In the case of Uber drivers, they are expected to "invest" in the equipment and machinery needed to transport passengers. "Pay per piece" has evolved into "pay per ride" in this context.

According to a New York Times report (SCHEIBER, 2017), Uber, unable to directly demand increased productivity from its drivers (as they are not employees), resorts to psychological manipulation through algorithms. Drivers are prompted to accept the next ride before completing their current one, creating a sense of urgency for more earnings. Moreover, to keep drivers actively working, the company leverages individuals' inclination to set personal goals. When a driver attempts to log off the app, Uber may alert them that they are close to reaching their goal, often convincing them to continue working.

Explicit control methods are also employed. If a driver declines too many ride requests, they may face suspension or deactivation from the platform. Uber imposes various standards on drivers, including refraining from soliciting work directly, not sharing personal contact information with passengers for private rides, and adhering to the ride prices set by the app. Rather than being evaluated by a company-hired supervisor, a driver's performance is assessed by customers. Since the service is consumed simultaneously with its production, customers are best positioned to evaluate the provider. Uber's website reinforces this:

"Ideally, you should provide excellent service to your passengers on all rides, such as turning on the air conditioning, offering amenities like candy and water, and maintaining a clean, vacuumed car interior. This way, you'll undoubtedly maintain a rating above 4.6" (UBER, 2018).

Consequently, with a maximum rating of 5 stars from each customer, drivers must maintain an average rating of at least 4.6. Failing to meet this performance threshold, which is also subject to the customer's subjective evaluation, can lead to temporary suspension or immediate deactivation from the Uber platform. The evaluation system further reinforces society's appreciation of managerialism (GAULEJAC, 2007), extending it beyond the traditional labour market and outsourcing some control activities to consumers.

In summary, although Uber drivers may appear autonomous, it is the company that sets their goals and enforces them, often resorting to punitive measures if targets are not met. This situation challenges the common perception that "uberized" workers are their "own masters."

UK Supreme Court verdict on Uber drivers

The recent verdict by the UK Supreme Court, classifying Uber drivers as "workers" rather than "self-employed" individuals, carries significant implications for labor markets worldwide. This decision is expected to play a pivotal role in shaping employer-employee relationships within the gig and platform economy and extending labor legislation protections to workers. India, too, is likely to be influenced by this verdict.

After a lengthy legal battle dating back to 2016, on February 19, 2021, Uber London lost its final appeal as the British Supreme Court ruled that Uber drivers should be recognized as "workers" under the Employment Rights Act 1996, rather than as "self-employed." This designation entitles Uber drivers to minimum wage, paid leave, and other legal benefits, similar to their traditionally employed counterparts. (Oxford Student)

Although this ruling specifically pertains to the drivers involved in the 2016 case, it sets a significant precedent that could impact the working conditions and entitlements of gig and platform workers worldwide.

When delivering its judgment, the UK Supreme Court considered the following key factors:

1. Uber sets the fares for each ride, and drivers do not have the autonomy to set their own prices as they would if they were genuinely self-employed.

2. Uber dictates the contract terms, leaving drivers with no negotiating power; they can only accept the terms and conditions presented to them.

3. Uber monitors and evaluates drivers' performance, with the ability to terminate the working relationship if performance falls short, even after repeated warnings. This level of control is characteristic of an employer-employee relationship.

4. Uber keeps track of ride requests and may penalize drivers for excessive ride cancellations.

The court emphasized that the classification of drivers as "workers" should not be solely determined by the contract between Uber and its drivers. Instead, it should be assessed in the context of protective labour legislation, such as the Employment Rights Act 1996. The primary intent of this legislation is to safeguard vulnerable workers from exploitation by granting them specific rights. If Uber's argument to exempt its drivers from these statutory rights were accepted, it would undermine the purpose and effectiveness of the legislation itself.

Furthermore, the UK Supreme Court raised concerns about how Uber restricts communication between drivers and passengers, primarily relying on the app for ride requests. (Oxford Student)

Recent developments in India suggest that the matter of defining employer-employee relationships in Uber and Ola operations has been a growing concern over the past few years. The UK's recent ruling is poised to exert a significant influence on the situation in India. The UK verdict unequivocally establishes that there are substantial grounds to recognize Uber as an employer, thereby granting Uber drivers the right to protections afforded by relevant labour laws.

In this context, it's essential to acknowledge that technology has been utilized to obscure employer-employee relations. The UK ruling effectively unravels the complexity of this obfuscation, shedding light on the true nature of these relationships. The implications of this ruling extend far beyond Uber, Ola, or even the broader community of app-based taxi drivers; they resonate with all gig and platform workers.

In essence, the UK verdict serves as a pivotal reference point, one that is likely to reshape discussions and actions surrounding the rights and protections of workers in the gig economy, not only in India but globally as well.

In recent times, Govt. of Rajasthan has introduced the Rajasthan Platform-Based Gig Workers (Registration and Welfare) Bill 2023, and proposed that there would be two categories: Aggregators and Principal Employers. However, there is no distinction between these two categories. The term aggregator nullifies the employer-employee relation. The use of the term aggregator should be avoided as far as possible. 'Employer' would be a better term in this case and restores the employer-employee relation in gig/platform work environment. This Bill defines gig and platform workers as working outside the traditional employment relation. This is conceptually a wrong notion. Gig and platform work should be conceptually seen within the employer-employee paradigm.

With regard to the grievance redressal mechanism, this Bill provides for a separate platform. This will unnecessarily complicate things. Better to avoid this. Grievance redressal is to be merged with industrial relation legislation/Code. Rajasthan Bill has provided for accidental benefit. Other benefits are not explicitly mentioned. Further, this contradicts the provision of the Social Security Code 2020 as under the Code, social security schemes for the gig and platform workers are to be entirely by the Central government (under Section 113).

The current legislation lacks provisions pertaining to various aspects of work, including work hours and the assurance of a minimum income. Notably, in the section addressing the rights of gig workers, the Bill specifies that all such workers will "have access to general and specific social security schemes based on contributions made as may be notified by the board."

This statement can be interpreted in two ways: First, it may imply that access to schemes established by the board would be contingent upon contributions made to the fund. Second, it might suggest that the level of access to these schemes could be directly proportional to the contributions made to the fund. The utilization and management of this fund will be determined by the board. However, it's important to note that the Bill does not explicitly address the issue of collectivization among gig and platform workers.

It would be better to have legislation regulating working conditions and employment terms of gig and platform workers. Limiting only certain welfare (social security) would be ineffective. Needs a comprehensive bill that reclaims the employer-employee relation and defines work in the gig and platform economy. Conceding that it is beyond the traditional employer-employee relation is conceptually inappropriate.

Conclusions

Beneath the facade of technology, the underlying employer-employee relationship in gig and platform work becomes evident. Employees are rightfully entitled to the protections outlined in various labour laws. The recently established Codes, particularly the Code on Social Security 2020, explicitly encompass gig and platform workers within the broader framework of social security. These workers are now recognized as part of the unorganized sector labour force.

However, as demonstrated by the UK Supreme Court's ruling, gig and platform work can also fit within a formal employment structure. This means that employers can be held accountable for providing the statutory rights outlined in labour legislation. In essence, employers within the gig economy can no longer use technology as a shield to deny workers their legally mandated labour rights. This shift underscores the evolving nature of labour relations in the digital age,

emphasizing the importance of ensuring that workers, regardless of their employment mode, receive the protections and benefits they deserve under the law.

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A Study of Factors Influencing Impulsive Buying Behavior for Indian Handicrafts: Understanding Consumer Purchase Intentions

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1. Introduction

An essential component of "Made in India," the Indian handicrafts industry exhibits the workmanship and cultural history of the country (Ministry of Textiles, 2020). Impulsive purchasing behaviour in this setting has not been studied, despite its importance to culture. This study looks into the factors that influence impulsive behaviour and how they affect the desire to buy Indian handicrafts in an effort to close this gap. Based on long-standing customs, this industry includes textiles, jewellery, woodwork, and more (Directorate General of Foreign Trade, 2021). Customers are drawn to it by its distinctive allure and cultural resonance (Chen et al., 2017).

In order to shed light on consumer psychology in a particular market, the study studies factors influencing impulsive purchase with an emphasis on the Impulsive Buying Tendency (IBT). The study examines the variables influencing impulsive purchasing, shedding light on consumer psychology in a particular industry. By improving understanding of consumer behaviour and providing recommendations for creators, companies, and politicians, this research benefits academia and business. This study, "Factors Influencing Impulsive Buying for Indian Handicrafts: Unveiling Purchase Intentions," analyzes how cultural values, aesthetics, perceptions of quality, and trust interact to drive impulsive purchasing while conserving India's cultural past.

2. Literature Review

The importance of customer purchasing intentions in this industry is increased by the fact that the Indian handicrafts industry serves as a steward of cultural heritage and a cornerstone of the "Made in India" brand (Ministry of Textiles, 2020). These intentions are influenced by a wide range of variables that reflect customer values, emotions, and preferences. Cultural and traditional values are ingrained in handicrafts, giving them sentimental significance (Chen et al., 2017). Consumers are encouraged to buy these goods by their strong ties to cultural origins. At the same time, handicrafts' aesthetic attraction seduces buyers, encouraging impulsive purchasing behaviors motivated by their eye-catching appeal (Yoo et al., 2020).

Purchase intentions are significantly influenced by perceived quality and product trust (Kotler & Keller, 2016). Impulsive purchasing is predisposed by consumers' opinions of the product's authenticity and quality. This is particularly important in the context of handicrafts, where the authenticity of the object frequently overlaps with its cultural narrative (Kim et al., 2013). The Theory of Reasoned Action and the Theory of Planned Behavior, two theories of impulse buying, provide a framework for comprehending the hastiness associated with plans to purchase handicrafts. According to Verplanken and Herabadi (2001), these theories emphasize the influence of attitudes, arbitrary standards, and perceived behavioral control on customers'

impulsive behavior. These ideas increase the possibility of impulsive purchases because of the emotional connection and cultural meaning of handicrafts.

By examining the effects of attractiveness, cultural values, perceived quality, and product trust on impulsive purchase intentions, the study, titled "A Study of Factors Influencing Impulsive Buying Behavior for Indian Handicrafts: Understanding Consumer Purchase Intentions," aims to close existing research gaps. The study uses theories like the Theory of Reasoned Action and Theory of Planned Behavior to understand the psychological mechanisms underlying consumers' impulsive actions in the context of the impulse buying tendency as a mediating factor. Consumers' impulsive purchasing tendencies are shaped by the cultural legacy, aesthetic attractiveness, and perceived quality of handmade goods. Theories of impulsive consumer behavior interact with cultural values, attractiveness, quality, and trust, guiding their actions. The goal of the study is to unravel these complex processes, which will improve knowledge of consumer behavior.

3. The Model/Conceptual Model

The study uses a structural equation model to analyze the factors that affect consumers' impulsive buying tendency for handicraft purchase. The framework includes independent variables such as attractiveness, cultural and traditional values, perceived quality, product trust, which are hypothesized to have an impact on handicraft purchase intention. Impulse buying tendency is considered as a mediating variable. The study aims to ascertain the relevance of each dimension of the theoretical model by examining the beta coefficients for the independent factors. The Conceptual model of the study is given below: -
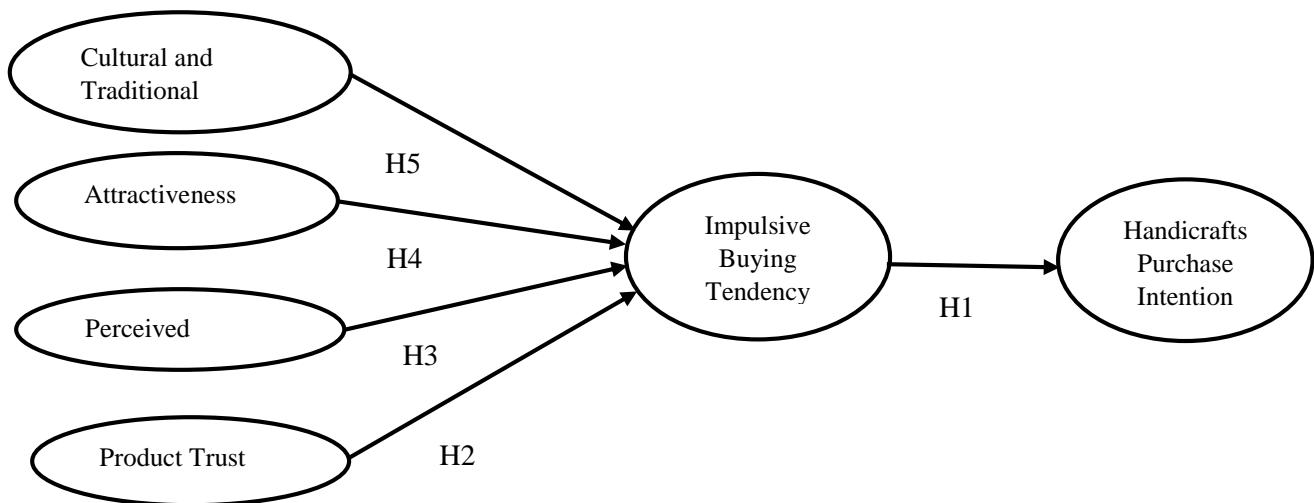
Figure 1. Research Model

Hypothesis

H1: Impulsive buying tendency is significantly related to handicrafts' purchase intention.

Impulse Buying Tendency: The psychological mechanism through which consumers' impulsive tendencies convert into actual purchase decisions is captured by the impulse buying propensity, which is positioned as a mediating variable. Verplanken and Herabadi (2001) examine individual variations in the propensity for impulse buying while highlighting the influence this has on purchasing decisions.

Handicraft Purchase Intentions: This variable represents customers' intentions to make impulsive purchases of handmade products, which are influenced by the independent and mediating variables listed above.

H2: Perceived Quality has a significant effect on impulsive buying tendency.

Perceived Quality: Consumer perceptions of the innate quality of handicrafts are reflected in this variable. It postulates that more impulsive purchasing intentions are caused by higher perceived quality. The significance of perceived quality in influencing consumer decisions and fostering brand loyalty is covered by Kotler and Keller (2016).

H3: Product trust has a significant effect on impulsive buying tendency.

Product Trust: This variable deals with building trust between customers and handcrafted goods. It suggests that consumers' impulsive impulses to buy rise when they believe in the reliability and authenticity of these products. In their study on online trust and perceived risk, Kim, Kim, and An (2013) emphasize the importance of trust in consumer decision-making.

H4: Attractiveness has a significant effect on impulsive buying tendency.

Attractiveness: This factor captures the visual value and distinctiveness of handcrafted goods. It asserts that handicrafts' individuality and visual attractiveness have a substantial impact on consumers' impulsive purchasing inclinations. Thus, Attractiveness could contribute highly to affecting the impulsive purchase intention of a consumer as though from the point of view of store visitors, or tourists of the destination place (Choudhary & Mishra, 2022). The impacts of attractiveness on service assessments are highlighted in research by Yoo, Park, and MacInnis (2020), and it is suggested that aesthetic appeal is a key factor in consumer choice.

H5: Cultural and Traditional Values has a significant effect on impulsive buying tendency.

Cultural and Traditional Values: This variable argues that the attachment to traditional values linked with handicrafts impacts customers' impulsive buying tendencies, reflecting the deeply ingrained cultural legacy. The study by Chen, Lin, and Chang (2017) investigates the link between cultural values and consumer behavior and demonstrates how these values affect consumers' intentions to make purchases. Culture and traditional values are other attributes associated with the impulsive handicraft purchase intentions of the consumer(Choudhary & Mishra, 2022).

By analyzing the beta coefficients linked to the independent variables, the study seeks to determine the importance of each dimension within the theoretical model. This analysis is part of the research's effort to pinpoint the variables that have the greatest impact on customers' impulsive handicraft buying intentions

4. Methodology

The study was conducted among consumers of handicrafts in Tamil Nadu, a region renowned for its talented craftspeople who are masters of traditional fabrics like Kanchipuram silk sarees, bronze casting, stone carving, and woodwork. The state's long history of handicrafts has been inspired by its close ties to temple culture. The study used a quantitative, descriptive research design to examine consumer attitudes and impulsive buying tendency toward handicrafts. Random sampling was used to select the respondents, and an online questionnaire was used to gather the data. Total of 432 responses were received. The profile of the respondents included a majority of female population (59% female and 41% male) and age group of 21-30 years (54%), followed by 31-40 years (26%) and 41-50 years (13%) category.

5. Data Analysis

For a comprehensive understanding of consumers' purchase intentions, a thorough model was developed by subjecting the constructs to factor analysis. Exploratory Factor Analysis (EFA) was employed as a method to streamline data by categorizing distinct variables into specific factors. Consequently, the six identified constructs along with their corresponding items underwent analysis utilizing SPSS software version 22. In this context, the KMO (Kaiser-Meyer-Olkin) value takes on a significant role as it offers insights into the adequacy of the sample size and structure.

Using SMART PLS4, Confirmatory Factor Analysis (CFA) was conducted, and the measurement model's validity was assessed through indicators of convergent and divergent validity. The evaluation of the measurement model encompassed various attributes, including the Root Mean Square Error of Approximation (RMSEA), the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), the Normed Fit Index (NFI), and the Comparative Fit Index (CFI). To facilitate hypothesis testing, the observed variables underwent analysis via structural equation modelling.

Factor	Item	Standard loading	Cronbach's Alpha	AVE	CR (rho_c)
Impulse Buying Tendency (IBT)	IBT1	0.852	0.799	0.714	0.882
	IBT2	0.799			
	IBT3	0.883			
Handicraft Purchase Intentions (HPI)	HPI1	0.724	0.377	0.614	0.760
	HPI2	0.839			
Perceived Quality (PQ)	PQ1	0.772	0.712	0.638	0.840
	PQ2	0.729			
	PQ3	0.886			
Product Trust (PT)	PT1	0.623	0.739	0.565	0.837
	PT2	0.842			
	PT3	0.801			
	PT4	0.721			
Attractiveness (ATS)	ATS1	0.926	0.857	0.874	0.933
	ATS2	0.944			
Cultural and Traditional Values (CTV)	CTV1	0.653	0.804	0.629	0.831
	CTV2	0.709			
	CTV3	0.979			

Table 1: Convergent Validity

This was achieved by constructing a structural model utilizing the imputed scores derived from the measurement model. Notably, independent variables encompassing attributes such as attractiveness, cultural and traditional values, perceive quality and product trust were positioned on the left-hand side, delineating their influence on the dependent variable, i.e., handicraft purchase intention with a mediating effect of impulsive buying tendency, which was the focal point of the study.

6. Results & Discussion

The study's findings show that a number of variables significantly influence customers' impulsive handcraft buying intentions. Consumers' impulse buying tendencies were found to be influenced by elements like attractiveness, cultural and traditional values, perceived quality, and product trust, which in turn affected their purchase intentions of handicrafts. It was discovered, however, that this was not a common factor encouraging impulsive buying of handicrafts.

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
ATS -> IBT	-0.039	-0.044	0.032	1.215	0.224	Not Supported
CTV -> IBT	-0.083	-0.075	0.065	1.266	0.206	Not Supported
IBT -> HPI	0.389	0.393	0.046	8.558	0.000	Supported
PQ -> IBT	0.041	0.036	0.038	1.080	0.280	Not Supported
PT -> IBT	0.706	0.705	0.031	23.072	0.000	Supported

Table 2: Result of Path Analysis

The mediation analysis revealed that the cultural and traditional values, perceived quality, product trust, and attractiveness all had a role in mediating the relationship between the intention to acquire handicrafts and impulsive buying Tendency. This implies that these elements have an impact on how quickly customers make impulsive purchases, which in turn has an impact on how often they buy handicrafts.
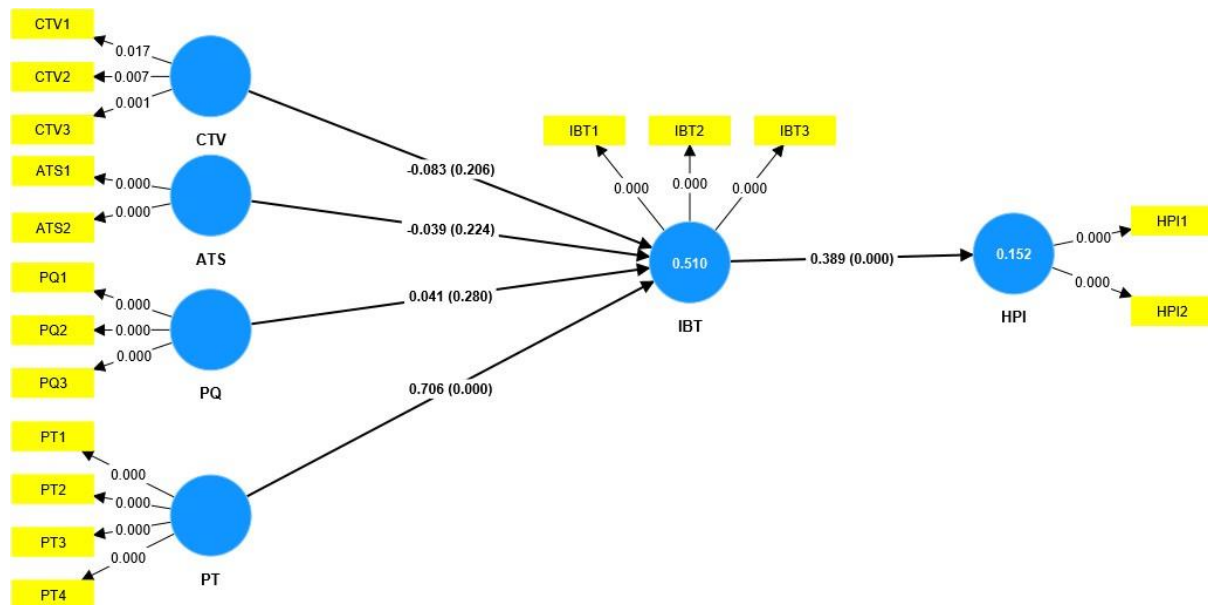
Figure 2. Validating Research Model

The relationship between Attractiveness (ATS) and Impulse Buying Tendency (IBT) is not supported. The observed correlation is not significantly different from zero at the 0.05 significance level. The relationship between Cultural and Traditional Values (CTV) and Impulse Buying Tendency (IBT) is not supported. The correlation between these constructs is not statistically significant. The relationship between Impulse Buying Tendency (IBT) and

Handicraft Purchase Intentions (HPI) is supported. The observed correlation is significantly different from zero, suggesting that there is a strong positive relationship between these constructs. The relationship between Perceived Quality (PQ) and Impulse Buying Tendency (IBT) is not supported. The observed correlation is not statistically significant.The relationship between Product Trust (PT) and Impulse Buying Tendency (IBT) is supported. The observed correlation is highly significant, indicating a very strong positive relationship between these constructs.

In summary, based on the provided data and significance levels, the results suggest that Impulse Buying Tendency (IBT) is significantly related to Handicraft Purchase Intentions (HPI) and Product Trust (PT), but not significantly related to Attractiveness (ATS), Cultural and Traditional Values (CTV), or Perceived Quality (PQ).

The findings imply that customers are impacted by a number of factors when buying handicrafts on impulse, and these aspects can assist to understand their purchasing intents.

	ATS	CTV	HPI	IBT	PQ	PT
ATS	*0.935*					
CTV	0.170	*0.793*				
HPI	0.195	0.382	*0.873*			
IBT	0.158	0.147	0.706	*0.845*		
PQ	0.145	0.445	0.543	0.437	*0.799*	
PT	0.194	0.321	0.843	0.897	0.640	*0.751*

Table 3: Discriminant Validity

Table 2 demonstrates the confirmation of discriminant validity among the constructs, wherein the diagonal values in italics represent the square root of Average Variance Extracted (AVE). Discriminant validity is established when the square root of AVE for each construct is greater than the correlation coefficients between different constructs.

