APPLIED MANAGEMENT PERSPECTIVES

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With immense pleasure and gratitude, we celebrate the forthcoming launch of the 5th issue of "Applied Management Perspectives." As Editor-in-Chief, it is my honour to extend a warm welcome to all our esteemed readers, contributors, reviewers, and editorial team members.

Since its inception, "Applied Management Perspectives" has endeavoured to serve as a beacon of knowledge dissemination and intellectual exchange in the realm of management studies. Our mission remains steadfast: to provide a platform for the dissemination of high-quality research and thought leadership aimed at advancing knowledge and fostering dialogue among scholars, practitioners, policymakers, and other stakeholders.

In this forthcoming issue, we are happy to present a diverse collection of research papers and insightful articles contributed by renowned academicians, scholars, management students and executives across various domains of management. From innovative approaches to addressing contemporary challenges to critical analyses of emerging trends, each article provides valuable insights that promise to enrich the discourse in our field.

As we continue to uphold our commitment to excellence, integrity, and inclusivity, we remain dedicated to maintaining quality and ethical publishing practices with the help of a network of expert reviewers and editors.

I extend my heartfelt appreciation to all the authors who have entrusted us with their scholarly work, as well as to the diligent reviewers and dedicated editorial team members whose invaluable contributions have made this issue possible. Your collective efforts exemplify the spirit of collaboration and scholarly excellence that defines "Applied Management Perspectives."

May this edition inspire our readers with new insights, new knowledge, new ideas, spark meaningful discussions, and pave the way for future advancements in the field of management studies.

Thank you for your continued support and engagement. Together, let us continue to push the boundaries of knowledge and contribute towards a brighter future through the power of applied management perspectives.

Warm regards,

Dr. K Srinivasan
Editor-in-Chief, "Applied Management Perspectives",
Dean, School of Management, Presidency University, Bengaluru.

Editor Notes

Dear Esteemed Readers

It is with great pleasure that we present to you the 5th issue of "Applied Management Perspectives." As stewards of this biannual journal, we are thrilled to continue our journey through the dynamic landscape of management practices, insights, and innovations.

In this edition, we delve deeper into the intricate tapestry of applied management, exploring a diverse array of topics that reflect the ever-evolving nature of the field. Our contributors have astutely examined emerging trends, best practices, and challenges across various domains, offering valuable insights and perspectives that resonate with the complexities of today's global business environment. This issue showcases the resilience and adaptability of the management community in the face of unprecedented challenges. From navigating the disruptions wrought by the ongoing global security crisis to harnessing the power of technological advancements, our contributors provide nuanced analyses and practical strategies to navigate uncertainty and drive sustainable growth.

Furthermore, this issue explores critical themes such as leadership effectiveness, organizational resilience, business analytics, financial planning and the imperative of ethical decision-making in a rapidly changing world. These articles serve as a testament to the depth and breadth of knowledge within the management discipline and underscore the importance of continual learning and adaptation. We extend our heartfelt gratitude to all our contributors for their scholarly contributions, which serve as catalysts for meaningful dialogue and intellectual inquiry. We also express our sincere appreciation to the leadership of Presidency University for their steadfast support and commitment to academic excellence.

With earnest gratitude and profound thanks, we would like to acknowledge the continuous guidance of Dr Nissar Ahmed, Chancellor, Dr Anubha Singh, Vice Chancellor, Dr Surendra Kumar A.M - Pro-Vice Chancellor, Dr. Sameena Noor Ahmed Panali, Registrar of Presidency University and Mr. Mrinmoy Biswas, Registrar - Accreditations & Corporate Relations for their initiative, continuous encouragement and motivation.

We wish to thank the SOM Director Dr Arul M J, Editor-in-Chief Dr K Srinivasan - Dean, School of Management, for his guidance and untiring support, in ensuring that the issue sees the light of the day. We are also extremely thankful to the Dr Prema Sankaran, Associate Dean, School of Management and Dr Prachi Beriwala -Associate Dean - SOM who has been a pillar of strength and motivation, all through the journey.

As you engage with the articles in this issue, we encourage you to approach them with curiosity and an open mind. Let us continue to learn, collaborate, and innovate as we navigate the complex and dynamic terrain of applied management.

Thank you for your continued support and readership.

Warm regards,
Dr Virupaksha Goud

IMPACT OF ORGANIZATIONAL CULTURE ON EMPLOYEES' COMMITMENT: A CASE OF ODA BULTUM UNIVERSITY

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ABSTRACT

The purpose of this study was to determine the effect of organizational culture on the commitment of employees in the Oda Bultum University. To achieve the study objectives, the researcher has used explanatory research design in determining relationship between different types of organizational cultural traits and employees' commitment. The stratified random sampling technique has been used to select the sample size of 298 numbers from Different Directorates, Colleges, Institutes of the 1167 study population. Data has been collected for the study from the sample with the use of standardized questionnaires, adapted from the Denison organizational culture survey and Allen and Meyer's standard questioner known as organizational commitment questionnaire (OCQ) The collected data has been be analyzed and interpreted quantitatively using descriptive and inferential statics in SPSS version 20. The study has evaluated the existing organizational culture of the University and showed clearly what the organizational culture looks like and what impact that culture brought on employees' commitment.

Key Words: Organizational Culture, Employees' Commitment

INTRODUCTION

Organizational culture is an elusive concept with varying but closely related definitions. According to (Denison, 1990) culture refers to the deep structure of organizations, which is rooted in the values, beliefs and assumptions held by organizational members. (Schein, 2010) stated culture as a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. For (Bauer & Erdogan, , 2012) Organizational culture refers to a system of shared assumptions, values, and beliefs that show employees what is appropriate and inappropriate. Generally, from the above definitions we can understand that culture is a set of values, belief systems and norms that are inherent in an organization and to which the members of the organizations adhere to and taught to new members.

Among these various culture representations, the Denison model is chosen for this study because first it is rooted in research on how culture influences organizational performance, and is focused on those cultural traits that emerged from the research as having a key impact on business performance. In contrast to most other frameworks, this model also offers a convenient measurement of parameters and assessment methods for culture and applicable to all organizational levels. This model is based on four cultural traits that have been shown to have a strong influence on organizational performance: involvement, consistency, adaptability, and mission. Each of these traits is measured with three component indexes, and each of those indexes is measured with five survey items (Cooper, Cartwright, & Earley, 2001) Just like organizational culture, there is also no consensus on the definition and models of employees' commitment.(Meyer, 2016) Although there are several definitions and models that portray the dimensions of employees' commitment, a tri-dimensional model that incorporates affective, continuance, and normative commitments,

developed by Allen and Meyer (1990), will be used in this study to examine its association with organizational culture.

As (Vanarse, 2019) referring to Allen and Meyer (1990) stated affective commitment is the desire to remain a member of an organization due to an emotional attachment to the organization. Members who are committed as an effective level stay with organization because they view their personal employment relationship as congruent to the goals and values of the organization.

The second dimension of the tri-dimensional model of organizational commitment is continuance commitment. Continuance commitment is a desire to remain a member of an organization because of awareness of the cost associated with leaving it. According to (Allen & Meyer, 1990) continuance commitment is 'the perception that it would be costly to discontinue a course of action'. So, employees prefer to continue employment in the organization because they need to do so. Continuance commitment comes into existence when employees feel that they will get benefit if they stay and they will incur cost if they leave. For example employees might be enjoying high pay and other benefits related to Job seniority if they stay in their current organization but such benefits may be lost if they move to another organization (Vanarse, 2019) The third dimension is normative commitment it is defined as the individual's bond with the organization due to an obligation on the part of the individual. Meyer and Parfyonova (2010) believed that normative commitment has two faces: one is moral duty and the second is indebted obligation. Normative commitment exists when employees have the feeling to stay in the organization is the 'right' or 'moral' thing to do so. As (Allen & Meyer, 1991) has stated that 'this moral obligation arises either through the process of socialization within the society or the organization'. In either case it is based on a norm of reciprocity, in other words if the employee receives any benefit, it places him in the organization under the moral obligation to respond in kindness.

Even though there is inconsistency of conclusions on the degree of its influence and which organizational culture traits have significant and positive influence on employees' commitment, most researchers agree that organizational culture is one the major factor which has significant impact on employees' commitment (Allen & Meyer, 1990); (Meyer, 2016); (Jahan, Huynh, & Mass, 2022).

1. STATEMENT OF THE PROBLEM
Among the numerous studies who has shown impact of organizational culture on employees' commitment from around the world, Africa, and Ethiopia, let us see some of them.

Aiming at assessing effect of organizational culture on the organizational commitment, (Sarhan, Harb, Shrafat, & Alhusban, 2019); and (Shoaib A. , Zainab, r Maqsood, & Sana, 2012); (Asghar, Mojbate, & Sedeghi, 2015) have shown that there is significant positive relationship between overall organizational culture and employee commitment. In contrast, to the above According to Williams, Rondeau & France Scutti, (2007) the culture does not have a strong and significant effect on the employees' commitment.