7. Conclusions

The study's main finding is that the demand for domestic handicrafts is greatly increased by impulsive consumer behavior. Notably, factors such as beauty, cultural and traditional values, perceived quality, and product trust significantly affect this propensity for impulsivity in consumers. A consistent focus on these elements can significantly increase domestic demand, acting as a crucial protection for regional crafts and the jobs they support. In order to revive the handicraft business, the study suggests using consumers' impulsive purchase behaviors. The study's original emphasis on impulsive tendencies as the defining quality of handmade objects makes it stand out as a unique contribution. By using smart market planning and methods, it is possible to effectively harness the impulsive fascination that handcrafted products arouse, enhancing customer purchasing behavior. The potential for higher sales through improved availability and thoughtful display of handcrafted goods is highlighted by this. As extensions of this research, additional directions for investigation, like packaging and product presentation tactics, merit consideration.

Latent factors that might have an impact on consumer decisions and behaviors, meanwhile, have not yet been investigated. Future studies are thus urged to shed light on the impact of these understudied factors on consumer purchasing decisions. Although the sample size for the study was rather small and the results cannot be generalized to the full population, the link between behavioral intentions and actual consumer behavior has long been known. Further study should investigate the intricate interactions between impulse buying inclinations and handicraft

purchase behaviors in order to gain a deeper knowledge and provide guidance for the developing discipline of market research.

8. Managerial Implications

Understanding the factors influencing the purchasing of handicrafts is essential for successful market management and strategic development. Businesses can tailor their marketing strategies to increase consumer demand by evaluating consumer preferences, impulsive buying patterns, and personal preferences. Significantly impacting customer behaviors and intents are vital aspects like attractiveness, cultural values, perceived quality, product trust, and the mediating function of impulse buying inclination. This realization enables handicraft companies to strategically position their products, engage local markets, and benefit from the support of regional women business owners. Furthermore, acknowledging the moderating function of impulsive tendencies makes it easier to develop techniques that support quick purchases.

Overall, this understanding enables companies to skilfully adapt to customer preferences, resulting in increased demand and stimulating market expansion within the handicraft industry. This study has value in both the academic and business worlds. Its examination of the factors influencing impulsive consumer behaviour in the context of Indian handicrafts advances our knowledge of consumer psychology in this particular market environment. At the same time, it offers governments, companies, and entrepreneurs' useful information that they can use to adapt marketing plans and product lines so that they seamlessly match customer preferences, so promoting long-term demand and industry sustainability. As consumers work to preserve and celebrate India's cultural legacy, this research study, titled "A Study of Factors Influencing Impulsive Buying Behavior for Indian Handicrafts: Understanding Consumer Purchase Intentions," sets out to understand the complex interplay of cultural values, aesthetic allure, perceived quality, and product trust.

Keywords: Impulse Buying Theory, Handicrafts, Handicrafts Purchase Intention, Impulsive buying behaviour, Structural Equation Modelling, Cultural and traditional Value, Perceived Quality, Product Trust.

Paper type: Research Paper

Declarations

Conflict of Interest: The authors have no competing interests and there is no conflict of interest to declare that are relevant to the content of this article. The authors have no financial or proprietary interests in any material discussed in this article.

Ethics Approval: Not applicable.

Consent to Participate: Consent and permission of the participants taken.

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Exploring the Nexus of Entrepreneurial Self-Efficacy: A Comprehensive Review and Future Directions

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Abstract

This comprehensive literature review explores the critical concept of Entrepreneurial Self-Efficacy (ESE) within the context of entrepreneurship research. It delves into the theoretical underpinnings of ESE, drawing on social cognitive theory and various disciplinary perspectives, shedding light on how individuals' beliefs in their entrepreneurial abilities are shaped. The review examines the variables and results of Entrepreneurial Self-Efficacy, emphasizing the role of factors such as Professional background, academic qualifications, and influential figures, and its impact on entrepreneurial intentions and business performance. Methodologically, the literature predominantly employs quantitative approaches, though it highlights the need for qualitative research and standardized measurement scales. The review concludes by presenting key research directions, including factors influencing short and long-term ESE changes and alternative theoretical frameworks for its examination, providing a roadmap for future research in this crucial entrepreneurial domain.

Key Words: Entrepreneurs, Self-efficacy, entrepreneurial ability, system literature review, cognitive theory, Entrepreneurial self-efficacy.

Introduction

Understanding how individuals think and act with an entrepreneurial mind-set has become a pivotal concern for researchers, educators, and policymakers alike. This pertains to supporting entrepreneurial endeavours undertaken either independently or within organizational settings. In the realm of business research, entrepreneurship is characterized as a sequential process involving the identification or collaborative development, assessment, and utilization of opportunities to produce products and services. Particularly in today's job landscape marked by instability, the role of becoming an autonomous business founder or entrepreneur holds significance. It is widely accepted that entrepreneurial self-efficacy (ESE), denoting an individual's confidence in their ability to undertake tasks and responsibilities related to entrepreneurial endeavors (Chen, Greene, & Crick, 1998), significantly influences the likelihood of individuals choosing entrepreneurial careers and participating in entrepreneurial activities

The current research has introduced several valuable additions to the fields of entrepreneurship and vocational behavior, along with offering insights that hold significance for policymakers and educators. It is noteworthy that, despite its relevance to both entrepreneurship and career progression, a comprehensive analysis of Entrepreneurial Self-Efficacy (ESE) has been lacking in the form of a systematic literature review. This systematic review endeavors to bring clarity to the intricate network of variables associated with the construct of Entrepreneurial Self-Efficacy (ESE). By meticulously examining the existing body of literature, the authors aim to elucidate the various ways ESE has been conceptualized and operationalized in prior research. Additionally, this review seeks to discern the fundamental theoretical frameworks that researchers have utilized to elucidate the origins of ESE beliefs and their subsequent impact on the attitudes and behaviors of individuals.

Methodology

Adhering to established methodological guidelines the authors adopted a rigorous approach by employing the prominent platform Scopus databases (see Fig 1). The objective was to identify scholarly articles encompassing the term "entrepreneurial self-efficacy" within the title, keywords, or abstract. The specified publication timeframe spanned from the commencement of 2005 to the conclusion of 2022. Notably, it was decided to concentrate on articles published after 2005 was a deliberate choice to streamline the scope of the search. The authors carried out a collaborative evaluation of the acquired articles, systematically assessing their alignment with the predefined inclusion criteria like A* and A category journals, only articles in the English language. Instances where uncertainty arose regarding the suitability of certain articles were discussed and resolved through mutual consultation. Notably, several articles were omitted from consideration due to their focus on measuring general self-efficacy, rather than specifically targeting Entrepreneurial Self-Efficacy (ESE) also some articles were included after cross-referencing.

It's important to underscore that the review process excluded book chapters, unpublished manuscripts, and dissertations. This decision was grounded in the rationale that, lacking the scrutiny of peer review, the quality of research in these formats couldn't be reliably verified. Such a criterion aimed at maintaining a rigorous standard in the selection of sources for our analysis.
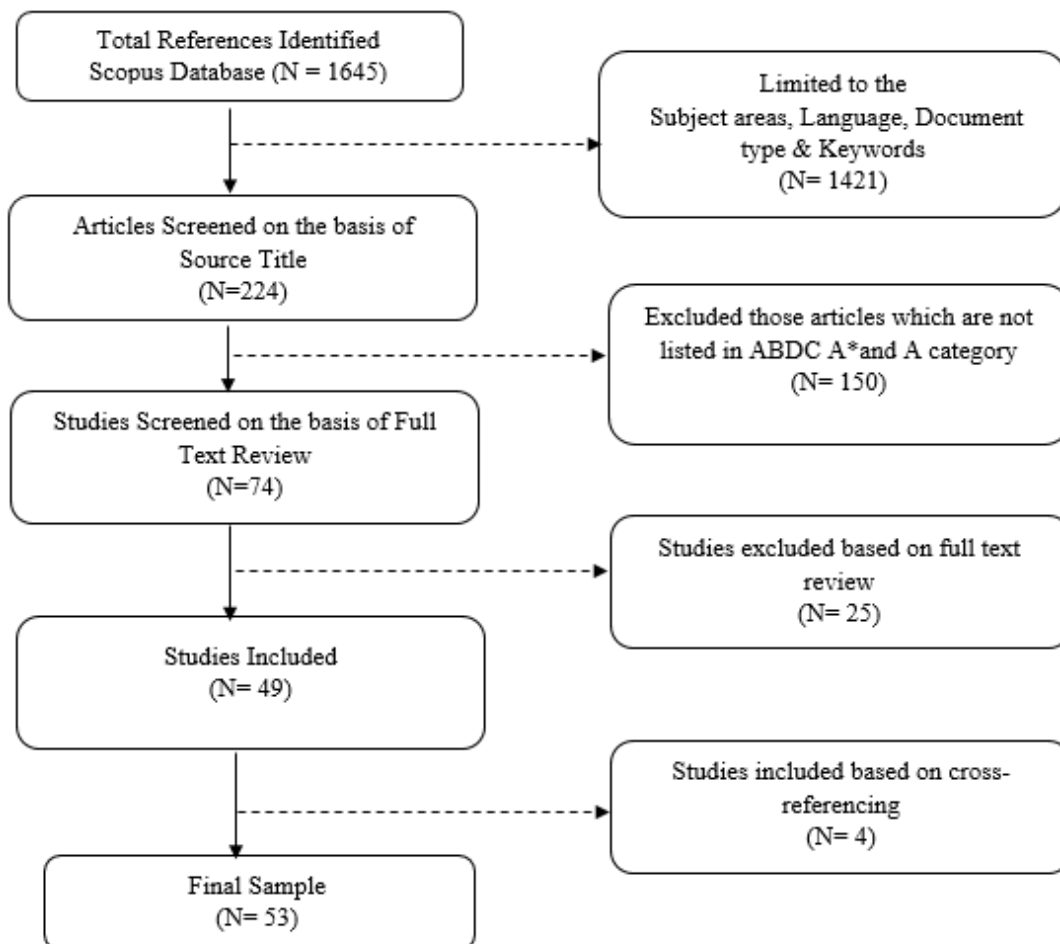

Figure 1 : Data Screening Procedure Adopted by the Authors

Literature Review

Theoretical Perspectives of Entrepreneurial Self-Efficacy (ESE)

The authors' examination revealed several theoretical viewpoints elucidating the formation and impact of Entrepreneurial Self-Efficacy (ESE) on entrepreneurial results. ESE is an outgrowth of the wider self-efficacy framework grounded in social cognitive theory, emphasizing the influence of social surroundings, observational learning, and behavioral replication in shaping self-efficacy beliefs. Aligned with the agency perspective, both self-efficacy and domain-specific constructs like ESE are firmly rooted in theories that view individuals as engaging in reciprocal interactions with both internal and external contexts.

ESE research has, up to this point, incorporated theoretical viewpoints from a wide range of disciplines, such as psychology, career development, and economics. Social cognitive theory (Bandura, 1997; Drnovek, Wincent & Cardon, 2010) is frequently used in studies on the causes of ESE to explain how mastery experiences, vicarious learning, social persuasion, and physiological states contribute to the development of ESE. These routes offer the proposed mechanisms of action via which education, training, and work experience are thought to affect ESE. The paths serve as a foundation for investigating institutional and cultural impacts on ESE growth at the company and macro levels.

Characteristics of Entrepreneurial Self-Efficacy (ESE)

There is a growing body of research that has outlined the potential drivers of ESE development. Such research not only demonstrates the malleability of ESE but also emphasizes the value of treatments that try to motivate people to embark on entrepreneurial endeavors. In the upcoming sections, we will delve into the key factors that influence entrepreneurial self-efficacy (ESE), which encompass work history, educational background and training, role models and mentors, personal attributes, company attributes, and the cultural and institutional environment. The majority of studies have applied social cognition theory (Bandura, 1997) to elucidate the developmental processes linked to ESE while investigating its precursors (Bandura, 1997). These processes encompass pathways such as affective states, mastery experiences, simulated learning, social persuasion, and self-assessment of physiological conditions."

 In the upcoming sections, the authors investigate antecedents at the micro, macro, and individual levels and compare them to the routes described by Bandura (1997). Individual level antecedents include work experiences (Lee, Hallak, & Sardeshmukh, 2016; Pfeifer, Šarlija, & Sušac, 2016; Sardeshmukh & Corbett, 2011), education & training (Kerrick, Cumberland, & Choi, 2016; Kubberød & Pettersen, 2017), presence of role model and mentors (BarNir et al., 2011; Vanevenhoven & Liguori, 2016). and individual differences(Henry, Foss, & Ahl, 2016; Sweida & Woods, 2015). According to Sardeshmukh and Corbett (2011), the duration of work experience was not positively correlated with the Entrepreneurial Self Efficacy of family business heirs, but the quality of that professional baground was. According to social cognitive theory, there is mounting proof that ESE and the availability of role models are positively correlated. Aside from providing opportunities for observing and learning from others, role models also serve as a powerful instrument for social persuasion, instilling individuals with the confidence required to embark on an entrepreneurial path (BarNir, Watson, & Hutchins, 2011).Additionally, individuals are better able to acquire techniques for dealing with obstacles and maintaining a positive physiological state by observing how role models handle stress and challenges. Studies have found a positive connection between an individual's entrepreneurial self-efficacy (ESE) and their exposure to entrepreneurial role models in various contexts, including the broader community (Farashah, 2015), family-owned businesses (Carr & Sequeira, 2007; Pfeifer et al., 2016), and close relationships with friends and family (Chen & He, 2011).

The influence of entrepreneurial self-efficacy (ESE) on a wide range of entrepreneurial results, along with the factors that can affect the relationship between ESE and these outcomes at various stages of an entrepreneurial career, are subjects that continue to be explored in an expanding body of literature. This kind of research shows connections between ESE and personal outcomes including entrepreneurial intention (Sieger & Monsen, 2015; Douglas 2013), mental states/ emotions (Uygur and Kim (2016), and different behaviors/actions (Tumasjan and Braun,2012) Additionally, this literature also investigates its impact on business-level results such as the establishment of firms, their expansion, and innovation (Hallak et al., 2012; McGee & Peterson, 2017).

The concept of entrepreneurial intention, representing an individual's intention to initiate a new business venture, has garnered the most research attention when examining the outcomes of entrepreneurial self-efficacy (ESE). A widely cited theoretical framework for understanding how ESE influences entrepreneurial aspirations is Ajzen's theory of planned behavior (1991). Research conducted by Zellweger et al. (2011) revealed that among students with family business backgrounds, those possessing high levels of ESE were more inclined to express aspirations of starting their own businesses. The next most preferred option was succession within the family business, with pursuing employment being the least favored choice.

Few researchers have looked into how ESE affects the thoughts or emotions associated with pursuing an entrepreneurial career. Engel et al. (2014) demonstrated that individuals with high entrepreneurial self-efficacy (ESE) were more inclined to view uncertainty as an opportunity and apply effective reasoning when confronted with a high-uncertainty business scenario, using effectuation and situational framing techniques. Uygur and Kim (2016) found that although ESE didn't lead to more discriminating entrepreneurial judgment, it did result in greater confidence in one's judgments.

In the context of an entrepreneurial career, various actions and behaviors have been positively linked to ESE, including planning, recognizing opportunities, exerting effort towards tasks, committing to goals, and making financial investments. This research often draws on the theory of planned behavior, which aligns with the study of entrepreneurial intentions.

When factors such as human capital and social capital are taken into account, Cassar and Friedman (2009) found that ESE predicted a greater willingness to invest personal assets, work longer hours, and increase the likelihood of establishing and launching a business.

Rather than using an overall measure of the entrepreneurial self-efficacy (ESE) of all team members, prior research examining the relationship between ESE and entrepreneurial outcomes has typically concentrated on the ESE of the founder. This approach is grounded in the belief that the characteristics of the top manager, especially in young enterprises where the founder and the organization are often closely aligned, significantly affect a firm's performance (Hambrick & Mason, 1984).

Previous studies (Hallak et al., 2012; Hallak, Assaker, & Lee, 2015; Hallak, Lindsay, & Brown, 2011; McGee & Peterson, 2017) have consistently shown a positive correlation between the ESE of the founding entrepreneur and traditional measures of entrepreneurial venture performance, particularly in terms of growth and innovation. Another performance outcome considered is venture emergence, often referred to as venture creation. Hopp and Stephan (2012) found that community cultural norms influence firm development through their impact on ESE, employing perspectives on cultural norms and person-culture fit. Specifically, cultures emphasizing performance had an effect on start-up motivation and ESE, whereas socially supportive cultures influenced motivation but not ESE. This suggests that founders with high ESE tend to align with

performance-oriented cultural norms and are more likely to succeed in establishing businesses within such environments.

Methods

Quantitative methodologies have predominated in the literature that is currently available on entrepreneurial self-efficacy. Qualitative research could offer a thorough insight into how individuals act and run their businesses in various contexts. A few studies concentrate on creating a standardized self-efficacy scale. Results vary depending on the scales used to measure self-efficacy. Researchers are likely to encounter challenges while attempting comparison studies and meta-analyses in the absence of a reliable construct.

Prospects for Subsequent Research

The earlier sections provided a summary of the current state of research on the consequences of Entrepreneurial Self-Efficacy (ESE). This review highlighted that a significant portion of scholars has primarily relied on Bandura's social cognitive theory as the fundamental framework for examining the factors at the individual level that influence ESE. These factors include elements such as work experience, educational background and training, the availability of role models and mentors, and individual traits. Additionally, a smaller body of research has started to investigate the factors at the organizational and macro-level that contribute to ESE.

Consistent with the prevailing trend in entrepreneurship research, a substantial focus has been directed toward probing the implications of ESE. This encompasses investigations into individuals' proclivity for entrepreneurship, their emotional and psychological states, manifested actions and behaviors, as well as the ultimate consequences in terms of entrepreneurial performance and the establishment of ventures at the organizational level. This emphasis on entrepreneurial performance and venture establishment holds significance due to their intricate connection with economic expansion and general well-being.

Analogous to examining of Entrepreneurial Self-Efficacy's antecedents, the studies of its outcomes has predominantly drawn from Bandura's social cognitive theory, with occasional incorporation of the theory of planned behavior. However, it is worth highlighting that the utilization of alternative theoretical perspectives to explicate the mechanisms through which ESE imparts its effects has been relatively limited.

The authors provide a section specifically devoted to future research directions to advance work in this field.

R1: What are the elements that impact both immediate and enduring shifts in entrepreneurial self-confidence?

R2: What are the early influences that contribute to entrepreneurial self-efficacy throughout an individual's lifetime as an entrepreneur?

R3: Different theoretical methods for examining entrepreneurial self-efficacy.

R4: How can we better evaluate entrepreneurial self-efficacy?

Conclusion

The current investigation systematically reviewed existing research about entrepreneurial self-efficacy (ESE). This encompassed an analysis of not only the measurement approaches employed in previous studies but also outcomes associated with ESE. Through this literature review, notable gaps within the existing knowledge landscape were discerned.

Consequently, an outline for prospective research endeavors was presented, shedding light on potential avenues for both empirical exploration and theoretical evolution within this field.

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Swiss Beauty: Will it sustain growth momentum in India?

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Abstract

This case is about Swiss Beauty Cosmetics Private Ltd, a personal care and cosmetics product company, that recently, started its operations in India. The company founded in 2009, is now facing severe competition from well-established international FMCG companies like Maybelline, Revlon and home grown brands like lakme, Sugar Cosmetics, Mamaearth, Mars Cosmetics, Insight cosmetics etc. Swiss Beauty is motivated by the innovative spirit and high standards of perfection found in Switzerland. Swiss Beauty relied on the rising demand for cosmetics from urban consumers who believed they were safe to use and does not have any hazardous ingredients. By sourcing goods from many nations, Swiss Beauty has always offered its products at a lower price than its rivals.

When compared to rival companies, which sought to quickly expand their businesses across the nation and reach more customers through initiatives like the establishment of specialised retail outlets, the creation of an online presence, and the signing of partnerships with retail chains, the success of the company can also be attributed to the fact that it spent very little money on the promotion of its products.

Against this background, would it be possible for the company to withstand competition and become one of the leading players in the cosmetic industry in India. What were the challenges the company as likely to face in future? Students will be asked to suggest how Swiss Beauty can beat competition and device strategies to sustain and grow its business in future. They will also be asked to do a SWOT analysis of and PESTEL analysis of company. Students will also be asked to give recommendations for growth of Swiss Beauty in India.

Learning Outcomes

By the end of this case study, student should be able to demonstrate:

1. The growth journey of Swiss beauty company in India.
2. How new companies challenge established players with a differentiated business model.
3. How can successful companies continue their growth momentum in the face of stiff competition in the Indian market?
4. The importance of celebrity endorsers in building a brand.
5. The importance of marketing communications in building a brand.

Keywords: Beauty industry, India, Cosmetics, Competition, Sustainability

1. Introduction

It was sunny afternoon in March 2023, Mohit Goyal founder and MD of Swiss Beauty cosmetics was in board room to discuss the future of Swiss Beauty in India. The Beauty industry is rapidly growing in India. Many international and in grown brands are rapidly expanding in India. He was wondering what to do about the growing competition of Swiss Beauty in India? The competition was increasing day by day in India. He was in dilemma that how they can increase their global presence capture the Indian market in future.

Swiss Beauty, one of the top companies in the nation, is dedicated to offering high-end and aspirational cosmetic items to Indian consumers. The company wants its clients to feel their best selves. The business carefully chooses ingredients for its products to ensure that they are free of toxins. In 2009, Mr. Amit and Mr. Mohit Goyal founded Swiss Beauty, which quickly became India's leading cosmetics and beauty brand. The goal of the business is to raise Indian beauty to Swiss levels. Swiss Beauty provides products that are perfect for a range of Indian skin tones, providing an unrivalled experience. Swiss Beauty draws its inspiration from the country's unmatched ingenuity and high standards of perfection.

The brand is an online retailer of high quality & toxin free products with focus on innovation, safety & individualism. Since most consumers demand a physical experience to see, touch & feel, the company is also working on expansion strategies to strengthen their offline presence and is currently present in 400 cities in India. The brand stands for celebrating each skin tone as unique & refreshing. Online presence apart, Swiss Beauty is present in 7,000 outlets across 200 cities in India, and this number is set to cross 10,000 this year.

The offline presence of Swiss Beauty currently spans 400 cities. Along with having a significant retail presence, the brand has experienced tremendous success online, with its goods being sold on all of the main e-commerce sites, including Nykaa, Amazon, Flipkart, Myntra, Purple, and others. One of the top five brands on e-commerce sites, Swiss Beauty, also launched its website in 2021 and has additional ambitions to expand into international markets in the future.

2. Beauty Industry in India

The beauty industry in India is a rapidly growing sector that includes a wide range of products and services related to personal care, skincare, haircare, makeup, and fragrances. The industry is driven by a growing consumer base that is increasingly interested in beauty and wellness products, as well as the rising disposable income of the middle class. The Indian beauty industry is expected to grow at a compound annual growth rate (CAGR) of around 7% over the next few years, driven by factors such as increasing consumer awareness, the growth of e-commerce, and the rise of organic and natural beauty products.

RedSeer predicts that India's personal care and cosmetics market will increase by 12 percent annually to $28 billion by 2025 from an anticipated $16 billion in 2020.Overall, the beauty industry in India presents a significant growth opportunity for both local and international companies, as the demand for personal care and beauty products continues to rise among Indian consumers.

The beauty & personal care market in India stood at Rs 1.12 trillion as of 2020 and is projected to reach 1.98 trillion by 2025, while nearly 23% of this market is dominated by Soaps, followed by Skin Care (18%) & Hair Oil (12%). Other categories are also gaining acceptance by the consumers, with rapid shift in lifestyle habits & exposure to cultures & notions of beauty from all over the world

IN APAC, the share of global cosmetics market is increasing at a fast pace growing from 36.2% in 2015 to 43% as of 2020.As evident from the below graph, India is one of the major potential markets for this industry. The total revenue for the year 2021 was a whopping US $ 22,338 million.