Though the number of researches conducted on the relationship between of organizational culture and employees' commitment are very few unlike other part of the world, the same controversy in the conclusions of the researchers is still continued among African scholars too. For example, A study by (Nongo & Ikyanyon, 2012) proved that corporate culture is important in improving the level of employee commitment to the organization but not all corporate cultural measures have effect on employee commitment. They have shown in their research that, consistency & Mission; two of the organizational culture traits on Dension model, are not significantly correlated with employees' commitment. To the contrary, Hakim (2015) and Mousa, M. (2017). found out positive and significant relationship between overall organizational culture and employees'

commitment.

2. RESEARCH QUESTION
The following research question were raised:
•	What is impact of involvement trait of organizational culture on employees' commitment in the university?
•	What is impact of consistency trait of organizational culture on employees' commitment in the university?
•	What is impact of adaptability trait of organizational culture on employees' commitment in the university?
•	What is impact of mission trait of organizational culture on employees' commitment in the university?

3. OBJECTIVES OF THE STUDY
1.3.1. General objective of the study
The main objective of the study was to assess the impact of organizational culture on employee commitment in Oda Bultum University.

4. SPECIFIC OBJECTIVES OF THE STUDY
The specific objectives of this study were to assess:
•	Impact of involvement trait of organizational culture on employees' commitment in the university?
•	Impact of consistency trait of organizational culture on employees' commitment in the university.
•	Impact of adaptability trait of organizational culture on employees' commitment in the university.
•	Impact of mission trait of organizational culture on employees' commitment in the university.

5. RESEARCH HYPOTHESIS
Based on the literature review the following hypotheses were tested:
Ho1: There is no significant relationship between involvement and employees' commitment. (Ho1:r=0)
H1: There is significant relationship between involvement and employees' commitment. (H1:r ≠0)

Ho2: There is no significant relationship between consistency and employees' commitment. (Ho2:r=0)
H2: There is significant relationship between consistency and employees' commitment. (H2:r≠0)
Ho3: There is no significant relationship between adaptability and employees' commitment. (Ho3:r=0)
H3: There is significant relationship between adaptability and employees' commitment. (H3:r≠0)
Ho4: There is no significant relationship between organizational mission and employees' commitment. (Ho4:r=0)
H4: There is significant relationship between organizational mission and employees' commitment. .(H4:r≠0)

6. RESEARCH DESIGN

In order to achieve the study objectives, the researcher used explanatory research design in determining causal relationship between the different types of organizational cultural traits and employee commitment. Across- sectional survey (one-shot study) using a standardized questionnaire administered to a sample will be used as a research strategy. (Saunders, Lewis, & Thornhill, 2009) I used cross sectional survey because my research question needs the study of a particular phenomenon at point of time. This strategy also be used to collect quantitative data which has been analyzed and interpreted quantitatively using descriptive and inferential statics in SPSS version 20

6.1 Types and Source of Data

Both Primary and secondary data sources were used during the study. Primary data was collected from employee of Oda Bultum University with the use of standardized questionnaires. Secondary data was collected from books, journals and from different offices of the university by interviewing concerned bodies.

6.2. Method of Data Collection

Data was collected for this study with the use of standardized questionnaires. Organizational culture was measured using some items adapted from the Denison organizational culture survey (Denison, 1990) The instrument has four sub scales measuring the four main cultural traits

namely, involvement, consistency, adaptability, and mission.

Organizational commitment was measured using Allen and Meyer's organizational commitment questionnaire (OCQ). The instrument contains 18 items that measure the employees' level of identification with their organizations on a 5-point Likert type scale starting from 1-strongly disagree to 5- strongly agree.

6.3. Sampling Design
6.3 .1. Study Population

The study population was the total number of academic and administration staff members of Oda Bultum University (1167 employees)

6.3.2 Sample Size and Its Determination

In quantitative research it is believed that if the sample is chosen carefully using the correct procedure, it is then possible to generalize the result to the whole of the research population (Dawson, 2002). Thus, to determine the appropriate sample size from the study population, for 95% confidence level and 0.05 precision applying Yamane (1967) formula:

$$n = N/1 + N(e^2)$$

Where:

N = study population
n = sample size
e = 0.05 at 95% confidence level.

Therefore, the sample size has been

$$n = 1167/1 + 1167(0.05)^2 = 298$$

6.4.3. Sampling Technique

The study used probability sampling technique. The aggregate population of the study was stratified according to different directorates, colleges, institutions and schools in the university. The stratified random sampling technique was applied, and the sample size of each stratum was determined using the method of proportional allocation under which the sizes of the sample from different strata were kept proportional to the size of the strata .That is if pi represents the proportion of the population included in stratum i and n represents the total sample size, the number of elements selected from stratum i is n*pi. (C.R.Kothari, 2004)

Table 1.Summary of Population and sample size from Directorates

	Name of Directorate,College or Institute of OBU	Total population	Sample population	Percentage
1	Registrar Office	20	5	1.7 %
2	Ethics and Anti-Corruption Directorate		1	0.33 %
3	HRM Directorate	17	4	1.3 %
4	Facility Development Management Directorate	300	76	25 %
6	Public and International Relation Dictorate	4	1	0.33 %
7	Internal Audit Directorate	3	1	0.33 %
8	Finance and Procurement Directorate	**39**	**10**	3.3%
9	Income Generation Enterprise Directorate	**20**	**5**	1.7 %
10	Student Service Directorate	**214**	**55**	**18%**
11	ICT Directorate	**12**	**3**	**1%**
12	Library and Documentation Directorate	**59**	**15**	**5%**
13	Dender, HIV/AIDs and Special need Dir	**4**	**1**	0.33 %
14	Academic Program and Development Directorate	**3**	**1**	0.33 %
15	Quality Assurance Directorate	**9**	**2**	**0.67** %
16	Property Administration Directorate	**19**	**5**	1.7 %
18	The President and V/Precedents Offices Supportive Staff Members	**12**	**3**	**1%**
	Sub Total	**742**	**189**	**64%**

Table 2. Summary of Population and sample size from Colleges, Institutes and from School of Law

	Name of College or Institute of OBU	Total population	Sample population	Percentage
20	College of Agriculture	**71**	**18**	**6%**
21	College of Natural Resource and Environmental Science	**47**	**12**	**4%**
22	College of Natural and Computational Science	**97**	**25**	**8%**
23	College of Business and Economics	**31**	**8**	**2.7%**

24	College of Social Science and Humanity	**63**	**16**	**5.4%**
25	Institute of Technology	**77**	**19**	**6.4%**
26	Institute of Land Administration	**28**	**7**	**2.3%**
27	School of Law	**11**	**3**	**1%**
	Sub Total	**425**	**108**	**36%**
	Grand Total	**1167**	**298**	**100 %**

6.5. Data Analysis

6.5.1. Method of data analysis

After the data was collected, it was analyzed in both descriptive and inferential statistics. In the descriptive statistics, the researcher used frequencies, percentages, Mean and S.D and in the inferential statistics, Correlation analysis and multiple regression analysis were applied. The researcher used correlation analysis to know existence of any association between variables under the study and if there is an association, of what degree? Multiple regression was used to answer the question "is there any cause and effect relationship between the dependent variable and the independent variables?"If yes, of what degree and in which direction? (C.R.Kothari, 2004) To apply the Correlation and multiple regression analysis, data was coded and summarized, then it was transferred to SPSS to be analyzed and presented.

6.5.2. Model Specification

The following model was used for the purpose of running multiple linear regressions that is necessary to test impact and statistical significance of organization culture on employees" commitment

Research Model,

$$Y = B + B1\ 1 + B2\ 2 + B3\ 3 + B4\ 4 + \varepsilon$$

Where: $\check{Y}$ = Dependent variable (employee commitment)

B = the constant term

B1,B2,B3 and B4 = coefficient of slope of regression model

X1, X2, X3, and X4= Independent variables (involvement, consistency, adaptability and Mission)

ε = error term

7. Validity and Reliability of the Study

To avoid defective measurement tools errors, in this research the researcher used previously validated items adapted from the Denison organizational culture survey and Allen and Meyer's standard questionnaire known as organizational commitment questionnaire (OCQ) Besides the validity and reliability of these items also evaluated in other many research works (Jahan, Huynh, & Mass, 2022); (Nongo & Ikyanyon, 2012); (Srinivasan, Desalew, & Belayneh, 2018) Apart from these, to determine the validity and reliability of the items the researcher also used correlation coefficient and Cronbach Coefficient alpha test. In order to test the construct validity, correlation coefficient for the independent and dependent variables was calculated to ensure that independent variables are positively related with the dependent variable, thus the independent variables can be considered as a good measure of employee commitment. The Cronbach Coefficient alpha test was applied to establish the instrument reliability and it was used to measure the internal consistency of independent and dependent variables.