Exhibit: 1 Distribution of Beauty and Personal Care Market across India

Distribution of beauty and personal care market across India as of May 2022, by category

Category	Share
Soaps	23%
Skin care	18%
Hair oil	12%
Oral care	10%
Color cosmetics	8%
Shampoo	7%
Fragrances	6%
Others	16%

Share of BPC market

Source
ICICI direct
© Statista 2022

Additional Information:
India; as of May 16, 2022

Source: https://www.statista.com/outlook/cmo/beauty-personal-care/india
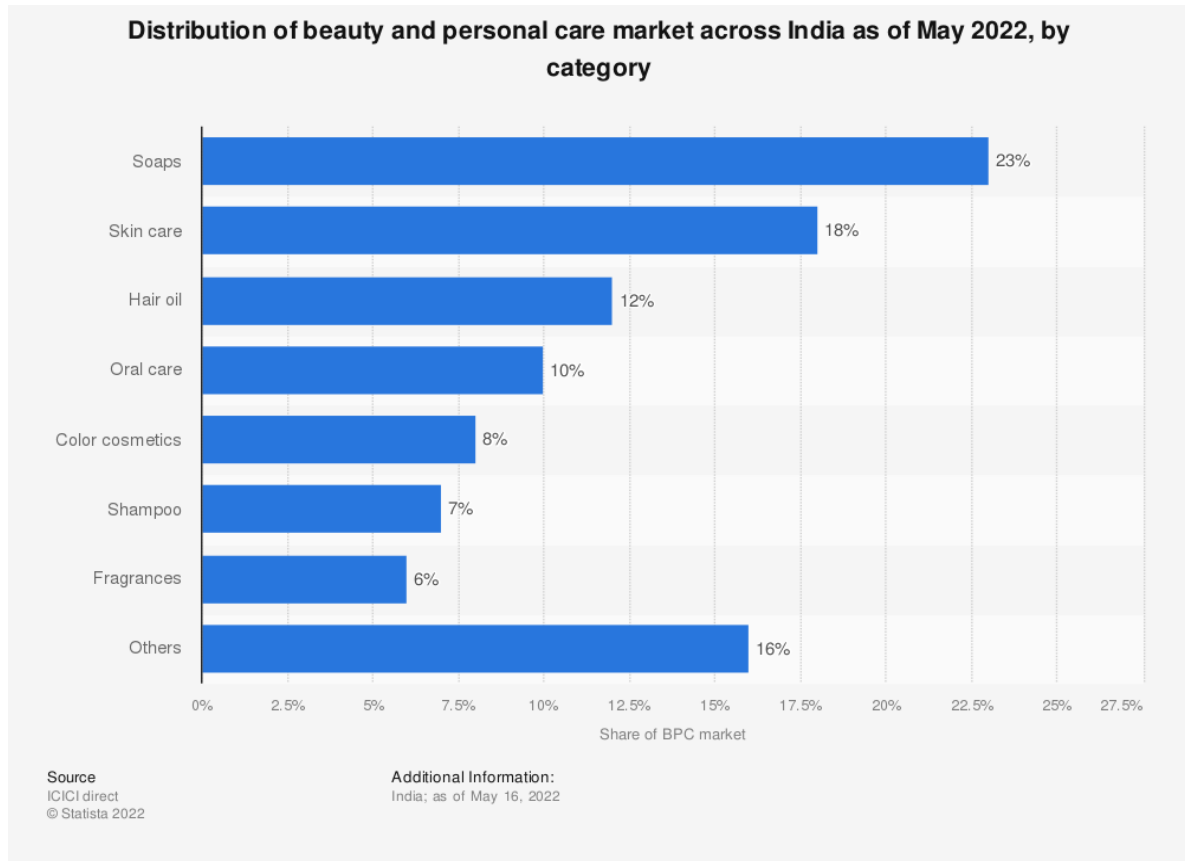
Exhibit 2: Market Size of BPC in 20 Countries, 2022

Revenue of the beauty & personal care market worldwide by country in 2022 (in million U.S. dollars)

Country	Revenue
United States	87,126.45
China	55,307.19
Japan	38,542.53
India	25,725.39
Brazil	20,818.21
Germany	17,348.33
France	15,063.94
United Kingdom	14,776.2
South Korea	12,103.4
Russia	11,487.56
Italy	10,830.98
Bangladesh	9,103.73
Spain	8,057.83
Mexico	7,927.5
Canada	7,779.47
Iran	7,621.51
Indonesia	7,228.24
Australia	6,214.18
Turkey	5,908.52
Egypt	5,423.85

Revenue in billion U.S. dollars

Sources
Statista Consumer Market Insights; Statista
© Statista 2023

Additional Information:
Worldwide; Statista Consumer Market Insights; Jan 1st to Dec 31st 2022

Source: **https://www.statista.com/forecasts/758635/revenue-of-the-cosmetics-and-personal-care-market-worldwide-by-country**

Market size of beauty and personal care industry across India from 2016 to 2020, with an estimate for 2025 (in billion Indian rupees)

Source:https://www.statista.com/statistics/1309259/india-beauty-and-personal-care-industry-market-size/

3. How Swiss beauty differentiated from its competitors?

1) Affordable products

Swiss Beauty realised that in India, there is more demand for reasonable price goods, so the company introduced high-quality, reasonably priced products According to a survey by Mexican-based online retailer Linio, on the beauty pricing index. The pricing range of Swiss Beauty is substantially lower than the average price of lipstick in India, where it costs Rs 926 on average. India is the second-most affordable market for beauty and treatment products after Vietnam. Furthermore, Swiss Beauty's eyeshadow has a beginning price of Rs 200 and a high selling price of Rs 1,500, while eyeshadow from bigger brands like HUDA Beauty, Lakme, or Maybelline starts at Rs 600.

The prices of Swiss Beauty's products are 30–40% less than those of competitors. High-quality ingredients, a sumptuous texture, cutting-edge formulae, and practical and smart packaging are all features of Swiss beauty products.

2) Outsourcing

The bulk of the products of Swiss Beauty offers are imported from countries like China, Taiwan, Germany, and even Italy. Additionally, they purchase some goods from South Korea. In India, where about 15% of the goods are produced.

3) Word of mouth Marketing

Word-of-mouth advertising has been a key strategy for Swiss Beauty. Swiss Beauty never had a significant marketing budget; instead, they invested funds in creating and improving their products.

4) Diversification and expansion of Swiss Beauty

The company increased its product line as it scaled up and grew. Primers, highlighters, contouring tools, no The Company values diversity, and our colour palettes reflect that. Each hue is chosen to complement your beauty and draw attention to your distinctive traits.n-transferable lipsticks, and other items were added after basic products.

4. Major Competitors of Swiss Beauty

Many domestic and foreign firms are fighting for market share in India's competitive cosmetics sector. Over the past ten years, the industry has experienced tremendous expansion, driven by factors such as rising disposable incomes, urbanisation, shifting consumer preferences, and rising awareness of beauty and personal care. In addition to these well-established competitors, the Indian cosmetics market is flooded with several other domestic and foreign brands, from high-end products to more affordable alternatives.

Swiss beauty is facing intense competition not only from International cosmetics brands like Maybelline Newyork, Loreal Paris, Revlon, Colourbar but also from premium home-grown Indian brands like Lakme, Forest essentials, Lotus Herbal, Biotique, Soultree, Kama Ayurveda and recently launched cosmetic companies like Sugar cosmetics, MyGlam, Mamaearth, Kay beauty, Mars Cosmetics, Insight cosmetics etc.

The beauty industry in India is highly competitive, with new brands entering the market with innovative and sustainable products, chemical free products.

5. Can It Sustain the Growth Momentum?

Swiss Beauty has devised numerous strategies for future. The company plans for expansion in to Tier-II and tier III cities like Jaipur, Ganganagar. One of the major USP of Swiss beauty is affordable prices. They also intend to bring fresh items in the future, such as shower gel, and try hands on fragrances. It will involve creating fresh categories, such as tools for body care and grooming tools Swiss Beauty intends to further solidify its dominance in the colour cosmetics market and meet the needs of premium and professional subcategories in the upcoming years. The company didn't disclose their sales figures but sets a sales objective for INR 1000 crore by 2025 and double the figure by 2027.

Recently, the company has launched a new campaign with actor Taapsee Pannu. The campaign is titled 'For all that you are. For all that you can be", With Pannu's influence and the brand's commitment to high-performing makeup, they aim to redefine standards and help people make better makeup choices.

Saahil Nayar, CEO of Swiss Beauty said "With a strong presence in the market, exceptional growth, and a solid position among the top 5 players, Swiss Beauty is well-positioned to lead the way in the years to come". Now the moot question is, will the company be able to sustain its growth momentum and fulfil its dream of becoming a number one cosmetic company in India?

Discussion questions

1. Do a SWOT analysis of Swiss Beauty in India.

2. Do a PESTEL analysis of Swiss Beauty in India

3. Why demand of cosmetics is increasing in India?

4. Why do incumbents have long staying power in this industry? How do new entrants like Swiss Beauty overcome entry barriers?

5. Give few recommendations for growth of Swiss Beauty in India.

Further Reading

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The effect of entrepreneurial education and attitude on the entrepreneurial intention of university students in India: The mediating role of an entrepreneurial mindset

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Introduction

In the last several decades, the study of entrepreneurial endeavors has advanced significantly, in terms of realizing its potential as a unique area of study (Boldureanu et al., 2020) Entrepreneurship educators must focus on how it can be taught, not if it can be taught (Matlay, 2008). Because of this realization, more than 1,600 colleges now offer entrepreneurship courses (Katz, 2003). Instead of concentrating on a single functional area of expertise, like finance, entrepreneurial education (EE) covers the entire spectrum of business management (Rae, 2003), as well as the processes of opportunity identification and business entry (McMullen & Shepherd, 2006), which are particular to the field of entrepreneurship.

The aggregate number of entrepreneurs around the world has been difficult to increase. The Indian government has addressed this issue by raising the quality of entrepreneurial education at all levels. In accordance with past studies (Boldureanu et al., 2020), participating in EE and business program improves Students' willingness to launch their own firm. Students can advance based on creativity and potential job paths with the help of EE. It will suggest that students have an alternate job choice from small-business owners to employees of a well-known corporations. According to Solesvik et al. (2013), the purpose of beginning a business is associated with attitude and entrepreneurship education. The mindset of an entrepreneur, which is conducive to all actions, can cause cognitive dissonance and improve the connection between intentions and actions (Mathisen & Arnulf, 2013). Students must also have an entrepreneurial attitude to handle changes and develop creative thinking in response to changing economic conditions. There are various studies demonstrate that students in India typically have little interest in starting their businesses. They generally are less interested in creating a new firm or becoming an entrepreneur after college and are more enthusiastic about working for established organizations. Due to the restricted job options and rising number of educated unemployed individuals, this symptom is highly concerning. This will become a concern, including significant social problems, financial difficulties, and even governance issues. The current study addresses the knowledge gap by examining how EE and mindset affect students' entrepreneurial inclinations.

The present research makes a variety of contributions to the literature field. The first addition is the notion of entrepreneurial aim, which is unique given that it is a current topic. The consequences of schooling and extracurricular activities (EA), which few academics have previously studied, are looked at to better understand the intention to become an entrepreneur. This highlights the vital contribution of the current study. The goal is to thoroughly examine how various personality types affect an entrepreneur's objective. To the author's knowledge, there are not numerous studies on business in the context of higher education, which brings us to our third point. Last but not least, the present study includes an entrepreneurial mindset as a mediator because it is thought that attitude influences a person's decision to adopt or disregard

entrepreneurial practices. Additionally, previous studies show that those with a robust entrepreneurial mindset are likelier to have a favorable attitude toward entrepreneurial ambitions. Therefore, employing an entrepreneurial mindset as a mediator is to determine whether or not it impacts the relationship between the suggested variables.

Literature Review

2.1 Entrepreneurial Attitude and Entrepreneurial Intention

According to Robbins and Timothy (2008), attitude is a judgment that can be positive or negative towards things, people, or events. Ajzen (2005) asserts that personal attitude is one component of an individual's intent that directly affects their behavior, but Muñoz et al. (2020) thought that personal attitude more precisely affects decision-making. According to research by Zampetakis et al. (2009), personal attitude influences the emergence of entrepreneurial goals. An association between EI and ATE is statistically significant in earlier research. Demonstrating that students would pursue entrepreneurial enterprises if given the chance and funding and that they view entrepreneurship as an alluring, desired career option (Ajzen, 2001, 2005, 2011; Ajzen and Cote, 2008; Muñoz et al., 2020; Palmer et al., 2021; Yasir et al., 2021). This study suggests the following hypothesis based on prior research:

H₁: Entrepreneurial attitude significantly impacts students' entrepreneurial intentions.

2.2 Entrepreneurial Education and Entrepreneurial Intention

EE is favorably correlated with entrepreneurial intention, according to earlier studies. According to research by Tessema (2012) and Zwan et al. (2013), entrepreneurship education impacts entrepreneurial inclinations. Additionally, by fostering awareness, competence, and skill, entrepreneurship education significantly influences college students' entrepreneurial intentions (Solomon et al., 2019). Attending entrepreneurial training courses had a significant effect on students' entrepreneurial goals, according to the research of undergraduate students majoring in engineering (Souitaris et al., 2007). Launching a firm is significantly influenced by developing entrepreneurial skills through EE (Burke et al., 2002). Additionally, the "entrepreneurship spirit's" inner strength is shaped substantially by EE. In conclusion, receiving an EE is beneficial for fostering college students' entrepreneurial inspiration, expertise, and abilities (Solomon et al., 2019; Muñoz et al., 2020), making it more straightforward for them to advance their EI and engage in entrepreneurship. In light of this, the following hypothesis is proposed:

H₂: Entrepreneurship education significantly impacts students' entrepreneurial intentions.

2.3 Mediating impact of Entrepreneurial Mindset between Entrepreneurial Education and Entrepreneurial Intentions

Through EE, entrepreneurial inclinations can be encouraged from a young age. The teacher is crucial to this process because they are the leading educators (Muñoz et al., 2020). Due to the skills and knowledge they gain from participating in entrepreneurship education, students' positive entrepreneurial mindset towards entrepreneurship has increased. Their positive outlook has developed their business intentions (Roeslie & Arianto, 2022). Solomon et al. (2019) established a substantial link between EE and a shift in entrepreneurial mindset. Similarly, Hasmidyani et al. (2020) demonstrated how EM and education influenced entrepreneurial goals.

Based on those findings, the following hypothesis was developed to explore how EE affects EA through an EM:

H₃: Entrepreneurship education positively affects entrepreneurial intention through Entrepreneurial Mindset.

2.4 Mediating impact of Entrepreneurial Mindset between Entrepreneurial Attitude and Entrepreneurial Intention

Aldrich (2012) study EI is the idea that business owners wish to launch a company. To put it another way, entrepreneurs primarily focus on business-centric results related to entrepreneurship (Kong et al., 2020). What motivates people to start their businesses? A psychological point of view is involved in this matter. Other investigators assert that mindset and attitude are a broader vision utilized to generate new suggestions and analyze uncertainties and possibilities associated with having novel company endeavors rely on the boundary viewpoint of one's vision rather than in a particular manner or qualities (Cui and Bell, 2022). According to earlier studies (Aldrich, 2012; Roeslie & Arianto, 2022; Walter and Block, 2016;), the relationship between EA and EI through a desire to be an entrepreneur has a positive effect. This analysis, therefore, proposes the following hypothesis:

H₄: Entrepreneurship Attitude positively affects entrepreneurial intention through Entrepreneurial Mindset.

Conceptual Model
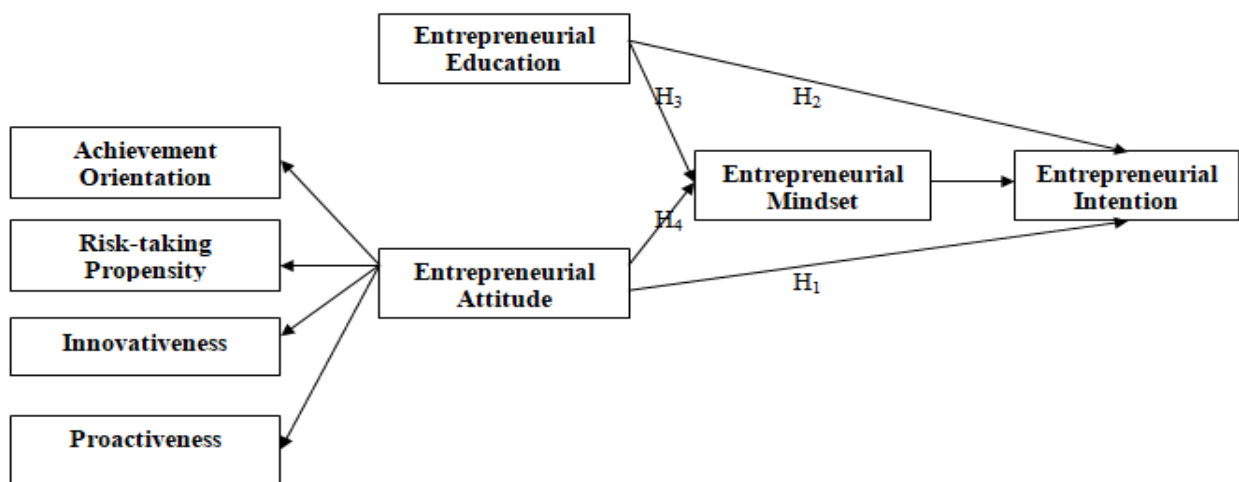
Figure 1: Proposed Conceptual Model

Methodology

Sampling and procedure of data collection

A quantitative approach was employed to accomplish the research objectives. Participants from Rajasthan, located in northeastern India, make up the sample. The research included a convenience sampling technique. 290 graduate and postgraduate students from Rajasthan, India, are the respondents in our study. The institutions grant academic degrees in different subject

areas (business, engineering, life sciences, social sciences, and humanities). With a self-administered in-class survey questionnaire, the data were gathered in 2022. SEM was used in the AMOS 23 program to evaluate the data from the survey replies.

Data Analysis

A series of confirmatory factor analyses assessed convergent and discriminant validity (Hair et al., 2019). Internal consistency was demonstrated by composite reliability scores above 0.80, exceeding the necessary threshold of 0.70 (Hair et al., 2019). Since every single item had loadings over the cutoff value, every single one of them was kept. To determine convergent validity, each component's AVE was analyzed using a threshold value 0.50. (Hair et al., 2019).

Discriminant validity was analyzed using the Fornell-Larcker criterion. A further indication of the discriminant character of the measures was the fact that all of the AVEs values in diagonals were higher than the corresponding row and column values (Fornell and Larcker, 1981).

Structural Model

Maximal likelihood estimation and structural equation modeling (SEM) were used to assess the research propositions (H_1 to H_4). The study also looked at the statistical significance of the path estimates to test the suggested hypotheses. According to the direct path estimations, EDU has a statistically significant EI (EDU $\rightarrow$ EI: $\beta = -0.317$, $P < 0.05$). However, EA has a positive impact on EI (EA $\rightarrow$ EI: $\beta = -0.447$, $P < 0.05$). So, the present study supported H_1 and H_2

Mediation Analysis

Then, using user-defined estimand in AMOS 23, mediation analysis was carried out. The indirect effect finding shows that EM partially mediates the effect of EDU on EI (EDU ----> EM ---> Entrepreneurial intention: (-0.317, 95% Boot LLCI = -0.341, Boot ULCI = -0.081). Thus, we accept H_3.

However, the relationship between EA and EI is not mediated by EM. (EA ----> EM ----> Entrepreneurial intention: (0.002, 95% Boot LLCI = -0.041, Boot ULCI = 0.059). Hence, H_4 was not supported.
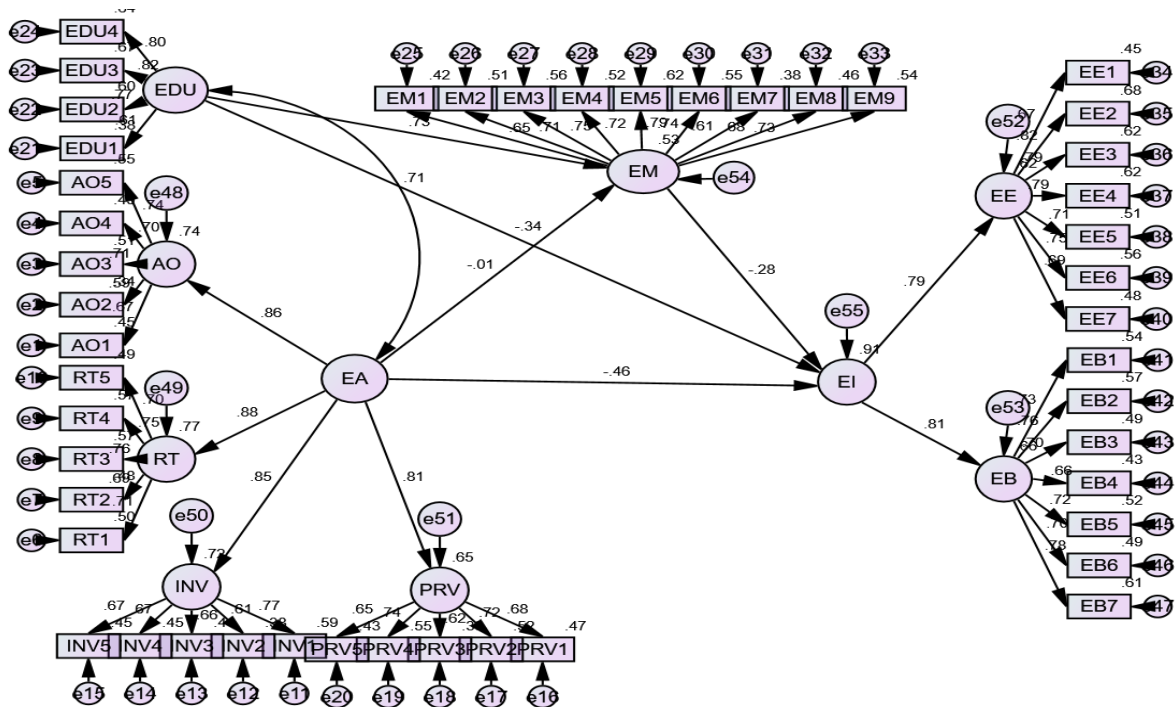
Figure 2: Structural Equation Model

Discussion and Implication

First, this study's findings indicate that entrepreneurial education (EE) promotes entrepreneurial intention (EI) in a good way (Burke et al., 2002; Muñoz et al., 2020; Solomon et al., 2019). The findings indicate that since students see entrepreneurship as a desired and favorable career path, they would engage in entrepreneurial activities. Second, our research showed a strong correlation between EA and EI. Our results support the notion that EA is the best predictor of EI (Walter & Block, 2016), which aligns with earlier studies. The significance of entrepreneurial attitude in influencing students' entrepreneurial ambitions through modifying their thinking towards entrepreneurship is highlighted by this finding. Third, another intriguing study finding is that the EM somewhat mediates the association between entrepreneurial education and EI. This result agrees with research done by (Aldrich, 2012; Walter and Block, 2016). It promotes the idea that students should take a module on entrepreneurship as part of a three-year degree program. Likewise, students with a positive entrepreneurial attitude were much more influenced by entrepreneurial education than those without a positive entrepreneurial mindset in their desire to become entrepreneurs. Forth, In contrast to earlier research (Cui and Bell, 2022; Hisrich and Ramadani, 2017; Walter and Block, 2016), this study shows that entrepreneurship mentality (EM) has no impact on the formation of an entrepreneurial attitude. As a result, students are more inclined to support entrepreneurial endeavors when they believe more strongly in the success of entrepreneurship. This suggests that developing a mindset for entrepreneurship was unnecessary.