Reliability: According to C.R. Kothari,2004 reliability refers to consistency, where internal consistency involves correlating the responses to each question in the questionnaire with those other questions in the questionnaire.

One of the foremost commonly used indicators of internal consistency is Cronbach's alpha coefficient. According to (Pallant ,2005), the Cronbach's alpha coefficient of scales should be at least 0.70 and the higher the better. Therefore, as shown on table 3.2 below, the results for reliability test of Cronbach's Alpha Coefficients are above 0.7. Therefore, it can be concluded that each variable represents a reliable and valid construct.

TABLE 3.2: Measurement of reliability Analysis

Organizational Culture Dimensions	Cronbach's Alpha	No. of Items
Involvement	0.808	9
Consistency	0.830	9
Adaptability	0.823	9
Mission	0.884	9
Employees' Commitment	0.779	18

8.1 Demographic Profile of the Respondents
This section presents a descriptive analysis of the personal profile of the respondents of Oda Bultum University employees. The personal profile includes age, gender education level, experience, marital status and employment groups respectively. This profile of respondents is summarized in the table 4.1 below.

Table Demographic profile of Respondents

Variables	Categories	Frequency	Percentage
Age	18-27	81	33.6
	28-37	105	43.6
	38-47	43	17.8
	48 and above	12	5.0
	Total	241	100.0
Gender	Male	191	79.3
	Female	50	20.7
	Total	241	100.0
Educational level	Level I-1V	54	22.4
	first degree	73	30.3
	Masters and above	114	47.3
	Total	241	100.0
Experience	less than 1 year	27	11.2
	1 to 3Years	41	17.0
	3 to 5Years	82	34.0
	Above 5Years	91	37.8
	Total	241	100.0
. Marital Status	Single	54	22.4
	Married	184	76.3
	Divorce	3	1.2
	Total	241	100.0
Employment Group	Academic Staff	97	40.2 %)
	Administrative staff	144	59.8%)
	Total	241	100.0

Source: Primary Data computed in SPSS, 2020

As shown in the table above, 84 (34.9%) of the respondents were between 18-27 years of age, 100 (41.5%) of them were between 28-37 years of age, 45(18.7%) of them were between 38- 47 years and the remaining 12 (5%) of them were at the age of 48 and above. This result shows majority of the respondents were found between 18 and 37 years of age . As far as gender is concerned 192(79.7%) of the respondents were male and the remaining 49(20.3%) were females.

Regarding Level of Education of the respondents, most of the them i.e. 180 (74.7%) were university graduates with Bachelor degree, and masters and above, and the remaining 61(25.3%) of them were. Level I- IV. Besides 169 (70.1%) of the respondents had 3 and more than 3 years of work experience in the organization.

As far as employment group of the respondents is concerned 144 (59.8%) them were in administrative group and the remaining 97 (40.2 %) of the them were academic staffs.

8.2 Descriptive Analysis
In this section the researcher has summarized the responses of the respondents for the 36 organizational culture dimensions items and the

As we can easily understand from the table, The lower the mean, the more the respondents disagree with the statements. The higher the mean, the more the respondents agree with the statement. Hence, in this study, the opinion of

18 employees' commitment Likert scale items using frequencies, percentages, mean and standard deviation. Finally grand mean and standard deviation were used for interpretation The main reason for using these measurements is to demonstrate the average and variability responses of respondents for each dimension included under independent and dependent variables.

According to (Sozen & Güven, 2019), (Tadesse & Umbuse, 2021) the calculated mean score of an item was classified in ranges of five-scaled Likert's measured strongly disagree, disagree, neutral, agree, and strongly agree (very low, low, moderate, high and very high) as shown in Table 4.1. below.

Table Weighted mean results for Likert scale

Mean	Response
From 1.00 to less than 1.80	**Very low**
From 1.81 to less than 2.60	**Low**
From 2.61 to less than 3.40	**Moderate**
From 3.41 to less than 4.20	**High**
From 4.21 to less than 5.00	**Very high**

employees on each dimension for both independent and dependent variables are labelled according to the grand mean and standard deviations score result.