Theoretical Contribution

According to the social cognitive theory, EE and attitude impact students' entrepreneurial aim and mindset. The following variable is influenced by and mediated by a personal cognitive characteristic, entrepreneurial mentality. In conclusion, an entrepreneurial mindset and education result in an emotional and mental shift that eventually affects student goals. This result is consistent with Bandura's social cognitive theory from 2001, which claimed that education frees a person's mental processes from the influence of their environment and their behavior, which can affect their mindset.

Managerial Contribution

The EA is one of them, and it influences entrepreneurial intention. This shows that an entrepreneurially encouraging campus environment fosters and shapes students' entrepreneurial mindsets. Additionally, the institution supports the creation of new business initiatives among college students by sponsoring a number of student entrepreneur product competitions. This study has several real-world applications for students, teachers, and academic institutions. The results of this study showed how crucial EE and attitude are in preparing students for entrepreneurship. Therefore, education about entrepreneurs should be valued equally with other subjects in the eyes of students. For lecturers, the learning process in the classroom should expand on the cognitive side and encourage students to strengthen their goals to become entrepreneurs. Successful businesspeople should share their business experiences in the entrepreneurial learning model classes.

Limitation and Future Research Direction

This study offers certain restrictions that would be considered for the following research possibilities. First, data from a small sample size of graduate and postgraduate students from Rajasthan, India, were collected. Only university students in the business department were the target demographic. Future studies should broaden the sample size to generalize the findings and consider more Indian states or other students from the nation. The absence of a cross-sectional design, which allows authors to understand the connections between variables and consider moderating variables, is the study's secondary flaw.

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India's Contribution to the World of Globalisation, The Indigenous Knowledge & Education System

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Introduction

India, the only surviving oldest civilisation in the world, has been connected to the world by several means of trade and a knowledge pool. Despite several attempts to destroy the wealth of the nation, despite several attempts to destruct the roots of the system, the country has been standing tall in the world. The contribution of this polity to the entire world is enormous and immeasurable. Several kingdoms were sustained and many vanished but the wealth of the incredible knowledge was sustained. Without the presence of any modern or so-called sophisticated systems, how the knowledge base is sustained? How then treasure of the literature survived through millennia? How are the systems maintained? How civilisation is retained intact? The obvious reason is the indigenous education system, which lasted till the 18th century. But the way the world is moving, we are slowly getting disconnected from the roots. The time has come when we actually need to revisit our present efforts for preserving the knowledge wealth forever. And the only plausible way ahead could be bringing back the time-tested ingenious education system and retain our civilisation forever.

Globalisation

Globalization[1] is all about the various connections and the linking of the economic requirements, political suitability, and social relationships among the different polities in the world. Trading among different polities by following the respective laws is considered under the definition of globalisation. In today's globalised world, the basic ingredients[2] are Trades, Laws or Governance, Uniform Language and Social Connections. Ethics and Culture are the implicit constituents. Further, sustainability is another need of the hour.

Considering each of these ingredients carefully, we can find the basic necessities for the trade are strong Military Power (a Strong Navy for Sea Trades), a Strong Economy and Good Governance.

India

Trade and Economy

Going back to Indian history from the period of the 3rd century BC to as early as the 19th century, we have several evidence of the trade with foreign countries. Arguably, India had the highest GDP[3] in the world since the inception of the common era till around the 14th century and the second highest GDP later till the 18th century. The then-strongest economy in the world had contributed a lot in terms of education and cultural information exchange. During the 3rd century BC, there were several trade routes in India. Uttarpatha[28] and Dakshinpatha[29] are some examples of the long highways that linked Central Asia and Indian subcontinents. Maurya rulers are to be credited for building thousands of miles of highways for smoother functioning of the trade with foreign countries.

Sea Trade and Cultural Influence

Similarly, the sea trade history goes back to the 10[4]th century when we can find the world's one of the strongest naval forces i.e. Chola Empire's navy, which probably had the largest naval power and the largest international trade in the world. The cultural exchange flourished in various countries like Thailand[5], Myanmar[6], Indonesia[7], Cambodia[8] and Malaysia[9]. Interestingly, the cultural exchange can be seen in the alphabetical letters in these countries' national language scripts till date. The alphabets of these languages are borrowed from Sanskrit or other Indian Languages. The artifacts and the cultural heritage are present to date in these countries. E.g. Angkor Wat i.e. largest temple complex in the world is in Cambodia; Ramayan is still played in Thailand[23] with the name Ramakien; Hinduism is practiced in Bali[10]. Interestingly, the Latin language is called the Indo-European language due to its origin in Sanskrit[11].

Monier Williams, a Sanskrit Professor at Oxford University, referred to Indians as ancient people who had attained a high degree of civilisation when the Britishers' forefathers were barbarians. Indians had polished language[29], sophisticated literature and profound systems of philosophy, centuries before English existed even in name.

Knowledge Base

Kautilya[12] or Arya Chaanakya, the guru of Great Chandragupta Maurya who created one of the biggest empires in the world during the 3rd century BC, was the Professor in one of the world's oldest Universities i.e. Takshashila[13]. He wrote the book "Arthashastra". It is one of the oldest and most valuable books on Economics and Governance. Arthashastra does not only talk about good governance and laws but also about various aspects of political wisdom and strategies that can withstand any timeline in the world history and the centuries to go ahead. It is so enriched that it has the capability to solve major present issues around the world. The knowledge wealth includes Rigved, Ramayan, Mahabharat and many more whose origin traced backed to several centuries prior common era.

Education System[24, 25]

India had the tradition of big universities like Takshashila (presently in Pakistan), Nalanda (in Bihar), Vikramshila (in Bihar) since the 3rd century BC. The knowledge varied from Philosophy, Science, Mathematics to Management and Strategies. The indigenous education system, which comprised of Gurukool in which Guru Shishya Parampara was maintained. In addition to the local language, Sanskrit was a common language of education throughout the schools in India. Brainstorming and Debates were regular part of the education system. Girls' education was also encouraged. There was almost one school in every village irrespective of the village size. The education was extremely affordable but highly respected and a must. Undoubtedly, literacy in India, prior to Britisher's influence, was the highest in the world. In India, there was an education for the masses contrary to the Europeans where the concept of education to royals was followed. Education in the villages used to come under Panchayat, a local village government body. Despite having several religions throughout India, the village governance was the most secular and democratic.

Further, from the Indian Education and knowledge system, the Saracens carried various concepts of Mathematics, e.g. decimal system and introduced the same to the Western world due to the fact that Arabic was the medium of the higher education throughout Europe till the 11th century[30].

Scholars and Foreign Authors on India's Knowledge Wealth

According to Laplace[15], a French scholar, Indians have the ingenious method of expressing all numbers, in ten characters, an absolute and a place value; an idea fine and important, and we do not sufficiently recognize its merit. Thus, India's contribution to the world is the backbone of mathematics and in turn the most important pillar of today's state of science and technology.

Based on the study of Benoy Kumar Sarkar, a social scientist and a professor, we can say that the Indian investigations[16] in the fields of mathematics, medicine, anatomy, embryology, metallurgy, chemistry, physics, surgery and zoology helped forward the scientific developments of mankind through China (and Japan) on the east and the Saracens on the west of India and both in theoretical inquiries and industrial arts. The point to be noted here is that the Saracen's mathematics, chemistry and medicine were essentially direct borrowings from Hindu masters i.e. most of the transferred knowledge to the world was truly originated from India.

The work of al-Khwarizmi[17] in Baghdad was the compilation of Indian Discoveries and Inventions. That led to new words in English i.e. Algebra, Zero, Algorithm, Sine Function to name a few. European scholars Copernicus, Adelard of Bath and Leonardo Fibonacci read the works of al-Khwarizmi. It was an Indian mathematical tool, that helped Copernicus to propose a heliocentric solar system.

Khalil wa Dimma is a famous book in Gulf countries actually originated from Panch Tantra i.e. Five Principles, which was written by Vishnu Sharma before the start of the Common Era (CE). All these stories have ethical, social and political wisdom. This book is with a noble purpose and is extremely necessary for moral improvement as well as the enrichment of children's upbringing.

Eusebius of Caesarea[17] also said that Pythagoras studied under Brahmans and learned Geometry, arithmetic and music. Voltaire even argued that the properties of right angled triangle by Pythagoras were actually brought from Indians. H. Rawlinson also acknowledged this. Along with Pythagoras, Plotinus also had an impact from Indian learnings, which were later reflected in the next Greek or Roman generations.

According to Wilhelm Halbfass[17], a German philosopher, Europe's articulation, definition, its fundamental and symptomatic concepts of theory, science & and philosophy have a significant impact from India.

Moreover, Vedic Mathematics, a stream of Mathematics, is still studied throughout the world for sharper mathematical computational power. Unfortunately, India's lion's share in the world of knowledge is rarely known fact. Rather, it is neither much recognised nor credited.

Impact on Other Countries

Mongolia has one of the richest treasures of Sanskrit literature in translated forms. A lot of Tibetan literature on Astronomy, Rhetorics, Medicine and Grammar is inspired by Indian works. Some historians have the opinion that the cloth wrapped to the Egyptian mummy was actually imported from India and traced back to Pandyan in South[10].

Military Power / Naval Supremacy

From the Chandragupta of Maurya Empire (3rd Century BC) or Samudragupta[27] from Gupta Empire (3rd Century) or Chola Empire (10th Century) to Shivaji Maharaj's Maratha Empire (17th & 18th Century), India has the rich heritage of the greatest empires in the world. Chandragupta was the largest nation builder, Samudragupta was said to be Indian Napolean[26], Cholas had great Naval Supremacy during that Time, whereas Shivaji Maharaj was the Gemstone in Indian History.

From all of the above, we have seen that all the ingredients needed for globalisation were present in India for long. Indians had a rich history of trades, connections and social interactions with several countries around the world. India has not only retained its knowledge wealth with its ingenious education system despite several attempts to destroy it but also shared this treasure with the entire world. Also, India spread its cultural heritage to the entire world. Being the leader in the world economy for more than a millennium, India has been in the driver's seat of Globalisation.

Thus, from all of these developments throughout the world, we can conclude that India has the major share of the whole world's present development. Even today's much talked about word "sustainability" has the motto to "Save Trees" or "Green Planet" is traced back to 17th century's saint in the Indian History i.e. Jagadguru Sant Tukaram's[18] abhang (Devotional Poem) "Vrukshawalli aamha soyare, vanchare" i.e Trees are our friends/relatives and have significant importance in our life. Rather the abhang goes beyond saying that the birds and the animals are also our relatives, and we should preserve them. Thus, it gives the message of keeping the planet green.

In the present world's lifestyle, stress[21] is a major health concern and the solution to handle stress is seen through the practice of "Yog", which traces back to its origins in Ancient Indian History. Yog is still commonly practiced throughout India and some parts of the world.

Even today's new technologies i.e. Artificial Intelligence and Machine Learning (AI & ML) have the most suitable language as Sanskrit[19, 20]. The Sanskrit language has its origin traced back to India's history of more than 3,500 years[27].

Thus, the world is migrating from several languages around the planet to mostly spoken English and from mostly spoken English to the most suitable uniform language i.e. Sanskrit.

Almost everything, we consider under the umbrella of globalisation in today's world, is originated from India. After all, rightly said in Mahopnishad, "Vasudhaiv Kutumbakam" means "World is Family" was written long back probably more than 1000 years[31].

Conclusion

Globalisation is although the new word of the era, however, India has been immensely connected to the entire world, in almost every era of human history, contributing a rich knowledge system for cultivating peace and love around the world. In the upcoming future human race, World will be witnessing India's major role in resolving the entire world's most important problems not only due to its present economic status but also due to the very fact that India has been blessed with a rich knowledge treasure, which might have been used just partially by the entire world till date.

Thus, as the tradition of impacting the world through knowledge and cultural heritage, India will continue to make the world a better place to live forever.

Key discussions

India has an immense heritage of culture and knowledge pool. A diversified and glorious history to inspire the generations to come. The incredible wealth of knowledge survived for several centuries despite lacking modern or European systems of preservation of knowledge. Despite several attacks on the indigenous culture and its existence, the entire India, its knowledge's identity and the culture survived. India had been the world's richest country and indisputably the oldest globalised country. What was it, that made this possible? How was the ancient knowledge retained, despite the complete destruction of the universities? How are the philosophies

preserved despite the lack of formal physical storage? Finally, despite the lack of all modern (present) equipment and techniques how India could become the mainstream of so-called Globalisation?

The answer is simple, the Indian Education System[24,25].

The reasons are many i.e. the highest literacy percentage in India during the presence of the indigenous education system. The integral connections to the roots by the presence of the education system. The education system was responsible to make people secular and democratic irrespective of the rulers. The concept of education to the masses with affordable mechanism and mutual tuitions were part of the education system. As our knowledge wealth was in Sanskrit, Sanskrit Language was an integral part of our education. It was indigenous education that made the country wealthy and that always fascinated foreign rulers towards India.

Does that make sense?

The time has come that we must seriously think of going back in time and studying, how was the Indian Education System. Is it practical to implement it again? What are the challenges for this? How to overcome those? Finally, how effectively we can implement the lessons learnt from our history for our nation's bright future?

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Three Important Strategy Lessons from Gita

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Abstract

Strategy is an essential part of business management. We live in a complex world full of challenges for which we need solutions. Strategy and strategic consultancy come in to help in solving these challenges. Strategy has evolved over time but is still a younger field as compared to other management disciplines and faces some critical challenges. Shrimad Bhagavad Gita is an infinite ocean of knowledge and it contains some very important lessons for the discipline of strategy. In this paper we have identified three important lessons for strategic management from Shrimad Bhagavad Gita namely how to implement strategy, see the world as it is and the importance of humility. These three lessons are key insights in solving one of the key challenges faced by strategic management i.e. strategy failure. These three lessons from Shrimad Bhagavad Gita can be of great help to strategy practitioners.

Keywords: Strategy, Strategy Failure, Shrimad Bhagavad Gita, Strategy Lessons, Strategy Process, Seeing the world as it is, Humility.

1. Introduction

Strategy is a very important part of business management. We live in a complex world full of challenges for which we need solutions. Strategy and strategic consultancy come in to help in solving these challenges. The business environment in which a company operates is like the concept of entropy in physics. The degree of randomness of the environment is always increasing which makes the life of top management both interesting and challenging. How to understand and operate successfully in such a complex environment highlights the need for strategy.

Strategy has evolved over time but is still a younger field as compared to other management disciplines and more so in the Indian context. Due to a number of reasons including increasing complexity, competition, and newer technologies, there is increasing demand for strategy and strategy consultancy to solve various challenges faced by the organizations. According to Allied Market Research (2022), the global strategic consultancy market has witnessed significant growth in recent years, and its future potential remains promising. The global strategic consultancy market was valued at $38.4 billion in 2021 and is projected to reach $111.4 billion by 2031, growing at a CAGR of 11.6%. In India also, there is increasing interest in strategy consultancy as seen by the increasing presence of strategy consultancy firms due to the opportunities offered by the growing Indian market including the business sector, government and civil society.

As a young and evolving field, the discipline of strategy faces numerous challenges. The discipline needs to learn from multiple sources to face these challenges, expand its horizons, contribute more and grow. This is one of the motivations behind this paper i.e. to take some strategy lessons from Shrimad Bhagavad Gita. Using stories and lessons from Shrimad Bhagavad Gita about which many managers already know, can be useful in making strategy more relatable, understandable and in implementing it successfully.

In this paper, we identify three important lessons for strategic management from Shrimad Bhagavad Gita namely how to implement strategy, see the world as it is and the importance of humility. These three lessons are key insights in solving one of the key challenges faced by strategic management i.e. of strategy failure. Gita is an infinite ocean of knowledge and it contains some very important lessons for the discipline of strategy.

2. A Key Challenge for Strategy Field

The field of strategy faces some critical challenges. One of these pressing challenges is the huge failure rate of strategy (Finkelstein, 2005; Peng et al, 2008; Altman, 1983; Lauenstein, 1986; Miles, 1984; Raynor, 2007; Pillania, 2009a; Pillania, 2009b; Edmondson, 2011; and, Bradley et al, 2018). Nine out of ten strategies fail (Bradley et al, 2018). That is ninety percent of all strategies fail. This is a huge failure rate.

It is relatively easy to formulate a strategy but difficult to implement it successfully. Strategy implementation is full of challenges and failures (Argyris, 1989; Beer & Eisenstat, 2000; Raps, 2005; Schaap, 2006; Ivančić, 2013; Baroto et al, 2014; Mango, 2014; Rajasekar, 2014; Speculand, 2014; Cândido & Santos, 2015; Cândido & Santos, 2018; Amoo et al, 2019; Kabeyi, 2019; Tawse et al, 2019; Njagi et al, 2020; Weiser, 2020; and, Tawse & Tabesh, 2021)

3. Strategy Lessons from Shrimad Bhagavad Gita and Discussion

Shrimad Bhagavad Gita is an ocean of knowledge and it contains some very important lessons for the discipline of strategy. In this paper, we focus on three key learnings for strategy and how these can help in solving one of the main problems of strategy i.e. strategy failure.

3.1   Focus on action and not on the results

In Shrimad Bhagavad Gita, on the battlefield of Mahabharata when Arjun is not sure of fighting his own relatives, Lord Krishna gives him great knowledge which has many dimensions. One dimension is the strategic aspect and it should be used in business education and in the industry. The key challenge of strategy failure is addressed in this knowledge.

In Shrimad Bhagavad Gita: Chapter 2, Verse 47,

<div align="center">

कर्मण्येवाधिकारस्ते मा फलेषु कदाचन |
मा कर्मफलहेतुर्भूर्मा ते सङ्गोऽस्त्वकर्मणि || 47 ||
karmany-evadhikaras te ma phaleshu kadachana
ma karma-phala-hetur bhur ma te sango 'stvakarmani

</div>

Translation: You have a right to perform your prescribed duties, but you are not entitled to the fruits of your actions. Never consider yourself to be the cause of the results of your activities, nor be attached to inaction (Bhagavad Gita, 2023).

This is a great solution to the key challenge of strategic management i.e. high failure rates of strategy. Instead of focusing too much on the results of strategy, one needs to focus on the process of strategy i.e. focus on the actions required for achieving the strategy.

Support for the solution in contemporary management literature
In Four Discipline of Strategy Execution, one important lesson is Acting on Lead Measures i.e. act on what is in your hands rather than focusing on the outcome. (McChesney et al, 2012). While you can't control how often your car breaks down on the road (a lag measure) you can certainly control how often your car receives routine maintenance (a lead measure). And, the more you act

on the lead measure, the more likely you are to avoid that roadside breakdown (McChesney, Covey, & Huling, 2012, p. 45).

3.2   Have a realistic view i.e. See the world as it is

In Mahabharata on the battlefield, Arjun saw his revered Bhishma Pitamah and Guru Dronacharya and other relatives and friends on the enemy side. He was overtaken by emotions and he gave up the idea of fighting.

Arjuna said that he did not see how any good could come from killing his own relatives and friends in this battle. Instead of doing this sin, he would prefer to be killed unarmed and unresisting by the sons of Dhrtarastra. Lord Krishna told him that the soul never dies. As a person puts on new garments, giving up old ones, the soul similarly accepts new material bodies, giving up the old ones. Everyone who takes birth has to die and be reborn again. So Arjuna should not lament and discharge his righteous duties. (Source: Bhagavad Gita)

Arjuna was lamenting because he was looking only at human bodies. Lord Krishna told him to look at the reality of life. The reality of life is, that the soul never dies, only the bodies die. By seeing the reality of life, Arjun participated in the war. Finally, the Pandavas win over the Kauravs in the war.

We should see the world as it is, not as what we wish to see. First, see the reality, and then change if we want to change it. Many strategies fail because they fail to see the reality. Many top strategy thinkers and CEOs, including the famous strategic thinker and consultant Ram Charan also stress the need to look at reality and be realistic.

3.3   Importance of Humility

In Bhagvad Gita, Lord Krishna explains what is true knowledge.

अमानित्वमदम्भित्वमहिंसा क्षान्तिरार्जवम् |
आचार्योपासनं शौचं स्थैर्यमात्मविनिग्रहः || 8||
इन्द्रियार्थेषु वैराग्यमनहङ्कार एव च |
जन्ममृत्युजराव्याधिदुःखदोषानुदर्शनम् || 9||

In true knowledge, the very first component is humility (amanitvam) [Chapter 13, Verse 8]. One of the other components of true knowledge closely related to humility is the absence of egotism (anahankāraḥ). [Chapter 13, Verse 9]. (Bhagavad Gita, 2023).

In Mahabharata, before the war starts, Yudhisthira showing his trademark humility goes to Bhishma Pitamah and Guru Dronacharya to seek their blessings and permission to start the war and both of them give him blessings to win the war. Whereas Duryodhana was full of pride and ego and that led to his downfall finally.

Humility is probably the top skill required for a strategist. It is because the organization operates in an ever-changing environment and the organization needs to keep listening to the changing environment and keep adapting and updating to survive and grow. In the absence of humility, one becomes arrogant and complacent, stops listening and finally fails.

If one looks at the list of Fortune 500 companies, which are the biggest companies in the world, it keeps changing every decade. Many existing top companies are overthrown by new players. The companies which survive are those which keep listening to the environment and keep updating and adjusting.

4. Conclusion

Shrimad Bhagavad Gita is an infinite ocean of knowledge. It contains many important lessons for the field of strategic management. In this paper we have looked at three important lessons for strategic management from Gita namely how to implement strategy, see the world as it is and the importance of humility. These three lessons are key insights in solving one of the key challenges faced by strategic management i.e. of strategy failure. Focusing on the process, seeing the world as it is and staying humble can be a great help in successful strategic management.

5. Managerial Implications

Many managers in the business world are facing challenges in understanding and relating with strategy and implementing strategy successfully. As shared at the beginning of the paper that strategy has a huge failure rate.

These three lessons from the Shrimad Bhagavad Gita can be of great help to strategy practitioners in the successful implementation of strategy. These three lessons are great stories to explain strategy, relate with strategy and look at strategy implementation.

Mahabharata and Shrimad Bhagavad Gita are part of the lives of many managers i.e. they have read or heard about these and can easily relate to them. Using these lessons from the Shrimad Bhagavad Gita, managers can understand strategy better, relate better with strategy and be more successful in implementing strategy.

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Chhatrapati Shivaji Maharaj – The Epitome of Management Excellence

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Introduction

In Management Studies, quite often we come across several foreign case studies in which we learn about management principles e.g. Strategy, Planning. However, in Indian History, we can find several evidences of the excellence of education and philosophies. We can find several warriors and their great contributions to the betterment of mankind. Several management keywords are actually arrived from warfare. E.g. Lead from front, Planning, Strategy, Commitment, Risk Analysis and many more. Among all the world history we have one name, that stands long apart and distinct from anyone who not only successfully executed the management principles but also respected a high degree of core values.

Chhatrapati Shivaji Maharaj![1,2] Yes, it might sound strange to those who have not studied the biography of Shivaji Maharaj, but the very fact is that he had demonstrated an extraordinary history from ordinary men to create a "Hindavi Swarajya" that ultimately became the Maratha Empire. Shivaji Maharaj lived such a dramatic and thrilling life that probably except Shri-Krushna's life no other life journey would be filled with such miraculous life.

Life Story

Shivaji was the son of Shahaji Raje Bhosale (the then commander of other ruler) and Jijamata.

During his time i.e. in the year 1630, there was literally no ingenious Ruler present and even the land on which Shivaji was staying was under the control of a foreign ruler i.e. Adilshah of Vijapur. Maratha just existed in name before his birth with very little or no significance. Mughals were growing their territories and Rajputs were under the control of Mughals. Also, in the absence of naval force and the growing presence of all foreign rulers around, Shivaji sowed the seeds of Swarajya i.e. ingenious rule for the people.

At the age of just 16 years, he took the oath for the war of freedom and started working on the plan. His remarkable story starts with the acquisition of some forts that subsequently lead to the battle of Pratapgad. Afzalkhan, the then subhedar (responsible for tax collection) and strong commander of Adilshah had started taking steps to finish Shivaji. He was a cunning and horror man of that time. He had been carrying a strong and experienced army and moving towards Shivaji's Swarajya. However, Shivaji had a small army with almost no experience in real warfare. In such a big threat situation for Swarajya, Shivaji himself called Afzalkhan at Pratapgad for a meeting and killed Afzalkhan in the meeting.

On the other hand, King Aurangzeb, the most successful Mughal King, was also watching Shivaji. So, he tried to fix Shivaji's problems by sending Shaesta Khan his maternal uncle. Shaesta Khan had been considered as second Aurangzeb due to his excellent military capabilities. During his first encounter with Shivaji's people, Shaesta Khan was stunned to witness a strong resistance by small army at Chakan Fort. The fort's commander Firangoji Narsala with an army of around 300 men was fighting with the Shaesta Khan's army of around 20,000. The battle lasted for more than 50 days. Shaesta Khan was so impressed by Firangoji's

unusual bravery that he tried to bribe him by offering a big position with the Mughal's army but Firangoji simply refused.

Although Shaesta Khan won the battle, he soon realised that winning Swarajya was extremely difficult. So, he stayed in Pune for years without choosing the direct war with Shivaji. Sighting this, Shivaji took a dangerous decision to enter and attack Shaesta Khan's home in Pune. Despite the presence of a strong army at Shaesta Khan's place, Shivaji courageously penetrated Shaesta Khan's house with a few men probably a few hundred and made Shaesta Khan tremble. It was probably the world's first commando attack. Shaesta Khan was fortunate to survive this attack but was so frightened of Shivaji that he left Pune immediately.

Post this, when his demand for remittance was rejected, Shivaji carried out an attack[3] on Surat, the then rich city of the Mughal Empire, where he looted countless wealth.

Subsequently, after a few years, Shivaji went to meet Aurangzeb on his birthday in Agra. However, he was captured along with his 8-year-old son by Aurangzeb. The situation was such that no one could have stopped him from getting killed by the court of Aurangzeb or probably there were no signs of getting released from the most powerful king of that time. Shivaji not only escaped alone but also released all his men from Aurangzeb's jail.

Years passed and Shivaji continued to grow his kingdom and was later got coronated at Raigarh in 1674 to become Chhatrapati i.e. The King Of Swarajya. Later he carried out the Dakshin Digvijay mission i.e. winning the Deccan region. During this time, Shivaji persisted in capturing the fort of Jinji and won it.

Years after years he built strong Swarajya and finally passed away in year 1680.

Analysis

Studying carefully Shivaji's life story, we can find quite interesting facts.

At a very young age, Shivaji implemented the management's big lessons i.e. networking, personnel relationships and long-term planning.

Initially, the reason for acquiring Adilshaha's forts was to block his revenue and subsequently create the wealth for Swarajya. Importance of finance for building the Swarajya was thus visible in his early years.

The encounter with Afzalkhan was Shivaji' first important decisive battle. Afzalkhan was the person who cunningly defeated Shivaji's Father and killed Shivaji's brother. He was a high-ranking officer of Adilshaha and it was next to impossible that he would listen to Shivaji's demand to meet at the place decided by Shivaji. However, Shivaji used great negotiation skills and convinced Afzalkhan to visit alone at Pratapgad i.e. at Shivaji's place. Afzalkhan tried to kill Shivaji while they were embracing each other during the meeting. But Shivaji had anticipated the danger. He wore a safety coat and used his presence of mind to counterattack Afzal. He made the situation such that Afzalkhan was completely inattentive and unaware of Shivaji's plan which resulted in his feat. During this clash, there was zero casualty from Shivaji's side. Despite having an inexperienced army, Shivaji placed his right resources in the right place and maintained very high morale among his people who then not only won the war but also won the major portion of the land mass within a very short period.

Thus, Shivaji showed courageous behaviour, great negotiation skill, presence of mind, impeccable planning skill and extracted meticulous results from his killer instinct.

In Chakan Fort's encounter with Shivaji's men, it is clearly visible that Shivaji's men were ready to die for their assigned responsibilities. Why people were ready to do this is the obvious question. The very reason was the complete faith in Shivaji. They were sure that after them Shivaji would take care of their families. The fact was, Shivaji used to give jobs in Swarajya to the sons of all martyrs. Also, for the families without males, Shivaji used to pay half of the salary of the martyr to the affected families, especially widows for the entire life. These are similar to present-day government schemes i.e. Compassionate Appointment[13] and Family-Pension Scheme. Shivaji's great Human Resource Policies had created several faithful personalities for Swarajya. He showed his managerial excellence in creating loyal people who did not turn even for quality bribes. Tanaji Malusare, Kondaji Farzand, Bajiprabhu Deshpande, Murarbaji Deshpande and many more were the loyal ones who were created, cultivated and retained by Shivaji Maharaj.

The attack on Shaesta Khan was an extremely risky mission. Shivaji could have sent any of his men to execute the task. However, he chose himself for the deadly assignment and succeeded in sending Shaesta Khan out of his territory. Here, Shivaji had shown his skills of Leading from the front, Flawless Planning, Innovation, and Courage in uncertain times.

In his successful attack on Shaesta Khan and Surat, he showed his ability to demonstrate SWOT i.e. Strength, Weakness, Opportunity and Threat Analysis. He used management's important principle of getting minute details of the competitor, creating a favourable plan and executing it to success.

In the Agra Episode, it was next to impossible to get released from Aurangjeb's stronghold capture. But Shivaji studied the scenario very patiently and set up a robust plan. Made his people get released first and then escaped through the boxes. This was the world's most amazing miraculous escape by any leader from a life-threatening imprisonment. While escaping, Shivaji used another engineering principle of Redundancy and Diversity by keeping his son separate and choosing another path for him. Here, he demonstrated out-of-the-box thinking and Leading by Example. Noticeably, this was not his first escape from the enemy's eyes. Shivaji had earlier also escaped from Panhalgad Fort when Siddi Jauhar had created a military blockade around the fort.

Despite the limited resources, Shivaji utilised his military force extremely effectively using Gorilla warfare technique.

Management Lessons

Chhatrapati Shivaji created the naval force from zero to become the Father of the Indian Navy in the present day. His naval power was such magnificent that even the Britishers were afraid of it. Undoubtedly, Chhatrapati was also the Father of the Indian Merchant Navy. He used to do trades with Arabian countries by which he generated huge revenue. But maintained dignity in the business as he had never been involved in human trafficking, which was one of the lucrative businesses of that time.

He predicted that the foreign traders[5] had the kingdom at the backend and they must possess the desire for land. Sighting this danger of foreign traders, he instructed his men not to give any good ports to foreign traders. This is very much a great visionary thought, that Shivaji had.

His visionary thought is seen in his insistence on winning Jinji Fort. After his death, when Aurangzeb attacked Swarajya, King Rajaram, used Jinji as his shield. He could save the Swarajya by fighting from this fort for seven years. Thus, the importance of this Jinji fort in terms of strategic location in the south as well as fighting capabilities was understood well in

advance by Shivaji. Shivaji predicted the danger of the Mughal's focus with complete strength towards Swarajya and he purposely expanded his Swarajya towards the south. He knew that Jinji will be playing a crucial role in saving Swarajya.

After his coronation, Shivaji established the Ashtapradhan Mandal (group of eight ministers) for the smooth and orderly administration of the Swarajya. The currency of independent Swaraj was introduced. To respect the mother tongue and avoid foreign language interference, he created one of the first dictionaries of any Indian Language. He was the founder of the pension scheme in India. Also, he implemented various administrative systems like compassionate appointment system, family pension system, tax collection system, a fort management system and so on. In the fort management system, every fort had three supremes[4] i.e. Hawaldar (Administrative Officer), Sabnis (Finance Officer) and Sarnaubat (Army Officer). All of these three have equal powers for the fort. This system may be related with three pillars[16] of our democracy i.e. Administrative, Executive & Legislative.

To sustain the salt business in his province, he used to levy heavy octroi[19] for outer traders.

It was strictly not allowed to cut the Mango or Jackfruit trees[5] for the wood, which was desirable for building naval ships.

Shivaji rewarded his outstanding performer even in the failed mission[20]. This shows his character and trust in his people to keep them motivated.

During his lifetime, Shivaji maintained his core values and ethical principles at any cost. He or his men never touched or manhandled any women, even the women from the enemy's camp. Conversely, his contemporary enemies often abused women irrespective of their origin. He was the people's king, however; all his enemies were troublemakers.

The then Mughal Empire supremo, Aurangzeb spent more than 25 years to wipe out the Marathas, however, he could not succeed in his intentions. Rather the Mughal empire collapsed while battling against Marathas. Certainly, the Britishers took India from none other than Marathas. The present India is almost like the Maratha Empire during the 19th century.

Unlike other great leaders, he did not have any professional advisors. He was a self-made man. Though the first management school was started more than a century after his death, just like a professional manager, he created several systems in his kingdom that are still relevant.

Discipline, Negotiation, Strategic Planning, Excellent use of Limited Resources, Networking, Motivation, Converting Unfavourable Circumstances into Favourable Opportunities and Belief in the Team are some of the examples of the management skills used by Shivaji Maharaj.

He was a great administrator, a great fort and nation builder, a philanthropist, a successful and real implementer of Gorilla Warfare and a value-driven Visionary.

Historian's Point of View

According to Khafi Khan the biographer of Aurangjeb said in his book Mutakhabu-l Lubab[17], said about Shivaji, "….he entirely abstained from other disgraceful acts, and was careful to maintain the honour of the women and children of Muhammadans when they fell into his hands."

According to famous historian Surendra Sen[18], "There should be no women, female slaves, or dancing girls in the army. He who would keep them should be beheaded. In enemy territories, women and children should not be captured. Males, if found, should be captured."

According to Jonathan[12] Scott, "Sewajee was, as a soldier unequalled, skilled in the art of government and a friend to men of virtue and religion. He planned his schemes wisely and

executed them with steadiness. He consulted many on every point but acted according to that advice which after weighing in his own mind he thought best applicable to his designs. No one was ever acquainted with his determinations but by the success of their executions."

According to Sir Edward Sullivan[10], "He possessed every quality requisite for success in the disturbed age in which he lived ; cautious and wily council, he was fierce and daring in action ; he possessed an endurance that made him remarkable even amongst his hardy subjects, and an energy and decision that would in any age have raised him to distinctions. -------- He was the Hindu prince who forced the heavy Mogul cavalry to fly before the charge of the native horse of India; his strength and activity in action were the glory and admiration of his race; and long after his death, the proudest boast of Mahratta was have to seen Sivaji charge hand to hand"

According to James Douglas[21], Aurangjeb's words were, "He was a great captain and the only one who has had the magnanimity to raise a new kingdom while I have been endeavouring to destroy the ancient sovereignties of India…. My armies have been employed against him for nineteen years and nevertheless his state has always been increasing."

According to Historian Robert Orme[11], "Shivaji possessed all the qualities of a command. Every influence, however latent, was combined in his schemes. In personal activities, he exceeded all the generals of whom there is record. No general ever traversed as much ground as he, at the head of armies. ------ his genius, and the boast of the soldier was to have seen Shivaji charging, sword in hand!"

According to Lord Metcalfe[9], a British colonial administrator, during the late 18th and the early 19th Century, India had only two great Powers, the British and the Marathas and every other state acknowledged the influence of one or the other. This shows Shivaji's visionary thought that he had cultivated in his men that lasted for more than a century to build Swarajya.

Key Take Aways

Chhatrapati[4,6,7] had presented all the management lessons like Ethics, No compromise on Core Values, Leading from the front, Leading by example, Flawless Planning, Sharp Execution, Lionhearted Courage, Risk Management, Motivation, Interpersonal Relationships, Human Resource Management, Organisation and Empowerment, Training, Networking, Negotiation Skills and so on to the entire world. Within a very short life of 50 years, he set up strong values for the generations to come. Right from Afzalkhan's killing, the Commando attack on Shaesta Khan, the Attack on Surat, the Miraculous Escape from Agra's arrest to the historic event of his Coronation, he displayed a trailblazer character who built the empire for people and the betterment of the nation.

Conclusion

Thus, Chhatrapati Shivaji Maharaj was such a phenomenal ground-breaker that by only studying his life, complete Business Management lessons can be learned. Even core concepts, like SWOT[6,7] analysis to the Visionary Strategies, can be grasped from his qualities. It would not be an exaggeration, if we say that he is the Epitome of Management Excellence. Subsequently, it is necessary that we should have several business case studies on Shivaji Maharaj and should have brainstorming among the scholars to understand Principled Business Management as he holds the Caliber of International Arena. After all, famous historian, Jadunath Sarkar termed him a Constructive Genius[1] of medieval India. This Constructive Genius is a hidden gem in Indian History that displayed to us one's capability to sustain and move forward towards success in the present Globalised World. The time has come to make this hidden gem visible to the entire world and potentially utilise his management lessons for India's Future! Also, in today's world of

Globalisation, business management has a key role to play. Today's management is not about profit making but it is more focused on social impact, ethics and sustainability. Shivaji's life and leadership style teach us exactly the same.

Thus, we must create, learn and cultivate case studies on Chhatrapati Shivaji Maharaj and his applications to Management Principles in our Business Management Studies. Those are not only having significant relevance for administration but also helpful to create great values for the several generations to come.

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Globalizing Indian Festivals - The "Raksha Bandhan" and its Spiritual Significance for Sustainability

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Abstract

India is well known for its festivals and fairs and usually they convey lot of meaning and wisdom. However, as time passes these festivals are mostly confined to mere celebrations without understanding the deeper significance. One such festival is the "Raksha Bandhan" or "Rakhi" which is celebrated during the full moon of the Hindu month of Shravan. The literal meaning of "Raksha Bandhan" is "bond of protection". During this festival the sisters tie "Rakhi" around their brothers' wrists. This amulet is a symbol of the love bond between the brother and sister. The brother in turn offers gift and promises to be safe. This paper examines explores "Raksha Bandhan" festival from a broader perspective to understand its meaning or significance to address the sustainability challenge. From a spiritual perspective, the "Raksha Bandhan" Festival is a memorial of how the Supreme soul save the humanity by purifying the human souls when they are conquered by the vices. When the nature of the human souls is pure the external nature is also pure and vice versa. When the souls get purified, their actions become elevated towards human beings and nature, thus by purifying the souls, both humanity and nature also get purified. Purification is done by re-establishing the subtle bond between the soul and the supreme soul based on the Godly wisdom shared by the Supreme. This is the spiritual meaning of the "Raksha Bandhan", and it leads to the sustainability of humanity and Nature or environment.

1. Introduction

India is well known for its festivals and fairs[1] and usually they convey lot of meaning and wisdom. However, as time passes these festivals are mostly confined to mere celebrations without understanding the deeper significance. One such festival is the *"Raksha Bandhan"* or *"Rakhi"* which is celebrated during the full moon of the Hindu month of Shravan. The literal meaning of *"Raksha Bandhan"* is "bond of protection". During this festival the sisters tie "Rakhi" around their brothers' wrists. This amulet is a symbol of the love bond between the brother and sister. The brother in turn offers gift and promises to be safe. In fact, we need to look at this festival from a broader perspective to understand its meaning or significance to address the sustainability challenge.

In today's world one of the biggest challenges is the sustainability. The safety and security of the entire world is being challenged. The call of time is safety and security in sustaining the humanity or natural environment. In order to address this challenge, ambitious programs are being planned and executed such as sustainable development. Also, various voluntary organizations/NGOs are established such as like Save the Humanity[2], Save the Earth[3] / Planet

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[1] https://utsav.gov.in/

[2] https://www.savethehumanity.org.in/

[3] https://savetheearth.org/

etc. The motive behind all these activities is to ensure the safety and security of the entire world and sustain the humanity.

The root cause behind the present scenario is the human activities that has raised this concern over safety and security of the world. Until we address the root cause, we may not be able find a long lasting solution to sustainability challenge. Therefore, it is important to address the basic issue of protection (*Raksha*) and its connection with sustainability. The following are explored in this paper.

- What is the true (real) meaning of "*Raksha Bandhan*"?
- **Who** needs protection and from **whom**
- **Who** can provide true protection
- **When** such protection is possible
- **How** the protection is achieved?

Therefore, it is interesting to explore is there any connection between the Indian Festival *"Raksha Bandhan"* and the sustainability of the world including the humanity and Nature. Sustainability in a sense means protection. The human actions when filled with vices such as lust, anger, greed, attachment and ego, they cause damage to not only himself/herself but also to other human beings and the Environment. From a spiritual perspective, the *"Raksha Bandhan"* Festival is a memorial of how the Supreme soul save the humanity by purifying the human souls when they are conquered by the vices. When the nature of the human souls is pure the external nature is also pure and vice versa. When the souls get purified, their actions become elevated towards human beings and nature, thus by purifying the souls, both humanity and nature also get purified. Purification is done by re-establishing the subtle bond between the soul and the supreme soul based on the Godly wisdom shared by the Supreme. This is the spiritual meaning of the *"Raksha Bandhan"*, and it leads to the sustainability of humanity and Nature or environment.

1.1   Related Literature

This section explores academic literature on "*Raksha Bandhan*" Festival. Most the published literature emphasizes on the significance of the Festival as pure love between a brother and sister and the commitment of brothers to protect their sisters. To the best of our knowledge, the spiritual significance of *"Raksha Bandhan"* for sustainability has not be explored by the academic literature.
 Sinha-Kerkhoff (2003) argues that the ethos of *"Raksha Bandhan"* not only emphasises the promise of brothers to protect their sisters, but also requires sisters to serve and love them and that is the reason it is popular among young men irrespective of their caste, religion, or class. Singh (2016) explores the historical imprints of the festival *"Raksha Bandhan"* in Mughal period and examines how it was celebrated in both Hindu and Muslim Communities. Arulmani and Latha (2014) explain the speculation that the *"Raksha Bandhan"* culture might be derived from Ancient "Kachcha Thread culture" of *Kachcha theevu* populations. Kumar (2022) discusses the means of subjugation a woman faces in socio-cultural festivities like "*Raksha Bandhan*". Malley & Barrett (2003) explores whether ritual form be predicted from knowledge of religious beliefs and tests cognitive theory of religious ritual proposed in (Lawson & McCauley 1990; McCauley & Lawson 2002). Goyal et al. (2016) examined the impact of Indian festivals on the stock market indices of BRICS countries. Jamwal (2015) explores the importance of cultural festivals. Fenn (2021) attempts to establish the cultural impact on celebrating festivals of India. Bairwa & Patawari (2021) explore the festivals of the Marwar region of Rajasthan and how they contribute to sustainable tourism development. Jani (2023) explores the impact of residents'

perceptions, Ours and Theirs, on sustainability of different festivals. Subramaniam (2022) discusses sustainability of   festivals they are   one of the sources of super spreading of the COVID-19 virus. Biradar & Hibare (2022) highlights that there is a need to change the approach to celebrations to become eco-friendlier, healthy and peaceful. Hassanli & Williamson (2021) explores how social sustainability is facilitated by multicultural festivals.

2. The *"Raksha Bandhan"* Festival - Evolution, Legends, and Forms

The *"Raksha Bandhan"* Festival has evolved over the period of time**.**   The *"Raksha Bandhan"* emphasizes the   dharma of brother to ensure the safety and security of his sister. When *Asuras* were defeated by *Devatas* in a war, they approached their *Guru Shukracharya* and appraised him of the sufferings[4].   He conveyed that the *Devatas* were victorious because they were protected by *Raksha*[5]. The "*Raksha Bandhan*" not really about physical "*Rakhi*" and other rituals, but about exchanging feeling of pure love, promise of security and a bond of purity.

There are number of legends or incidents related to "*Raksha Bandhan*". Most of them signifies the importance of pure love that can act as a protection in all circumstances.   The following are among many of them[6].   The *Devatas* led by *Indra* fought with *Asuras* for 12 years but were losing the war[7].   When *Devatas* were prepared to fight again, *Sachi*, the wife of *Indra* tied a "Rakhi" on his wrist after extolling the glories of "Raksha Bandhan" and then Indra became victorious[8].   In another story, *Yamuna*, the sister of *Yama* was thrilled when he visited her after a long gap of 12 years and tied a "*Rakhi*" on his wrist as an expression of love. *Yama*, the God of death touched Yamuna's love and blessed her with immortality.[9] More legends about "*Raksha Bandhan*" are listed in Appendix A.

The "*Raksha Bandhan*" Festival is celebrated by different names across India[10]. It is celebrated as **Shravan Purnima** in the North eastern part of India. It is celebrated as **Nariyal Purnima** in the western coastal regions covering Gujarat, Maharashtra, Goa. As the new fishing season starts, the fishermen offer coconuts to the sea as a thanksgiving. In Gujarat, it is celebrated as **Pavitropana** and people worship **Lord Shiva** on this day believing that He will remove all sins. It is celebrated as **Jhulan Purnima (Jhulan Yatra)** in the eastern parts (West Bengal and Odisha) signifying the love between Radha and Krishna. In the southern parts of India, it is celebrated as **Avani Avittam** when the Brahmins change their holy thread called **Janeyu** and it is symbolic of atonement of all previous sins and a vow to live a life of goodness, strength, and dignity. It is celebrated as **Nag Panchami** in Karnataka by tying the "*Rakhi*" thread[11]. In the central regions including Madhya Pradesh, Chhatisgarh and Uttar Pradesh, it is celebrated as **Kajari Purnima** when the sowing season of wheat and barley begins. Prayers are offered to Goddess *Bagwati* for the wellbeing of the family and a good harvest. Jammu celebrates this festival by flying colourful kites and in Uttarakhand the *Janeyu* is changed for the new one.

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[4] Bhavishya Purana

[5] https://www.hinduismoutlook.com/raksha-bandhan-rakhi/#:~:text=According%20to%20Bhavishya%20Purana%2C%20when%20Asura%E2%80%99s%20were%20defeated,Asuras%20too%20tied%20these%20holy%20threads%20of%20Raksha.

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[7] Bhavishya Purana

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[9] https://www.educba.com/raksha-bandhan/

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The Spiritual Significance of "*Raksha Bandhan*"

"*Raksha Bandhan*" or "*Rakhi*" is celebrated during the full moon of the Hindu month of *Shravan*. The literal meaning of "*Raksha Bandhan*" is "bond or knot of protection". It is celebrated to remind the eternal bond of pure love between a brother and sister. It brings immense joy to all when "*Rakhi*" s is tied, sweets are fed, and gifts are exchanged. A "*Rakhi*" ranges from a simple thread to an elaborate diamond studded wristband. The sister ties a "*Rakhi*" around the brother's wrist by wishing a long and prosperous life and expecting him to protect her life. The brother, in turn, vows to protect the sister's dignity, honor, purity, and chastity in difficult times. As discussed earlier, "*Raksha Bandhan*" is linked to many mythological and historical stories that highlight the power of the subtle pure bond between sister and a brother.

Today the human beings go through sufferings of various kinds including disease, poverty, calamities etc. that are caused by their deeds or actions. Until one transforms the deeds or actions by making the internal nature pure, the real protection would be difficult. *"Raksha Bandhan"* is not a physical bond but a bond of "*Dharma*" or Purity. Those who remain pure in their *karma* - thoughts, words and actions are protected by their own pure or good *karma*. However, anyone can become becomes instrumental in protecting them.