Table 2.Descriptive statistics summary result of Involvement dimension of organizational culture

	Responses frequencies and percentages Respectively										Mean	S. D
	StronglyAgree		Agree		Neither Agreenor Disagree		Disagree		Strongly Disagree			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
Q1	19	7.9	121	50.2	37	15.4	32	13.3	32	13.3	3.27	1.210
Q2	62	25.7	93	38.6	45	18.7	35	14.5	6	2.5	3.71	1.080
Q3	15	6.2	60	24.9	74	30.7	84	34.9	8	3.3	2.96	.991
Q4	17	7.1	75	31.1	50	20.7	90	37.3	9	3.7	3.00	1.059
Q5	59	24.5	73	30.3	30	12.4	58	24.1	21	8.7	3.38	1.318
Q6	45	18.7	96	39.8	33	13.7	53	22.0	14	5.8	3.44	1.189
Q7	23	9.5	62	25.7	39	16.2	94	39.0	23	9.5	2.87	1.183
Q8	30	12.4	70	29.0	94	39.0	34	14.1	13	5.4	3.29	1.032
Q9	13	5.4	74	30.7	46	19.1	76	31.5	32	13.2	2.83	1.161
											3.19	**1.136**

Table 3.Descriptive statistics summary result of Consistency dimension of organizational culture

	Responses frequencies and percentages Respectively										M	S. D
	Strongly Agree		Agree		Neither Agreenor Disagree		Disagree		Strongly Disagree			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
Q10	16	6.6	68	28.2	74	30.7	58	24.1	25	10.4	2.97	1.099
Q11	27	11.2	90	37.3	53	22.0	59	24.5	12	5.0	3.25	1.098
Q12	46	18.1	114	47.3	55	22.8	18	7.5	8	3.3	3.71	.969
Q13	23	9.5	55	22.8	82	34.0	70	29.0	11	4.6	3.04	1.042
Q14	28	11.6	79	32.8	51	21.2	66	27.4	17	7.1	3.15	1.155
Q15	19	7.9	65	27.0	71	29.5	53	22.0	33	13.7	2.93	1.164
Q16	21	8.7	67	27.8	69	28.6	70	29.0	14	5.8	3.05	1.073
Q17	9	3.7	58	24.1	77	32.0	71	29.5	26	10.8	2.80	1.041
Q18	18	7.5	91	37.8	62	25.7	61	25.3	9	3.7	3.20	1.022

8.2.3. Adaptability Dimension

Table 4.Descriptive statistics summary result of Adaptability dimension of organizational culture

	Responses frequencies and percentages Respectively										Mean	S. D
	Strongly Agree		Agree		Neither Agreenor Disagree		Disagree		Strongly Disagree			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
Q19	30	12.4	73	30.3	49	20.3	69	28.6	20	8.3	3.10	1.190
Q20	20	8.3	107	44.4	60	24.9	34	14.1	20	8.3	3.30	1.078
Q21	27	11.2	59	24.5	58	24.1	85	35..3	12	5.0	3.02	1.118
Q22	36	14.9	90	37.3	64	26.6	26	10.8	25	10.4	3.36	1.171
Q23	31	12.9	116	48.1	62	25.7	20	8.3	12	5.0	3.56	.986
Q24	17	7.1	83	34.4	58	24.1	40	16.6	43	17.8	2.96	1.229
Q25	39	16.2	49	20.3	63	26.1	76	31.5	14	5.8	3.10	1.181
Q26	96	39.8.	99	41.1	19	7.9	16	6.6	11	4.6	4.05	1.075
Q27	22	9.1	77	32.0	74	30.7	57	23.7	11	4.5	3.17	1.038
3.29	**1.118**											

8.2.4. Mission Dimension

Table 5.Descriptive statistics summary result of Mission dimension of organizational culture

	Responses frequencies and percentages Respectively										Mean	S. D
	Strongly Agree		Agree		Neither Agreenor Disagree		Disagree		Strongly Disagree			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
Q28	60	24.9	111	46.1	15	6.2	47	19.5	8	3.3	3.70	1.142
Q29	63	26.1	85	35.3	53	22.0	27	11.2	13	5.4	3.66	1.141
Q30	63	26.1	98	40.7	27	11.2	47	19.5	6	2.5	3.68	1.133
Q31	19	7.9	74	30.7	89	36.9	40	16.6	19	7.9	3.14	1.043
Q32	27	11.2	76	31.5	91	37.8	47	19.5	0	0	3.34	.918
Q33	39	16.2	97	40.2	63	26.1	36	14.9	6	2.5	3.53	1.013
Q34	40	16.6	73	30.3	46	19.1	53	22.0	29	12.0	3.17	1.282
Q35	41	17.0	67	27.8	68	28.2	56	23.2	9	3.7	3.31	1.117
Q36	27	11.2	55	22.8	61	25.3	75	31.1	23	9.5	2.95	1.172
3.39	**1.107**											