The bond of thread used in "*Rakhi*" is only symbolic. It means a very subtle and powerful bond. Leading a life like lotus flower means being detached and remain pure like a lotus flower while living in dirty water. The "*Raksha Bandhan*" (bond or knot of protection) means observing the vow of purity. The virtue of purity is dear to the supreme protector God because He is always pure. The brother-sister relationship is considered to be sacred or pure. Usually "*Rakhi*" is tied by a sister to brother or a *Brahmin* to a householder with the wish "Brother, be pure because purity is dear to the protector God". It is believed that "when *Indras'*s wife tied "*Rakhi*" to him, he got the divine self-sovereignty of paradise and when *Yamuna* tied her brother *Yam* with this bondage, he bestowed this boon on humanity that on this day whoever ties "*Rakhi*" will be exempted from punishment in *Yam Lok*". Thus, one can attain the self-sovereignty or one can get exemption from punishment at the hands of *Yam*, through *"Raksha Bandhan"*. Also, it enables one to emerge the innate nature of peace, love and purity and maintain a loving subtle connection with God, the only true, effective and loyal protector.

It is the powerful memorial of the loving relationship we renew with our Supreme Protector and Guide at the present time; our beloved supreme parent frees us from the bondages of our old negativities by inspiring us to pledge a life of pure thoughts, words, and actions[12]. The act of stabilizing ourselves in Soul-Consciousness allows us to emerge our innate virtues and powers that help us to overcome all inner and outer conflicts and difficulties. Sisters have true love for their brothers and do not want to see the moral downfall of their brothers as they know that a person in bondage of vices will eventually be bonded in sorrow. Thus, they tie their brothers in the subtle bond of purity and dharma. Other traditions associated with *"Raksha Bandhan"* are the sister applying a *tilak* in the forehead of the brother, tying "*Rakhi*" on his wrist and offering sweets to him. The brother in turn vows to protect her offers a gift. The spiritual significance of this practice is shown in Figure 1.
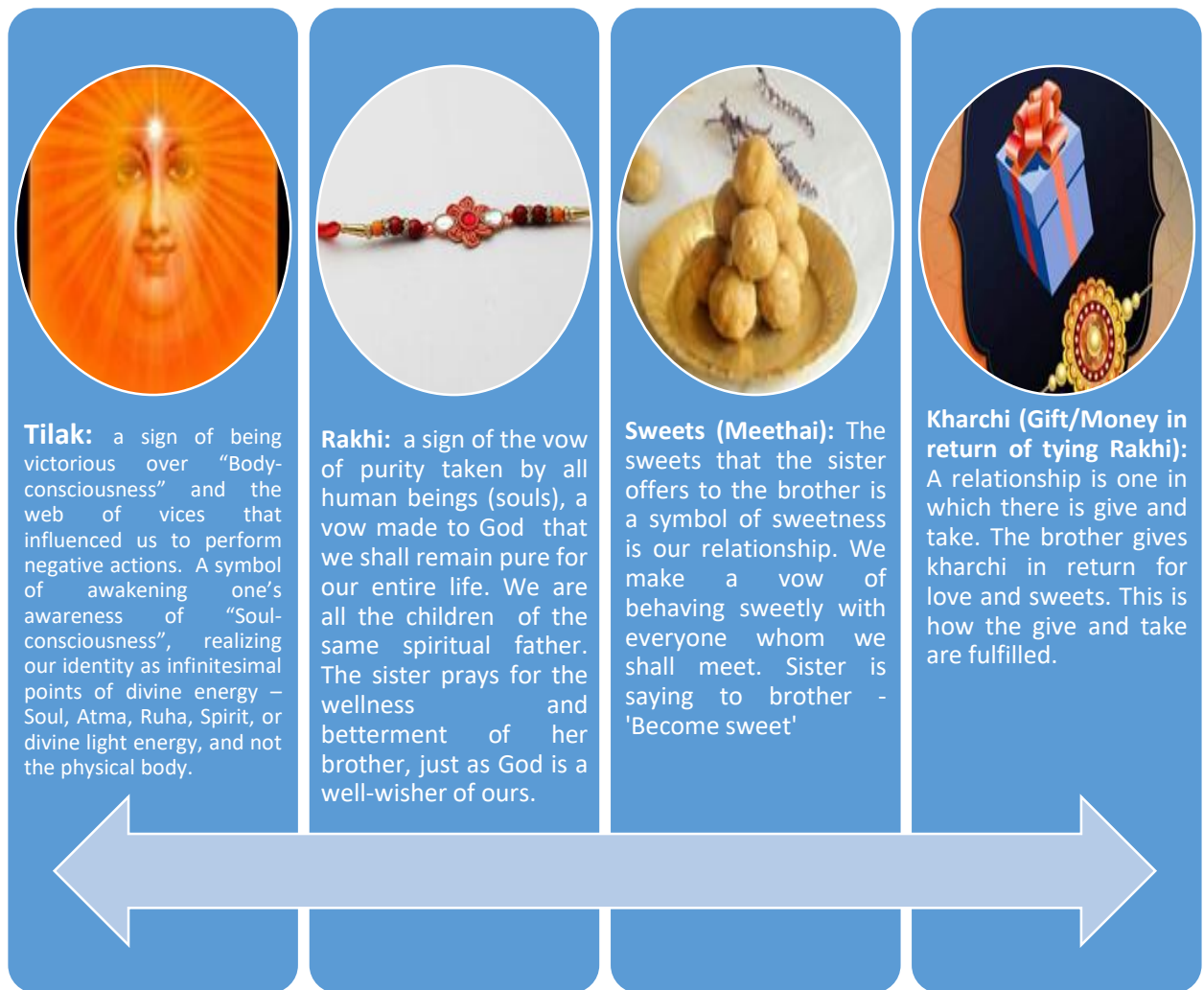
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[12] World renewal, Aug 2022

Figure 1: The spiritual significance of *Tilak*, *"Rakhi"*, Sweet and Gift in "*Raksha Bandhan*"

Tilak: a sign of being victorious over "Body-consciousness" and the web of vices that influenced us to perform negative actions. A symbol of awakening one's awareness of "Soul-consciousness", realizing our identity as infinitesimal points of divine energy – Soul, Atma, Ruha, Spirit, or divine light energy, and not the physical body.

Rakhi: a sign of the vow of purity taken by all human beings (souls), a vow made to God that we shall remain pure for our entire life. We are all the children of the same spiritual father. The sister prays for the wellness and betterment of her brother, just as God is a well-wisher of ours.

Sweets (Meethai): The sweets that the sister offers to the brother is a symbol of sweetness is our relationship. We make a vow of behaving sweetly with everyone whom we shall meet. Sister is saying to brother - 'Become sweet'

Kharchi (Gift/Money in return of tying Rakhi): A relationship is one in which there is give and take. The brother gives kharchi in return for love and sweets. This is how the give and take are fulfilled.

3. Experiencing True "*Raksha*" in Practical Life Through Subtle "*Bandhan*"

The Rajayoga lifestyle being practised for spiritual empowerment at the Prajapita Brahma Kumaris Ishwariya Vishwa Vidyalaya (Donnel, 2006) is briefly discussed here for experiencing "*Raksha*" in practical life. Various steps involved in Rajayoga meditation is illustrated in Figure 2 (Pillai (2021).

According to the **Godly Wisdom on Rajayoga,** imparted through this system, there are three major powers in the world that interact with each other - the Soul, the Supreme Soul, and the Five elements of the Nature (Pillai (2022)).

As per the Godly wisdom, "the soul is a conscient energy in the form of a tiny divine light located in the forehead. The soul is different from its instrument – the body with its organs and is also the master of the body. The soul is eternal and imperishable and is originally complete and perfect with virtues such as *knowledge, purity, love, peace, happiness, bliss, and power*. While being in the body, the soul always desires to experience and sustain these eternal virtues. In the *soul consciousness*, the soul is aware its nature and the virtues emerge naturally. The God or Supreme Soul is the supreme among all souls, is also a subtle, infinitesimal point of light but does not come into the cycle of birth and death like a soul. All religions have images, idols, or memorials bearing some name representing His form of light. He is worshipped in different

names such as 'Shiva' meaning the benefactor and other expressive names like Allah, Jehovah, and The Father etc. His original abode is *Paramdham* or *Brahmlok* or Incorporeal world is also the original abode of all souls. It is an infinite expanse of golden-red light beyond this physical world."

Soul consciousness is essential for self/soul realization and God realization. As shown in Figure 2, through the Rajayoga meditation practice the soul establishes a subtle connection or bond or knot with God. This has four steps – withdrawal of attention from body consciousness to soul consciousness, contemplation on spiritual or eternal truth, concentration on the Supreme Soul and Realization. This enables the Soul to get rid of the vices and regain its innate virtues such as *knowledge, purity, love, peace, happiness, bliss, and power*. This subtle connection serves as the "*Raksha Bandhan*" of the soul with the Supreme Protector God and lead to virtuous or pure actions by the soul. The souls go through a cyclic transformation from a pure/perfect stage to impure/imperfect stage and again to pure stage in the Cycle of time. The harmony among the Souls and between the Soul and the External Nature is dependent on the purity of the Soul in the Cycle of Time. The details of the Cycle of Time are given in Appendix B.

Step 1: WITHDRAW
From outer being and external influences and senses

Step 2: CONTEMPLATION
Your inner self (Soul) as a point of light energy radiating positive energy waves.

Supreme Soul

Soul

Step 3: CONCENTRATE
Your attention on a higher power (Supreme Soul) and experience energy flowing into the Soul.

Step 4: REALIZE
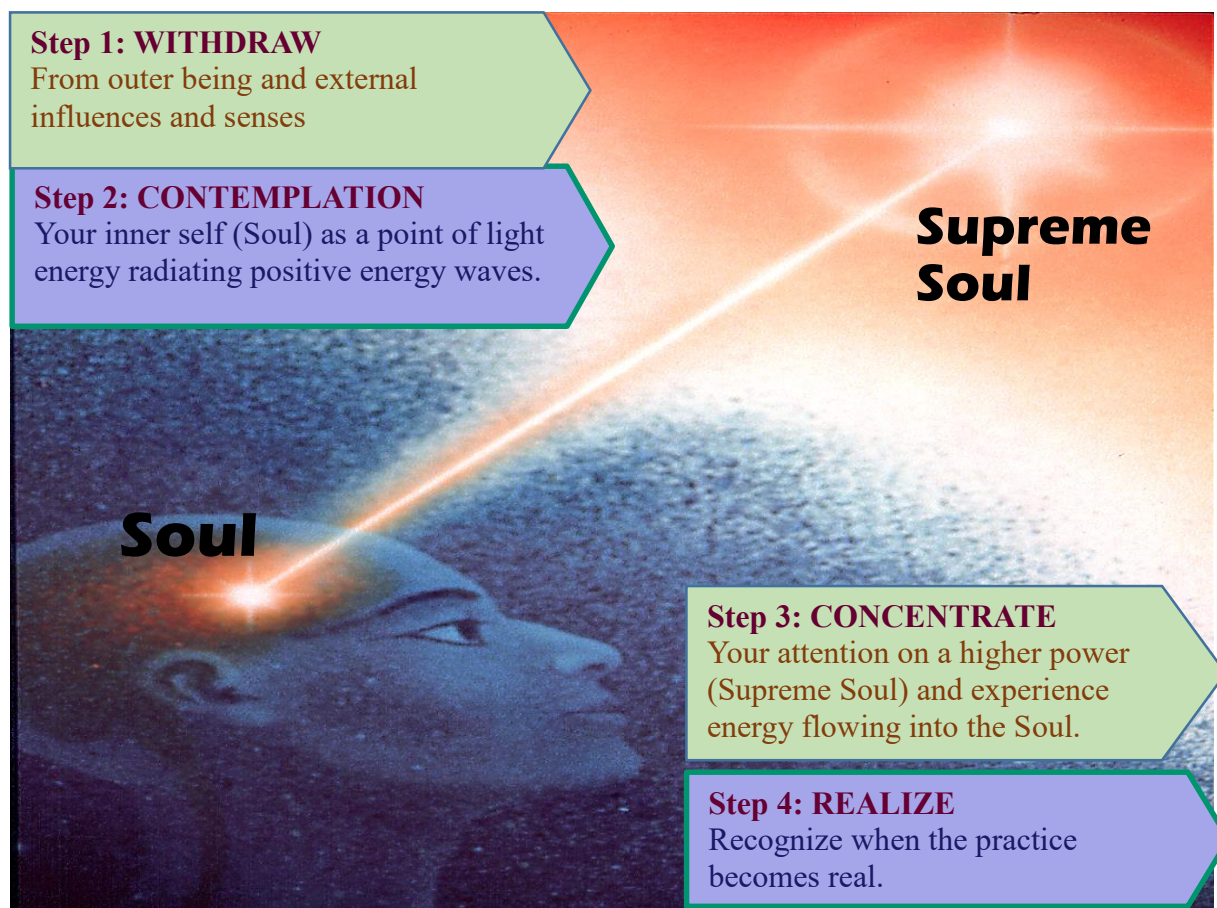Recognize when the practice becomes real.

Figure 2: Rajayoga Meditation

4. Sustainability Through "*Raksha Bandhan*"

As discussed in the previous section, the subtle bond or knot between the soul and the Supreme Soul through Rajayoga enables the soul to enables the soul to get rid of the vices and regain its innate virtues such as *knowledge, purity, love, peace, happiness, bliss, and power* (Pillai (2021a)). This subtle connection serves as the "*Raksha Bandhan*" of the soul with the Supreme Protector God and lead to virtuous or pure actions by the soul. The souls also go through a cyclic transformation from a pure/perfect stage to impure/imperfect stage and again back to pure stage in the Cycle of time. The harmony among the Souls and between the Soul and the External Nature comprising of 5 elements (earth, water, ether, fire and air) is dependent on the purity of the Soul in the Cycle of Time. The positive transformation of the soul impacts the transformation of body, relationship, society, and the environment in a positive way as shown in Figure 3.

The root cause behind the present scenario is the human activities that has raised this concern over safety and security of the world. Through "*Raksha Bandhan*", this root cause is addressed. That is by transforming the soul or self by inculcating its original values, the actions are transformed in a positive way. This naturally leads to transformation of the external nature. Therefore, it is important to address the protection ("*Raksha*") of souls and that is the real significance of "*Raksha Bandhan*". This leads to the answers to the basic questions raised at the beginning:

- **Who** needs protection and from **whom** - The souls need protection from vices that makes their actions vicious
- **Who** can protect – Protector God
- **When** such protection is possible – In the confluence age
- **How** the protection is achieved – By remembering the Supreme in soul conscious stage
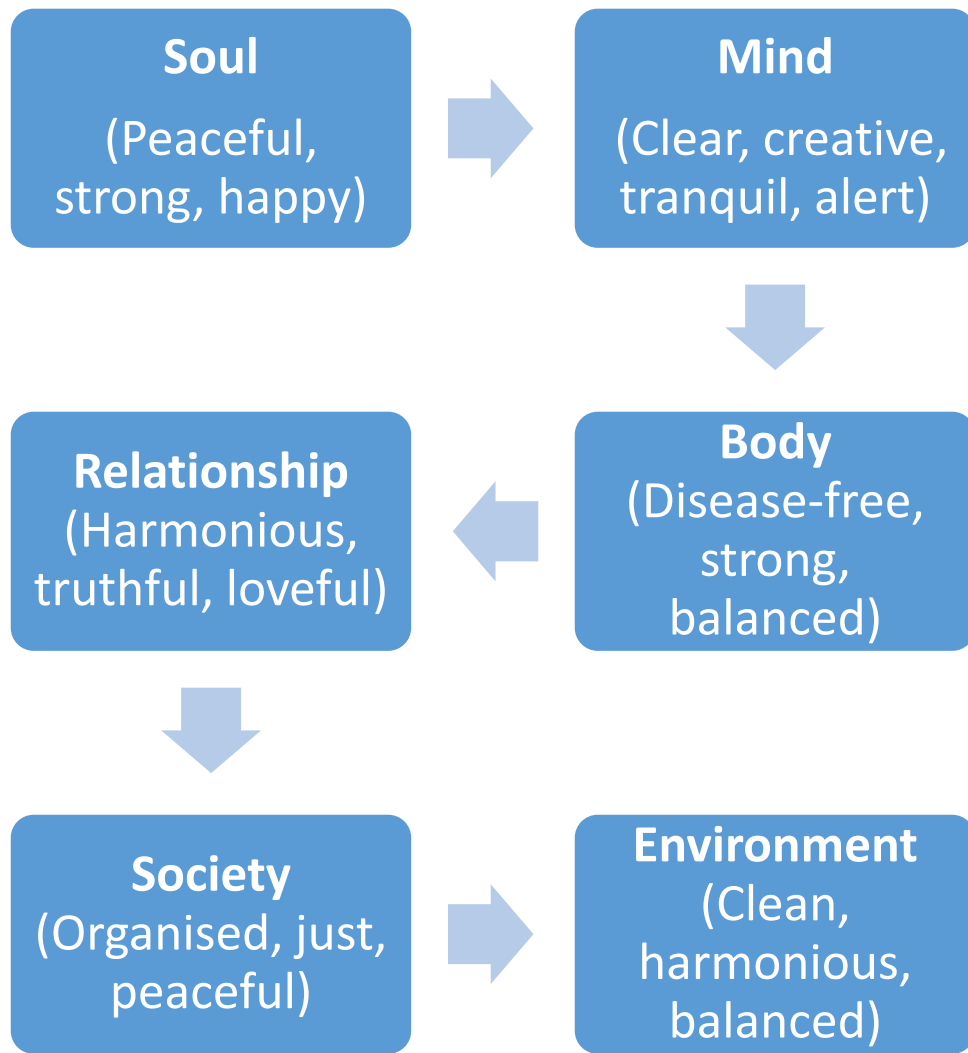
Figure 3: World Transformation Through Self Transformation

5. Conclusion

The "*Raksha Bandhan*" festival is explored from a broader spiritual perspective to understand its meaning or significance to address the sustainability challenge. From a spiritual perspective, the "*Raksha Bandhan*" Festival is a memorial of how the Supreme soul save the humanity by purifying the human souls when they are conquered by the vices. When the nature of the human souls is pure the external nature comprising of five elements (earth, water, air, ether and fire) is also pure and vice versa. When the souls get purified, their actions become elevated towards human beings and nature, thus by purifying the souls, both humanity and nature also get purified. Purification is done by re-establishing the subtle bond between the soul and the supreme soul based on the Godly wisdom shared by the Supreme. This is the spiritual meaning of the "*Raksha Bandhan*", and it leads to the sustainability of humanity and Nature or environment.

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Appendix A: Legends on Raksha Bandhan Festival

- Before the battle of *Kurukshetra*, narrated in the Mahabharata, Queen *Kunti* tied a "*Rakhi*" on her grandson, *Abhimanyu*, to protect him in battle. [13]

- According to the *Mahabharata*, *Yudhisthira*, the eldest of the five *Pandava* brothers, asked Shri Krishna, how best he could guard himself against impending evils and catastrophes in the forthcoming year. Krishna advised him to observe the "*Raksha Bandhan*" ceremony. He also narrated an old incident to show how potent the "*Rakhi*" can be.[14]

- When the devotion of the demon King, *Bali,* won over *Vishnu*, the Lord promised to become his devotee's doorman. Thus he was compelled to leave his own abode, *Vaikuntha*, and to stay in Bali's kingdom in a place called *Sutal*. When Lord Vishnu failed to return, his distressed consort, Lakshmi, journeyed to *Sutal*. She arrived on the full-moon day called Shravan Purnima. She accepted Bali as her brother by tying a "*Rakhi*" on him. In return, Bali asked her to request a boon. She asked for her husband's return.

- Once *Shubh* and *Labh*, the sons of Lord *Ganesha*, watched him celebrate "*Raksha Bandhan*" with his sister *Manasa*. Seeing the love of a brother and sister, they also wished to have a precious little sister. To fulfill their wish, Lord *Ganesha* created *Santoshi Mata* with his powers and thus was born another beautiful tale of sibling love.[15]

- "*Raksha Bandhan*" originates in the great epic *Mahabharata*. During *Yudhishthira's Rajasuya Yagnya*, Lord Krishna injured his finger while punishing the evil *Shishupala*. When *Draupadi* saw Krishna's finger bleeding, she tore a corner of her saree and tied it to his finger. Krishna, moved by *Draupadi's* affection, promised always to protect her. This promise planted the seed for many others to celebrate "*Raksha Bandhan*".[16]

- According to a popular story, the Queen of Mewar, Maharani *Karmavati*, had to face the threat of Governor Bahadur Shah who laid siege to her kingdom. Outnumbered and unable to resist, she sent a "*Rakhi*" to the Moghal king, *Humayun*. The Muslim emperor, who under normal circumstances would not have helped a Hindu ruler, decided to protect her from the threat. *Humayun* reached Mewar at the last moment, just as the queen was preparing for self-immolation. He put flight to Bahadur Shah and his troops and restored the kingdom back to the Queen.

- A story is told of the wife of Alexander the Great. She approached her husband's mighty Hindu adversary, *Pururavas*, and tied a "*Rakhi*" on his wrist. She sought assurance from him to protect the life of her husband on the battlefield. The chivalrous Hindu king responded in true *kshatriya* (warrior) style; as he raised his hand to deliver a fatal blow to Alexander, he saw the "*Rakhi*" on his own wrist and restrained himself. The two sides later signed a truce.

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[13] https://iskconeducationalservices.org/HoH/further-information-and-teaching-resources-primary/festivals/p-stories-connected-with-raksha-bandhan/
[14] https://iskconeducationalservices.org/HoH/further-information-and-teaching-resources-primary/festivals/p-stories-connected-with-raksha-bandhan/
[15] https://www.educba.com/raksha-bandhan/
[16] https://www.educba.com/raksha-bandhan/

Appendix B: The details of Cycle of Time

The Cycle Time is also known as the World Drama Wheel or Wheel of Time, or *Kalachakra* and it has connection with *Swastika*[17] (Figure 4). The Cycle Time of duration 5000 years (*Kalpa*) has four major epochs namely the Golden-Age, Silver Age, Copper-Age, and Iron Age each with a duration of 1250 years. The cycle repeats itself after every five thousand years. The souls are actors on the drama stage and repeats the part in every cycle. The change in the stage of Soul from a perfect stage to an imperfect stage (*Satopradhan* to *Thamopradhan* stage OR virtuous to vicious stage) is depicted in the knowledge of the Cycle of Time. The harmony among the Souls and between the Soul and the External Nature is dependent on the internal stage or nature of the Soul in the Cycle of Time. The Cyclic variation of the stage of the Soul and the intervention of the Supreme Souls is also depicted in the Knowledge of the Cycle of Time.

At the beginning of the cycle, the *Sanatan Dharma* was present in the Golden age where the souls were complete and perfect and possessed divine qualities and nature and they enjoyed complete purity (16 degrees, *Satopradhan*), peace and prosperity. During the second epoch, the silver age, even though the souls were enjoying a high degree of purity, peace, and prosperity but a little less (14 degrees, *Sato*) compared to the Golden Age. This is indicated by the arm going down in the silver age. After having experienced beatitude and fruition for many births, the souls get influenced by the vices and becomes unrighteous in the Copper age. This is indicated by the arm going left in the Copper age as left hand symbolizes impure and un-auspicious. From one *Sanatan Dharma* prevailed during Golden and Silver ages, multiple *Dharma* emerges during copper age and humanity is divided on various religions, disputes emerged, and the vices started ruling the soul leading to unrighteous actions making the souls increasingly impure leading to more sorrow (8 degrees, *Rajo*). This process continued and the souls became more impure in the Iron age. This is indicated by the arm going up in the Iron age with increased conflicts, clashes, and calamities. (0 degrees, *Tamopradhan*). At present, we are going through a crucial phase in the history, marking the confluence of the end of Iron Age and the beginning of the next Golden Age. It is called the Confluence Age (epoch) when the God re-incarnates in this world to annihilate *adharma* and re-establish the *Dharma* (*Sanatan Dharma*) or righteousness. It has been mentioned in Srimad Bhagavad Gita (Verses 4.7-8)[18].
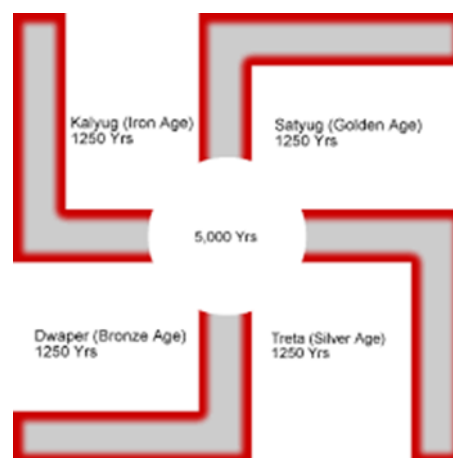

Figure 4: The World Drama Wheel (The Cycle of Time)

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[17] https://en.wikipedia.org/wiki/Swastika

[18] https://www.holy-bhagavad-gita.org/

<p style="text-align: center;">*"यदा यदा हि धर्मस्य ग्लानिर्भवति भारत ।*</p>
<p style="text-align: center;">*अभ्युत्थानमधर्मस्य तदात्मानं सृजाम्यहम् ॥BGः 4- 7॥*</p>

<p style="text-align: center;">*परित्राणाय साधूनां विनाशाय च दुष्कृताम् ।*</p>
<p style="text-align: center;">*धर्मसंस्थापनार्थाय सम्भवामि युगे युगे"॥BGः 4- 8॥*</p>

*"**BG 4.7-8**: Whenever there is a decline in righteousness and an increase in unrighteousness, O Arjun, at that time I manifest myself on earth. To protect the righteous, to annihilate the wicked, and to re-establish the principles of dharma I appear on this earth, age after age."[19]*

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[19] https://www.holy-bhagavad-gita.org/

Marketing Strategies and Children's Influence: A Comparative Analysis of Malted Health Drink Brands

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Abstract

This study delves into the intricate relationship between marketing strategies employed by malted health drink brands and the extent to which children's influence shapes parental purchasing decisions. Focusing on a diverse array of malted health drink brands, this research conducts a comparative analysis to discern the varying degrees of effectiveness in targeting and resonating with young consumers. By scrutinizing branding, advertising techniques, and messaging, the study aims to uncover key insights into how these factors influence children's preferences and subsequently impact parental buying behaviour. The findings offer valuable implications for marketers seeking to optimize strategies for this dynamic consumer demographic, ultimately enhancing product visibility and appeal within the competitive malted health drink market.

Keywords: Advertising, Branding, Consumers, Market, Malted health drinks

1. Introduction

In recent decades, the global market for children's food and beverage products has experienced an unprecedented surge, spurred by shifting societal norms and increased awareness of health and nutrition. Among the myriad products catering to this demographic, malted health drinks have emerged as a significant player, promising a blend of essential nutrients, energy, and taste. This surge in popularity has not only prompted intense competition among manufacturers but has also raised critical questions about the marketing strategies employed to entice young consumers and the influence these strategies exert on their preferences and purchasing decisions. The consumption habits formed during childhood can significantly impact an individual's lifelong dietary choices and health outcomes. As such, understanding the marketing techniques adopted by malted health drink brands in targeting children is of paramount importance. This comparative analysis aims to shed light on the diverse strategies employed by leading brands in this sector, evaluating their effectiveness and discerning the extent to which they influence children's perceptions and preferences. This study will delve into the nuanced dimensions of marketing strategies, encompassing elements such as branding, packaging, messaging, and promotional campaigns. By examining these facets across multiple malted health drink brands, we aim to provide a comprehensive perspective on the methods employed to engage and captivate the young consumer demographic. Children can also influence their families, particularly in areas where they have greater expertise, such as technology or entertainment alternatives (Coleman,1973). Overall, their emotional connections, brand loyalty, and influence as small trendsetters contribute to family product decisions (Solomon,1996). Thus, examining and studying the malted food consumption pattern among children may help in assessing the nutrition status and it also provides insights into the availability, accessibility, and affordability of nutrition sources for the society. Furthermore, this analysis will consider explicit marketing strategies and explore the subtle, underlying influences that shape children's perceptions of these products. The present study intends to satisfy the following objectives:

- To study the influence of demographic factors of children on the parent buying decision
- To identify the consumption pattern of malted health drinks among children
- To identify the influential factors or marketing strategies which influence children to buy malted health drinks

2. Literature review

A study by Harris et al. (2009) emphasised that children are susceptible to advertising messages and may not possess the cognitive skills to evaluate the information presented to them critically. This vulnerability makes them a prime target for marketing efforts. Buijzen and Valkenburg (2005) found that exposure to food advertisements can lead to increased consumption of advertised products, particularly in the case of children. Moreover, the use of appealing visuals, mascots, and jingles can further enhance the effectiveness of marketing campaigns targeted at children (Robinson, 2014). Kumar (2013) studied the influence of children on the family purchase decision for high, low and child-centric products. The impact of children on family purchase decisions depends on various factors. He found that children use different methods to influence their parents' buying decisions, and the level of influence varies depending on the parents' education, profession, income, family type, and the type of product. Kumar and Ghodeswar (2014) highlight the importance of providing accurate and transparent information regarding the nutritional content of these drinks. Misleading health claims can lead to misguided consumer choices and potentially harm children's health. Robinson (2014) delves into the psychological impact of advertising on children, emphasizing the role of visual stimuli, catchy jingles, and mascots. These elements are designed to capture children's attention and create positive associations with products. In the case of malted health drinks, understanding the psychological mechanisms at play can inform the design of effective marketing campaigns that resonate with young consumers.

3. Conceptual Model for the study

A conceptual framework has been compiled by the researcher based on previous studies and also, after reviewing various literature to portray the relationship between variables. The model describes the marketing strategies which persuade children and thus, lead to parental buying decisions with the support of mediating variables such as age, family type and monthly income of the parent. Variables such as Peer Influence (Kaur and Medury,2013, Lati et al.,2017), Internet Influence (Ward et al.,2016), Media Influence (Ward et al.,2016), Brand Influence (Hellier et al., (2003) were identified as the main conductors of influence to the children.

Figure 1- Conceptual Model (Source: Compiled by the researcher)
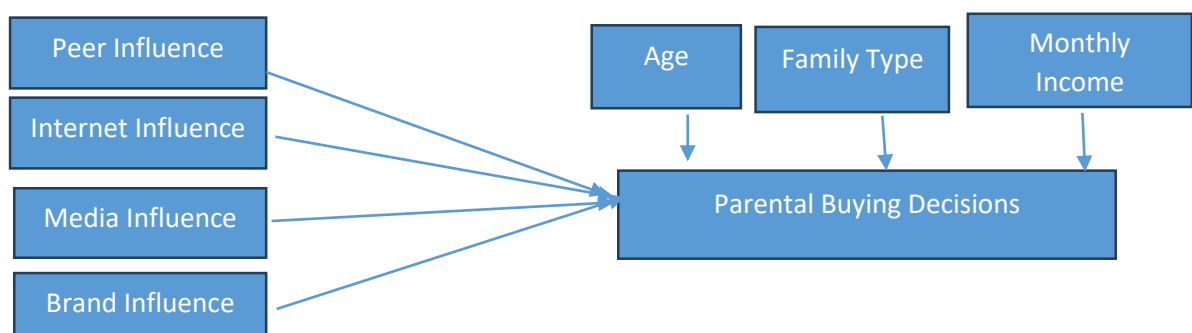
4. Materials and Methods

The study used descriptive and exploratory research design and the study is confined to children aged between 7 to 11 only, that is children who fall under preoperational thinking, and concrete operational thinking stages of cognitive development. Both qualitative and quantitative data are used for the study. Statistical tools are used in the study using SPSS software.

5. Analysis, Results and Discussions

Table 1- Demographic Profile of respondents - -

Respondents		Frequency	Per cent
Age	Below 30	49	66.2
	31-40	15	20.3
	41-50	10	13.5
Occupation	Government	14	18.9
	Private	39	52.7
	Business	13	17.6
	Others	8	10.8
Qualification	upto12	13	17.6
	undergraduate	21	28.4
	Graduate	28	37.8
	Post-graduation and above	12	16.2
Family type	Nuclear	28	37.8
	Joint family	21	28.4
	Extended family	13	17.6
	Childless Family	9	12.2
	Re-constituted Family	3	4.0
Monthly income	<10000	11	14.9
	10001-25000	28	37.8
	25001-40000	17	23.0
	40001-55000	12	16.2
	Above 55000	6	8.1
Residence	Urban	38	51.4
	semi-urban	27	36.5
	Rural	9	12.1

Source: Primary Data, SPSS

The above table summarizes the demographic data about respondents' age group, qualifications, occupation, income, family type and residence.

Table 2- Classification of the respondents on the basis of mostly preferred health drink brand

S. No	Brand	Percentage
1	Bournvita	17%
2	Horlicks	39%
3	Boost	23%
4	Complan	14%
5	Any other	7%

Source: Primary Data, SPSS

From the above, we can see that the most preferred health drink brand by the respondents is **'Horlicks'** by 39%. We can also see that 17% of respondents prefer Bournvita, 23% of respondents prefer Boost, 14% of respondents prefer Complan and 7% of respondents prefer any other brand.

Table 3 - Classification of respondents on the basis of factors that influence their choice of purchase of health drinks

S.No	Factors	Percentage
1	Brand	18%
2	Advertisement	9%
3	Price	14%
4	Taste	34%
5	Quality	25%

Source: Primary Data, SPSS

From the above, we can see that 34% of respondents choose taste factor over other factors while purchasing malt-based health drinks. We can also see that 25% chose the quality factor, 18% brand factor, 14% price factor and the advertisement factor by 9%.

Table 4 - Classification of respondents on the basis of how they know about malted health drinks.

S. No	Factors	Percentage
1	Social Media and E-magazines	24%
2	Word of mouth	12%
3	Family members/ peer groups	14%
4	Television Advertisement	38%
5	Newspapers	12%

Source: Primary Data, SPSS

38% of respondents came to know about it by Television advertisements, 24% by social media and e-magazines. Also, 14% of respondents by Family members/peer groups, 12% by newspapers and word of mouth.

Table 5 - Classification of respondents based on how they frequently use these drinks

S. No	Factors	Percentage
1	Daily	42%
2	2-3 times a week	25%
3	4-6 times a week	14%
4	Less than once a week	15%
5	Once a month	4%

Source: Primary Data, SPSS

Around 42% of respondents consume drinks daily, 25% of respondents by 2-3 times a week, 15% of respondents consume less than once a week, 14% by 4-6 times a week and only 4% of respondents consume 4% in once a month.

Table 6- Classification of Ranking of the Brand Interpretation

Brand	Rank1	Rank2	Rank3	Rank4	Rank5	Rank6	Rank7	Mean	rank
Horlicks	10	10	6	18	0	0	0	5.28	1
Boost	6	6	17	4	14	0	0	5.53	2
Bournvita	11	13	7	10	3	0	0	6.87	4
Complan	12	15	11	4	10	0	0	6.23	3
Maltova	0	0	0	6	15	7	8	9.32	7
Milo	0	0	0	0	9	17	19	8.53	6
Viva	5	0	3	0	0	16	16	6.69	5

Among the various factors listed above, the respondents have their own preferences towards different factors, which they feel as important is ranked accordingly.

6. Conclusions and Managerial Implications

The comparative analysis of marketing strategies employed by malted health drink brands and their influence on children's preferences and choices has provided a comprehensive view of this critical intersection of marketing, nutrition, and child development. Through a systematic examination of branding elements, nutritional messaging, and their impact on children's perceptions, this study offers significant insights into the strategies that shape children's dietary preferences. The study unequivocally demonstrates the pivotal role of branding in capturing the attention and loyalty of young consumers. Recognizable logos, appealing packaging, and relatable visual elements emerged as powerful tools for creating brand recognition and recall among children (Turner,2006). In conclusion, this comparative analysis offers a nuanced understanding of the marketing strategies employed by malted health drink brands and their impact on children. By examining the interplay between branding elements, nutritional messaging, and emotional associations, this study provides valuable insights for marketers, parents, educators, and policymakers alike. It is our hope that the knowledge gained from this research will contribute to a more informed and responsible approach to marketing to children in the context of health-related products.

In light of the findings from the comparative analysis, malted health drink brands are advised to adopt a multifaceted approach to their marketing strategies. Firstly, prioritizing child-centric branding elements such as captivating logos, appealing packaging, and relatable visual components is crucial. These elements enhance brand recognition and recall among young consumers. Additionally, brands should ensure that their nutritional messaging is transparent,

easy to understand, and focused on the key benefits of their products. Building on this, fostering positive emotional connections through relatable characters or themes can cultivate stronger brand loyalty (Yang,2007). Ethical marketing practices should be at the forefront, with a commitment to avoiding misleading claims and adhering to industry guidelines. Recognizing the influential role of parents, brands should actively engage with them, providing transparent and accurate information about their products. Moreover, continuous innovation in product development to meet evolving nutritional needs and preferences is essential for maintaining a competitive edge. Lastly, staying informed about and adapting to regulatory changes in advertising and promotion targeted at children is vital to ensure compliance and maintain trust. By embracing these managerial implications, malted health drink brands can navigate the dynamic landscape of marketing to children with integrity and responsibility, ultimately fostering long-lasting consumer loyalty and trust.

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Assessing Educators' Readiness for Education 4.0 - A Survey of Higher Secondary School Teachers

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Introduction

The dawn of the 21st century has witnessed a transformative wave sweeping through the global education landscape. With the rapid integration of cutting-edge technologies, digitization, and innovative pedagogical approaches, education has evolved into what is commonly referred to as Education 4.0. This paradigm shift not only redefines the way knowledge is imparted but also challenges the roles and competencies of educators themselves. In the context of India, a nation with a rich heritage in education and a burgeoning population of learners, the adaptation and readiness of educators for Education 4.0 is of paramount significance. This research paper delves into the critical inquiry of "Assessing Educator Readiness for Education 4.0 in India," aiming to unravel the multifaceted dimensions that shape the preparedness of for this transformative era. India, with its diverse educational landscape, is uniquely positioned to both benefit from and contribute to the global evolution of education. The country has embarked on ambitious initiatives like Digital India and National Education Policy 2020, which emphasize the integration of technology into education. However, for these visionary policies to bear fruit, it is imperative to gauge the readiness of educators who are at the forefront of implementing these reforms. Education 4.0, characterized by personalized learning, immersive technologies, online resources, and the cultivation of 21st-century skills, necessitates a paradigm shift in teaching methods and a holistic re-evaluation of educator competencies. In this context, it becomes essential to scrutinize the extent to which Indian educators are equipped to harness the potential of Education 4.0, as well as to identify the obstacles and opportunities that lie ahead.

This research paper adopts a multidimensional approach to assess educator readiness, encompassing factors such as digital literacy, pedagogical adaptability, technology integration in classrooms, professional development opportunities, and the impact of cultural and contextual factors. By gaining insights into the current state of educator preparedness, this study seeks to inform policymakers, educational institutions, and teacher training programs, enabling them to tailor their efforts toward equipping educators with the requisite skills and knowledge to navigate the dynamic terrain of Education 4.0. The findings of this research will not only contribute to the broader discourse on the global evolution of education but also serve as a critical compass for India's educational stakeholders, guiding their endeavors to empower educators and, by extension, the learners who hold the key to the nation's future success.

Literature Review

The landscape of education is undergoing a profound transformation globally with the emergence of Education 4.0, driven by the integration of digital technologies, data analytics, and artificial intelligence. In the Indian context, where education is a cornerstone of societal development, assessing educator readiness for Education 4.0 becomes imperative. This literature review provides an overview of key themes and findings in the existing scholarship on this topic.

Digital Competence and Literacy:

The readiness of educators to embrace Education 4.0 begins with their digital competence and literacy. Mishra and Koehler (2006) introduced the concept of Technological Pedagogical Content Knowledge (TPACK), emphasizing that educators need to possess a deep understanding of technology integration within their specific subject matter. In India, studies by Khanna and Basu (2018) have highlighted disparities in digital literacy among educators, with urban educators often being more tech-savvy than their rural counterparts. The digital divide is a critical concern that needs to be addressed to ensure equitable preparedness.

Pedagogical Adaptation:

Education 4.0 calls for a shift from traditional, teacher-centered pedagogies to student-centered and experiential learning approaches (Abersek et.al., 2017). Indian educators are grappling with the need to adapt their teaching methods to align with this transformative paradigm. Research by Puncreobutr, (2016) underscores the importance of pedagogical innovation, suggesting that educators should become facilitators of learning rather than just dispensers of knowledge.

Professional Development Opportunities:

Ongoing professional development is a cornerstone of educator readiness for Education 4.0. Studies have shown that access to quality training and development programs significantly influences educators' ability to integrate technology effectively into their teaching (Sinlarat, 2016). Initiatives like the SWAYAM platform in India have sought to bridge this gap, offering educators online courses and resources. However, challenges remain in ensuring widespread access and measuring the effectiveness of such programs.

Cultural and Contextual Factors:

India's vast and diverse educational landscape is marked by varying cultural, linguistic, and socioeconomic contexts. These factors play a pivotal role in educator readiness. Rajan and Barua (2019) emphasize the importance of culturally sensitive approaches to technology integration in Indian classrooms. Recognizing that one size does not fit all, educators must adapt their strategies to align with the unique needs of their students and communities.

Several researchers have analyzed the components of Education 4.0 that have been considered in 21st-century skills frameworks and identified the teaching and learning methods and key stakeholders impacted. Perez et.al (2022) identified opportunities to create or improve 21st century skills frameworks with the required Education 4.0 components to develop future skills. Their study revealed the absence of these frameworks for teachers and schools. Akimov et.al (2023) found that that there is little literature research on issues related to important aspects in the dynamics of open innovation (partnerships, critical thinking, self-assessment, leadership, friendships, and risk-taking).

The literature review highlights a pressing need to explore and assess the readiness of educators for Education 4.0 in India. Education in India stands at a pivotal juncture, where it must harness the potential of digital technologies, personalized learning, and innovative pedagogies to meet the evolving needs of students and the demands of a rapidly changing world. However, this transition is far from uniform across the country, with disparities in digital literacy, pedagogical adaptation, and access to professional development opportunities evident among educators. Furthermore, the diverse cultural and contextual factors that influence education in India add a layer of complexity to this readiness assessment. Given the nation's commitment to educational reform, as exemplified by the National Education Policy 2020 and initiatives like Digital India, it is crucial to gauge the preparedness of educators. Understanding their strengths, challenges,

and specific needs will inform targeted strategies for capacity building, thereby ensuring that India's vast and diverse learner population can benefit fully from the opportunities presented by Education 4.0.

Research Methodology

For this study aimed at comprehending the readiness of Higher Secondary school teachers to embrace Education 4.0, a robust research methodology was employed. The research design entailed a quantitative approach, with a sample size of 125 teachers selected from various Higher Secondary schools across three districts in Kerala (Alappuzha, Ernakulam and Thrissur). Data collection was primarily accomplished through a structured questionnaire carefully designed to assess multiple dimensions of educator readiness for Education 4.0. The questionnaire was distributed to the selected participants, who were given ample time to respond thoughtfully to the survey items. The questionnaire incorporated a mix of closed-ended and Likert-scale questions to quantify the teachers' perspectives on digital literacy, pedagogical adaptability, access to professional development, and other pertinent factors contributing to their preparedness for the evolving educational landscape of Education 4.0. This methodological approach enabled the study to gather comprehensive quantitative data, allowing for a systematic analysis of teacher readiness and serving as a valuable foundation for drawing meaningful insights and recommendations in the pursuit of advancing education in the digital age.

The questionnaire encompassed inquiries aligned with the conceptual framework proposed by Beyza et al. (2020), which delineates four pivotal dimensions requisite for educators in the context of Education 4.0. As illustrated in Figure 1, these dimensions comprise: (a) Personal Characteristics: This dimension explores the intrinsic attributes and traits of educators that are conducive to effective engagement in Education 4.0. Questions related to personal motivation, adaptability, and enthusiasm for innovative teaching methods were included to assess this facet. (b) Technological Skills: Within this dimension, the questionnaire sought to gauge the proficiency of educators in utilizing contemporary technologies and digital tools. Queries were designed to assess teachers' competencies in navigating digital platforms, creating digital content, and integrating technology into instructional practices. (c) Guidance Skills: The third dimension focuses on educators' ability to guide and mentor students in a rapidly evolving educational landscape. Items in this category ascertained the extent to which teachers possess skills related to mentorship, counselling, and providing guidance to students in their academic and personal development. (d) Lifelong Learning Skills: The final dimension examined educators' commitment to continuous professional growth and development. Questions within this dimension probed teachers' attitudes toward lifelong learning, their engagement in ongoing professional development activities, and their receptiveness to acquiring new knowledge and skills. This comprehensive questionnaire, grounded in the conceptual model presented by Beyza et al. (2020), facilitated a structured evaluation of educators' readiness in these critical dimensions, contributing to a nuanced understanding of their preparedness for the dynamic landscape of Education 4.0. The data analysis tools used include Chi-Square and Kruskal-Wallis test
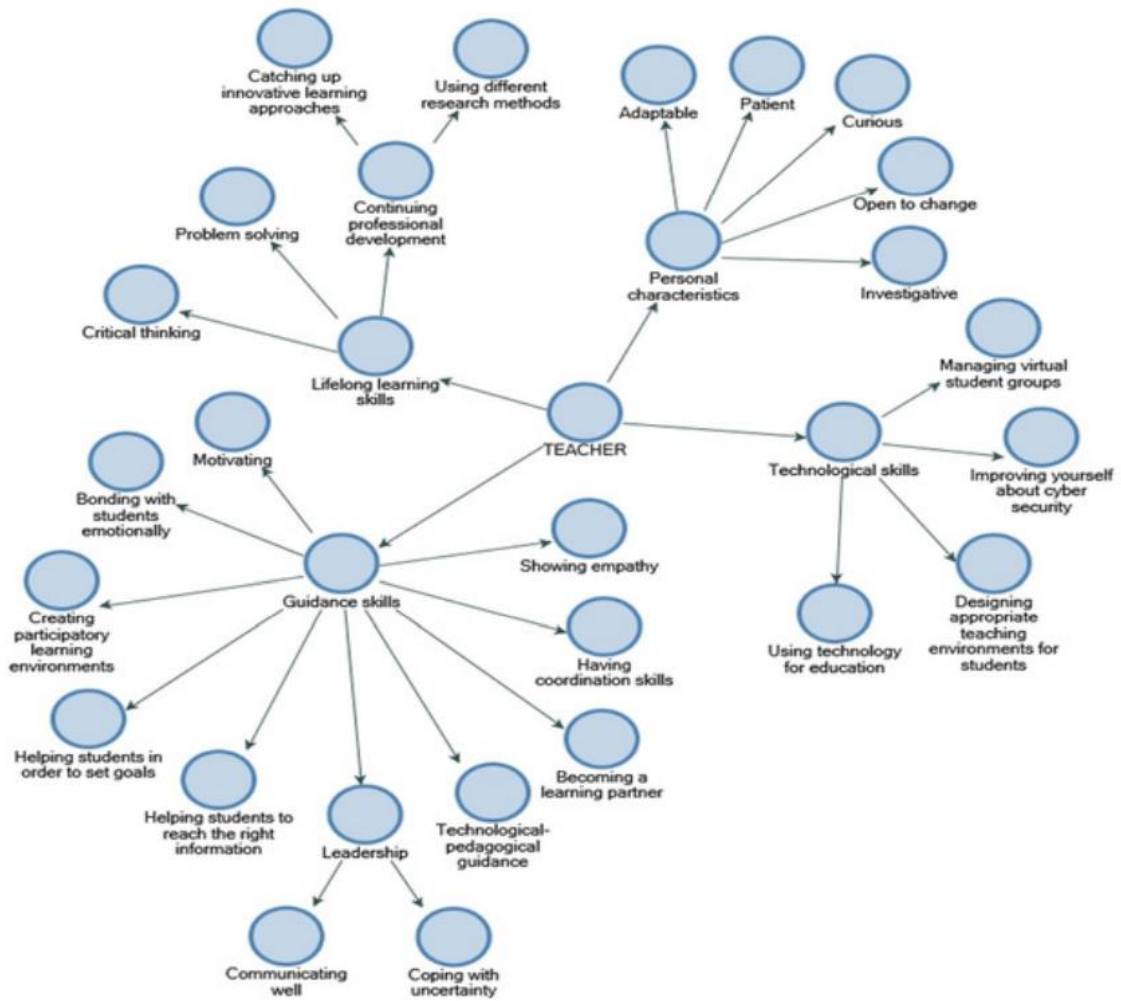
Figure 1: The qualifications expected from a teacher of Education 4.0

Data Analysis, Results and Discussions

The demographic profile of the respondents is mentioned below

25-30 years						30- 40 years					
Government		Aided		Private		Government		Aided		Private	
M	F	M	F	M	F	M	F	M	F	M	F
0	4	1	5	0	2	1	15	3	14	2	12

40 - 50 years						50 years & above					
Government		Aided		Private		Government		Aided		Private	
M	F	M	F	M	F	M	F	M	F	M	F
4	4	2	12	3	15	1	8	2	4	2	9

The results of the percentage analysis shed light on the relative strengths of educators across the four assessed dimensions. Notably, the highest scores were observed in the domains of personal characteristics and guidance skills, followed by lifelong learning skills and technological skills, in descending order of prominence. This pattern suggests that educators excel in areas related to

their intrinsic qualities and interpersonal competencies, demonstrating motivation, adaptability, enthusiasm, and the ability to provide guidance and mentorship effectively. However, there is room for growth in technological proficiency and the cultivation of skills needed to navigate the digital landscape. These findings emphasize the significance of nurturing the holistic development of educators, not only in terms of technological aptitude but also in enhancing their lifelong learning capabilities to adapt and thrive in the dynamic realm of Education 4.0.

The Chi-Square test was employed to investigate whether there is a significant difference between males and females concerning their personal characteristics, technological skills, guidance skills, and lifelong learning abilities within the context of this study. The findings revealed statistically significant differences in all four dimensions. Males and females displayed divergent personal characteristics, with variations in adaptability, curiosity, patience, openness to change and investigative mind. Additionally, a substantial disparity emerged in technological skills, indicating varying proficiencies in using digital tools and technologies. Furthermore, differences were observed in guidance skills, highlighting distinct abilities in mentoring and counselling between the two groups. Lastly, disparities in lifelong learning skills were evident, signifying varying attitudes towards continuous professional development and receptiveness to acquiring new knowledge. These findings underscore the importance of considering gender-specific strategies when addressing educator readiness for Education 4.0, recognizing that tailored approaches may be necessary to bridge the gender-based gaps in these critical dimensions.

The Kruskal-Wallis test was utilized to explore potential differences among Higher Secondary teachers from Government, Aided, and Private sectors concerning personal characteristics, technological skills, guidance skills, and lifelong learning competencies. The results of the analysis revealed that there are no statistically significant differences in all four dimensions across the sectors in personal characteristics, technological skills, guidance skills, and lifelong learning skills.

Conclusion

The findings of this comprehensive study assessing the readiness of educators for Education 4.0 through Chi-Square and Kruskal-Wallis tests hold profound implications for educational policies, institutions, and professional development programs. The results provide valuable insights into the strengths and areas for improvement among educators, shedding light on the multifaceted dimensions of their readiness for the digital age of Education 4.0. First and foremost, the percentage analysis revealed that educators exhibit remarkable strengths in personal characteristics and guidance skills. This implies that educators possess a strong foundation in intrinsic qualities such as motivation, adaptability, and the ability to provide effective guidance and mentorship to students. These findings underscore the importance of recognizing and harnessing these existing strengths as a cornerstone for educator development in the era of Education 4.0.

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Social Sustainability in the Context of Construction Projects: A Literature Review

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1. Introduction

Recently, the term "sustainability" has been one of the most widely used buzzwords in business. The World Commission on Environment and Development (WECD) has defined "Sustainable Development" as "meeting the needs of the present without compromising the ability of future generations to meet their needs" (Brundtland, 1987, Section 3). Scoones (2007) has traced the history of sustainability and suggested that it converges on three pillars – Economic, Environmental, and Social sustainability. This definition and the pillars of sustainability apply not only to production (i.e., manufacturing and process industries) but also to other industries and businesses that meet the needs and wants of any human being or another business. One such industry is the construction industry, which has a significant role in any country's economy. For example, GlobalNewswire (2020) reports that by 2024, the global construction industry may record a Compound Annual Growth Rate (CAGR) of 9.2%, reaching USD 11093.7 billion. Due to its sheer size and significance, the construction industry considerably impacts society, the environment, and the economy (Zuo et al., 2012).

1.1 Research Motivation

Jafari et al. (2019) defined sustainable construction as "*improving the current situation to generate benefits or savings for owners and/or occupants in terms of economic criteria (e.g., reducing operation costs and optimising life cycle economic performance), environmental criteria (e.g., reducing greenhouse gas emissions), and social criteria (e.g., enhancing comfort and health of occupants, as well as the creation of job opportunities)*." Despite such a nuanced understanding of the role of sustainability in the construction domain, there seems to be ample gaps in both academia and practice. For example, the Leadership in Energy and Environmental Design (LEED) certification was awarded to a total of 323 construction projects in India in 2022, covering more than 10.47 million gross area square meters (GSM) of space – an increase of more than twice the number of projects in 2021 (The Green Business Certification Inc. https://www.gbci.org/). According to GBCI, India, LEED certification is "*an international symbol of sustainability achievement*" that signifies a building is lowering carbon emissions, conserving resources, reducing operating costs, prioritising sustainable practices, and creating a healthier environment. While it is heartening to note from the GBCI data that the number of projects certified for LEED is increasing (which is a direct measure of environmental sustainability and also a measure of economic sustainability to a measurable extent), it seems that it only provides "a framework for healthy, efficient, carbon and cost-saving green buildings." It misses the "social pillar" of sustainability and certifies buildings as "Green buildings." The same phenomenon is observed amid global urbanisation trends. Although construction projects wield significant influence on communities, environmental and economic concerns often seem to overshadow the social dimension of sustainability. Hence, this research aims to address this gap by focusing on the social impact of construction to identify industry practices and develop policies to foster more socially sustainable construction projects.

Similarly, in academia, "existing sustainability studies in construction are primarily related to the environmental and economic aspects, and Social Sustainability (SS) seems missing from the research radar" (Zuo et al., 2012). Valdes-Vasquez et al. (2013) also argued that SS in construction is often overlooked in favour of financial and environmental aspects. Kordi et al. (2021) commented that there is a lack of evidence regarding the extent to which SS considerations were included in addressing sustainable construction. Hence, in this study, an attempt has been made to uncover the background of work done in the academic space on "social sustainability" in the construction sector by addressing the following research question (RQ):

- RQ1: What is the current status of "social sustainability" research within the construction sector in general and residential construction projects in particular?

If there needs to be more attention to the social dimension of sustainability, then it has to be clearly defined and explained. SS in construction can be defined as "*avoiding harm to communities, prioritising resource distribution, community involvement, and creating areas that enhance lives and inclusivity.*" However, Zadeh et al. (2013) claim that SS is often the vaguest and least explicit dimension in construction projects. Unlike the environmental and economic system, in which the flows are easily observed, the dynamics within the social system are highly intangible. Karji et al. (2019) noted that it is challenging to formulate measurable SS criteria compared to economic and environmental sustainability dimensions, which are often measured quantitatively. Nakamba et al. (2017) also highlight that SS may be perceived as a complex and highly subjective concept due to the qualitative nature of measurement, as social measures include variables such as peoples' opinions, perceptions, and satisfaction. Hence, to improve visibility and establish the various constructs or measures that describe SS, it is essential to develop a framework for the same. It should be similar to the LEED standards that help assess construction projects for their environmental and economic sustainability. Developing and proposing such a framework requires understanding the different factors, criteria, and assessment methods. Hence, this led to the following research question:

- RQ2: What are the different elements that constitute "social sustainability"? Are there any frameworks to assess and quantify SS?

2. Methodology

To address the RQs mentioned above, it becomes essential to understand the existing literature in detail. Hence, a systematic literature review has been chosen as an appropriate methodology. Systematic literature reviews remain at the top of the "hierarchy of facts" above all other research designs since they can have the most important functional consequences. (Andy et al., 2019). Nevertheless, Rostamnezhad et al. (2022) and Argaw et al. (2022) have reviewed the literature recently. These papers focussed on finding the indicators, barriers, and enablers for SS implementation. However, the RQs addressed in this research differ significantly from those addressed in the above reviews. A structured literature review is performed, as summarised in Table 1.

Table 1: Summary of the step-by-step literature review process

Steps	Description	No. of Documents
Choosing the database	**Databases:** Scopus	
Keyword search	**Social sustainability – related keywords:** "Social sustainability" OR "Social indicators" OR "Social performance" OR "Social responsibility" OR "Community development" OR "Social well-being" OR "Social equity" OR "Social justice" OR "Stakeholder engagement" OR "Human rights" OR "Quality of life" OR "Social development" OR "Social policies" OR "Social Responsibility" OR "Social Behaviour" OR "Social Support" OR "Socio-Economics" OR "Human Well-being" AND **Assessment Framework – related keywords:** "Assessment Framework" OR "Evaluation Methodology" OR "Measurement Criteria" OR "Indicators" OR "Guidelines" OR "Best practices" OR "Method" OR "Technique" OR "Procedure" OR "System" OR "Analysis" OR "Social measurement" OR "Social evaluation" OR "Social criteria "OR "Social indicators" AND **Construction–related keywords:** "Construction Sector" OR "Construction Industry" OR "Construction Project*" OR "Building Construction" OR "Construction Sites" OR "Construction Work"	1377
Search filtering criteria 1	Subject area: Social Sciences, Business Management and Accounting, Engineering, Environmental Science	1039
Search filtering criteria 2	Language: English, Document type: Articles, Years: 2013 – 2023	504
Search filtering criteria 3	Source: Journals (Restricted to top 10 journals)	216
Exclusion and Inclusion criteria	Exclusion criteria: Studies based on non-construction sector not included Inclusion criteria: The major focus of the social sustainability impact studies within the construction sector	90
Final Filtering criteria	Keywords integrating construction, framework, assessment, and social sustainability	16
Additional records identified	References cited by the selected articles were examined for suitability (Snowballing)	+4
The final set of articles	Synthesising the collection of articles	**20**

1. Choosing the database: The Scopus platform was selected due to its higher journal coverage than similar databases (Christidis et al., 2016). Also, it guarantees high-quality peer-reviewed articles, rigorous inclusion criteria, indexing processes, and availability of more recent publications, apart from providing a reproducible method (Oraee et al., 2019).

2. Selecting initial keywords: The next step is identifying the relevant keywords for the literature search. Hence, as a starting point, an initial keyword combination of 'social sustainability,' 'assessment framework,' and 'construction' was used in Google Scholar. The initial set of keywords is obtained based on the themes of the RQs. The first 100 results were analysed for potentially related keywords to ensure the comprehensiveness of the keywords for searching. These potentially related keywords were used for subsequent literature searches in Scopus.

3. Inclusion/exclusion criteria: Only journal articles in English published after 2013 were included for review. The trend representing the frequency of articles published over the years is plotted, as shown in Figure 1. It can be inferred that the literature on social sustainability and assessment framework started to spike in 2013. Hence, we restricted our sample period from 2013 to 2023. It also helped to understand the patterns and changes within SS in the construction industry over the last decade.
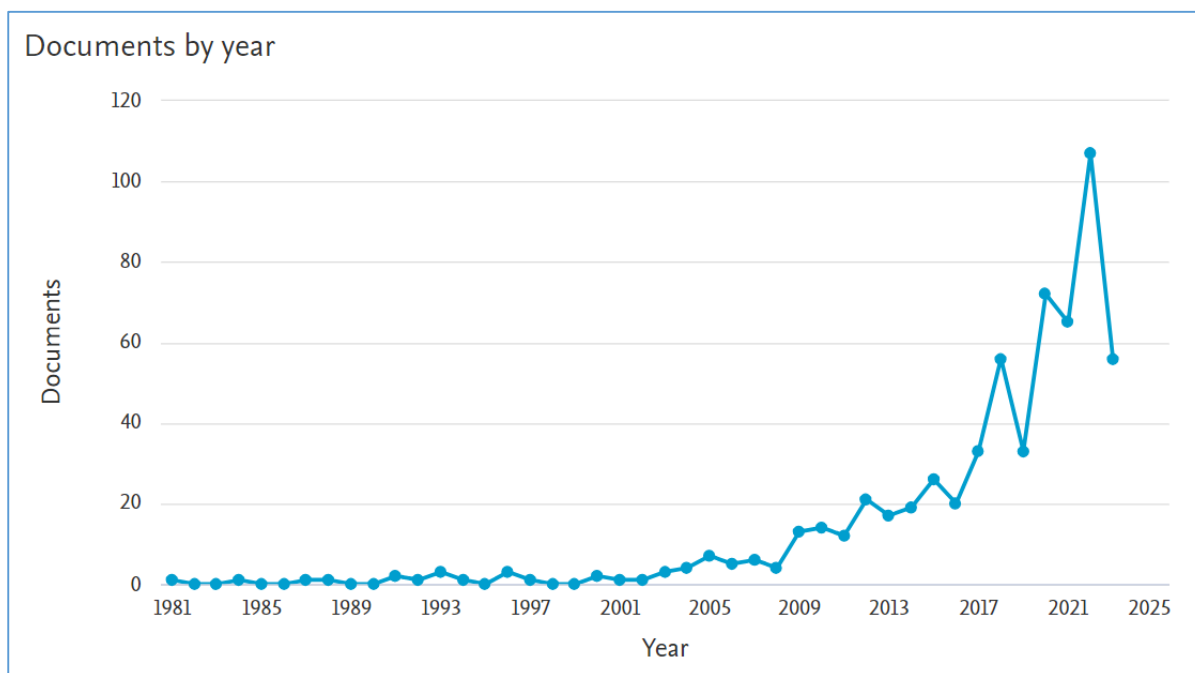

Figure 1: Publication trend

4. Focused filtration: The review is restricted to papers published in the top 10 journals from the list. Various metrics, such as frequency or number of relevant papers published per year, citation scores, and SJR rankings, were used to identify the top journals in the remaining list of publications after exclusion/inclusion criteria. Figure 2 shows the frequency of publications in the top journals.
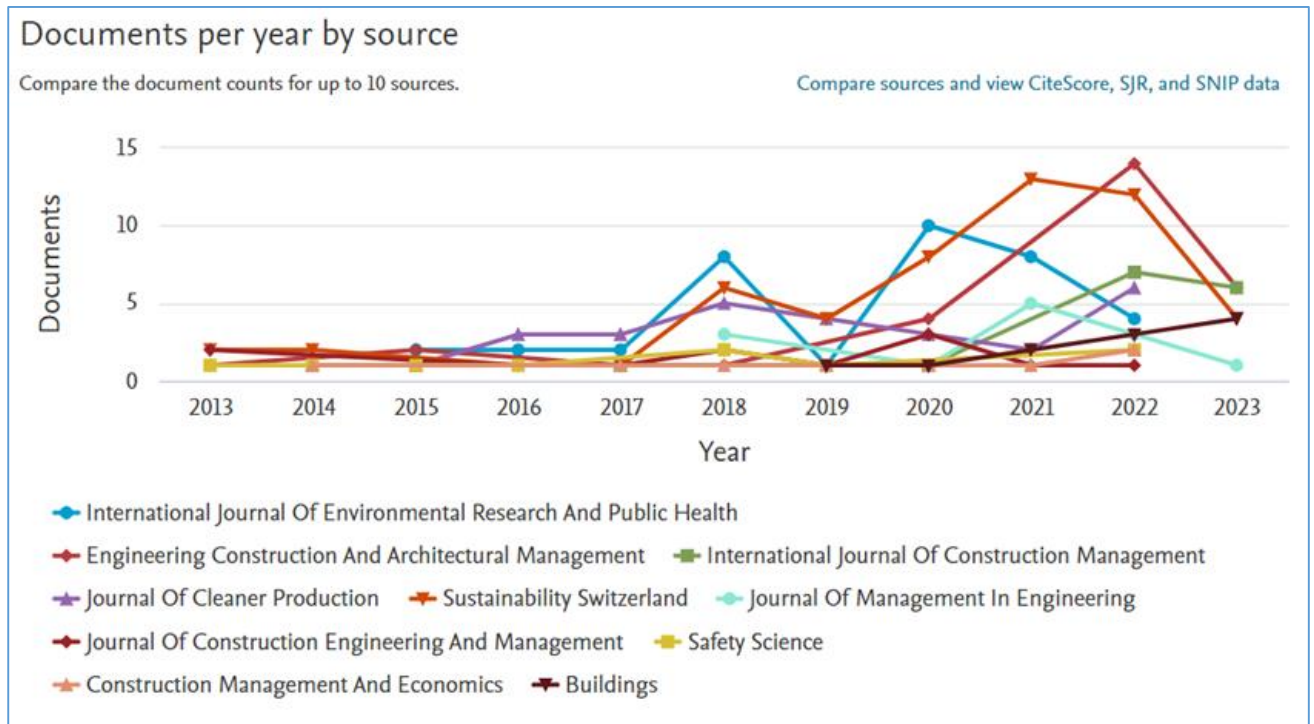
Figure 2: Frequency of publications in the top 10 journals

3. Findings from literature synthesis

A thorough content analysis of the 20 papers was performed based on a detailed reading. A summary of a few essential articles that focus on the conceptual understanding of SS and suggest newer ideas for SS are synthesised below:

Valdes-Vasquez et al. (2013) listed the essential categories to be considered in the framework development. It includes stakeholder engagement, user considerations, team formation, management considerations, impact assessment, and place context. Zuo et al. (2014) commented that the attitudes of industry professionals towards social sustainability in the construction industry have to be investigated. Loosemore and Bridgeman (2017) suggested corporate volunteering can help establish SS within the construction sector. They found that it is motivated by factors beyond altruism, such as loyalty to the organisation, profession, and industry, networking opportunities, and personal satisfaction from helping others.

Wang et al. (2018) noted that Social network analysis (SNA) could be instrumental in developing a multilayered conceptual framework for improving SS in construction by analysing working relationships and embedding social sustainability aspects in these relationships. They also guided other researchers to study the importance of network thinking and continuous monitoring of the network interplay in construction projects to enhance social sustainability in the long run. Troje and Gluch (2019) highlighted the concept of "social procurement." They explained that it would become a distinct domain of practice with collective work toward creating social value through procurement becoming normative. They also explained the evolution of a new professional role called the "employment requirement professional" (ERP) in the Swedish construction sector. They found ERPs are crucial in mediating contrasting interests and enacting different approaches to promote SS in the construction industry.

Similarly, Goel et al. (2020) emphasised that social sustainability has to be integrated with Construction Project Management Practices to bridge the gap between theory and practice in

realising social good through construction projects. Kordi et al. (2021) commented that the social attributes should be mapped against varying degrees of stakeholder involvement at different phases of the project life cycle. This mapping enables project clients to prioritise selecting social sustainability attributes relevant to their projects by engaging with relevant stakeholders throughout the construction project life cycle. In another paper, Kordi et al. (2022) stated that although practitioners recognise the importance of SS attributes, there needs to be more clarity between their perception of importance and the actual implementation during the projects. They found that the most significant gap between perception and practices is identified in the area of stakeholder involvement. Hence, they indicated the need for extra effort to proactively engage stakeholders throughout the construction process. Nezhad et al. (2022) opined that there is a need for a comprehensive and standardised framework for SS assessment in construction projects. They claimed that the absence of an SS assessment framework diminishes the holistic view of sustainability, challenging the selection of factors across different contexts.

4.   Towards a framework for SS and its assessment

Based on the extensive synthesis of the literature, the necessary components for establishing SS in the construction sector and the criteria for assessing the same are presented below:

The construction sector predominantly uses a project management approach. It is suggested that the construction industry re-focus on construction project management from the traditional triple constraints (time, cost, quality) to the penta bottom line, incorporating time, cost, quality, environment, and society. Secondly, the project life cycle can be used as the backbone of the proposed framework for SS. Integrating social aspects across the project lifecycle aligns with sustainable development goals.

Since SS cannot be performed without stakeholder involvement, developing a Stakeholder Management Plan in construction projects is proposed, as per the Guidelines in the Project Management Body of Knowledge (PMBOK, Project Management Institute, USA, https://www.pmi.org). Moreover, "stakeholder engagement" or "stakeholder management" should be considered an essential criterion during SS assessment.

It is believed that education and training can bridge the perception-practice gap. Construction being an informal sector, education of all the relevant stakeholders in this regard is highly stressed. Hence, education and training on sustainability in general and SS in particular are the need of the hour. Naturally, "education and training" should be included as a criterion in the assessment framework.

Health and safety are vital in maintaining SS at the project team level. It is essential to have stricter norms and rules related to safety in the workplace, such as safety guidelines and protocols, mistake-proofing mechanisms to prevent accidents and falls, etc. Hence, it is also vital to have Occupational Health Hazard audits. These aspects should also be part of the SS framework, and the criteria, such as the availability of ISO 45000, strict adherence to safety protocols and guidelines, availability and use of personal protection equipment (PPE), etc., can be assessed.

In general, the local communities are always affected negatively by most of the construction projects. Hence, the focus on SS would make it essential for the construction industry to create a positive experience and impact through increased job opportunities, improved infrastructure, and enhanced quality of life. Policymakers can craft culturally appropriate regulations during the planning, permits, construction, and hand-over, which would strengthen the importance of SS

among construction companies. For example, a social impact assessment should be mandatory for any construction project, regardless of size. Actual impact assessment should be evidenced by interacting with the community and getting feedback and opinions about the projects through focus groups not only before the start of the project but during the entire project life cycle. Hence, the assessment framework can also evaluate mechanisms such as social impact assessment, outcomes planned for improving the community affected by the construction, availability of plan, budget for risk, and mitigation of problems that might affect the community or society.

Continuous monitoring of network dynamics is essential to improve long-term social sustainability. Measuring working relationships in construction projects is recommended, considering inter- and intra-organizational networking. Construction companies can benefit from incorporating SS by enhancing their reputation, attracting socially conscious clients, and improving employee morale and retention. This can be achieved by establishing industry-wide or national awards and certifications similar to LEED. The SS assessment can also include the recognition/awards and certification/accreditation, apart from including the impact the project or construction company created on the society/community through appropriate performance measures.

Given the many factors considered for social sustainability assessment, it is also envisaged to have a model that can rank these factors and help the decision-makers prioritise and use them.

5. Conclusion

This paper started with the claim that SS is not given due importance in the construction sector. Hence, a literature review was undertaken based on the research questions addressing the recent trends and identifying the criteria for assessing the SS. The temporal analysis capturing the trend of publications and the frequency of publications in various journals showed a significant interest in this field. It answered the RQ1. However, the review revealed that only a few assessment frameworks were available to evaluate SS within the construction sector. Based on the synthesis of about 20 articles published in the last decade, an attempt was made in this paper to uncover the constituents of SS. In addition, various factors and criteria for assessing or evaluating the SS were retrieved in response to the RQ2 raised earlier. Assessment frameworks provide a structured approach to establishing SS in construction projects apart from ensuring socially responsible practices are incorporated. Moreover, it can also enable construction companies to monitor and evaluate their social sustainability performance, leading to continuous improvement and accountability. This piece of work, with its initial idea for the components/guidelines of SS and criteria for assessment, contributes towards achieving the same.

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