8.2.5 Employees' Commitment

Table 6. Descriptive statistics summary result of employees' commitment

	Responses frequencies and percentages Respectively										Mean	S. D
	Strongly Agree		Agree		Neither Agreenor Disagree		Disagree		Strongly Disagree			
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
Q1	52	21.6	49	20.3	32	13.3	90	37.3	18	7.5	3.11	1.317
Q2	86	35.7	71	29.5	38	15.8	42	17.4	4	1.7	3.80	1.152
Q3	41	17.0	60	24.9	48	19.9	81	33.6	11	4.6	3.16	1.195
Q4	24	10.0	96	39.8	50	20.7	68	28.2	3	1.2	3.29	1.024
Q5	60	24.9	73	30.3	52	21.6	35	14.5	21	8.7	3.48	1.252
Q6	31	12.9	64	26.6	51	21.2	85	35.3	10	4.1	3.09	1.139
Q7	41	17.0	66	27.4	47	19.5	67	27.8	20	8.3	3.17	1.242
Q8	10	4.1	46	19.1	71	29.5	82	34.0	32	13.3	2.67	1.060

Q9	21	8.7	86	35.7	55	22.8	60	24.9	19	7.9	3.12	1.122
Q10	43	17.8	56	23.2	52	21.6	67	27.8	23	9.5	3.12	1.264
Q11	26	10.8	49	20.3	54	22.4	80	33.2	32	13.3	2.82	1.213
Q12	33	13.7	91	37.8	48	19.9	45	18.7	24	10.0	3.27	1.202
Q13	64	26.6	88	36.5	42	17.4	21	8.7	26	10.8	3.59	1.265
Q14	34	14.1	36	14.9	42	17.4	90	37.3	39	16.2	2.73	1.293
Q15	31	12.9	34	14.1	62	25.7	87	36.1	27	11.2	2.81	1.198
Q16	50	20.7	101	41.9	56	23.2	28	11.6	6	2.5	3.67	1.011
Q17	33	13.7	56	23.2	77	32.0	68	28.2	7	2.9	3.17	1.075
Q18	34	14.1	80	33.2	35	14.5	72	29.9	20	8.3	3.13	1.223
3.18	**1.18**										

As we can see from above tables (table 4.2-4.6) organizational culture model involvement has a total mean of 3.19 with standard deviation 1.136 and consistency has a total mean of 3.12 with a standard deviation of 1.074. Adaptability and mission has 3.29 mean with 1.118 standard deviation and 3.39 mean with 1.107 standard deviation respectively. Similarly, employees' commitment has 3.18 mean with 1.180 standard deviation.

Generally, from the grand means of the above organizational culture dimensions and employees' commitment, we can understand that, all the components of organizational culture models and employee's commitment are falling in to the moderate agreement level. This finding of the grand mean is consistent with the research finding in Arba Minch University by- (Srinivasan, Desalew, & Belayneh, 2018) as far as Adaptability of organizational culture dimension and employees' commitment are concerned since they also confirmed that most of the university academic staffs had medium level of agreement. However, regarding organizational dimensions: involvement, Consistency and mission majority of the Oda Bultum university academic staffs had low level agreement in contrary to this research finding.

8.3.1. Correlation Analysis

As per (Marczyk, DeMatteo, & Festinger, 2005) Correlations is the most basic and most useful measure of association between two or more variables expressed in a single number called a correlation coefficient (r). Correlations provide information about the direction of the relationship (either positive or negative) and the intensity of the relationship. It takes values in the [1,-1] ranges. If r>o it indicates direct or positive correlation. If r<o it indicates indirect or negative correlation. Whereas if r=0 there is no relationship between the variables under consideration. The closer it gets to 1.0 (whether it is negative or positive), the stronger the relationship. Marczyk et al., (2005) also stated correlations of .01 to .30 are considered as weak, correlations of .30 to .70 are considered as moderate, correlations of .70 to .90 are considered as strong, and correlations of .90 to 1.00 are considered as very strong. Accordingly, the Correlations between the selected four organizational culture dimensions (i.e. involvement, consistency, adaptability and mission) and employees' commitment was computed in the following the table below:

Table 7. Correlation coefficients between dependent and independent variables

``		Involvement	Consistancy	Adaptablity	Mission	Employees_Commitment
Involvement	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	241				
Consistancy	Pearson Correlation	.757**	1			
	Sig. (2-tailed)	.000				
	N	241	241			
Adaptablity	Pearson Correlation	.728**	.832**	1		
	Sig. (2-tailed)	.000	.000			
	N	241	241	241		
Mission	Pearson Correlation	.635**	.636**	.661**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	241	241	241	241	
Employees_Commitment	Pearson Correlation	.648**	.678**	.714**	.617**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	241	241	241	241	241
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: Own Survey, computed in SPSS, 2020

The above table 4.7 explains the relationship between the overall organizational culture and employees' commitments. Based on the output indicated, there is a moderate positive significant correlation between involvement, consistency and mission dimensions of organizational culture and employee's commitment with correlation coefficient r=0.648, 0.678, 0.617 respectively. Adaptability has strong positive statistically significant correlation with employees commitment (r=0.714 with p<0.01) Therefore from the above finding the researcher has rejected the null hypotheses there is no significant relationship between involvement, consistency, adaptability ,mission dimensions of organizational culture and employees' commitment because he surely approved the existence of association between the four organizational culture dimensions and employees' commitment including the degree of the association.

8.3.2. Multiple Regression Analysis
In contrast to the correlation coefficient, the coefficient of determination (sometimes known as the regression coefficient) enables us to assess the strength of relationship between a numerical dependent variable and one or more numerical independent variables. The coefficient of determination (represented by r2) can take on any value between 0 and +1. It measures the proportion of the variation in a dependent variable that can be explained statistically by the independent variable. (Saunders, Lewis, & Thornhill, 2009)

The process of calculating coefficient of determination and regression equation using one independent variable is normally termed regression analysis. Calculating a coefficient of multiple determination (multiple regression coefficient) and regression equation using two or more independent variables is termed multiple regression analysis. (Saunders, Lewis, & Thornhill, 2009)

Regression analysis can also be used to predict the values of a dependent variable given the values of one or more independent variables by calculating a regression equation. To predict how much employees' commitment is affected by the values of the four organizational culture dimensions, the researcher would represent this as a regression equation:

$$Y = B_o +$$

B1X1+B2X2+B3X3+B4X4+ε

Where: $\check{Y}$ = Dependent variable (employee commitment)

B_o = the constant term

B1,B2,B3 and B4 = coefficient of slope of regression model

X1,X2,X3, and X4= Independent variables(involvement, consistency, adaptability and Mission)
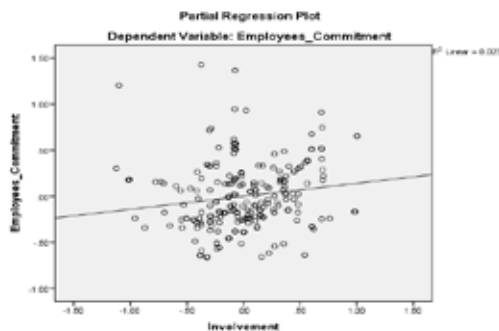
ε = error term

B1,B2,B3 and B4 = coefficient of slope of regression model

X1,X2,X3, and X4= Independent variables(involvement, consistency, adaptability and Mission)

ε = error term

However, before calculating a regression equation the researcher would need to ensure the following assumptions are met:

Linearity assumption: Linearity refers to the degree to which the change in the dependent variable is related to the change in the independent variables. According to (Saunders, Lewis, & Thornhill, 2009) linearity can easily be examined through scatter plots usually drawn by the analysis software. The researcher in this thesis also tested the assumption by producing scatter plots of the relationship between the four independent organizational culture dimensions variables and the dependent variable. By visually looking at the scatter plot produced by SPSS. The relationship between independent variables and the dependent variable found to be linear as shown in the figures below.

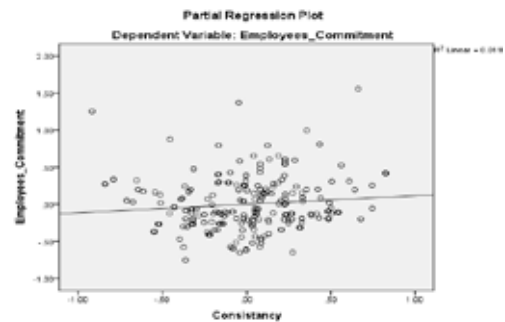**Source: Own Survey, computed in SPSS, 2020**

Figure 2. Relationship between Involvement and Employees Commitment

Figure 3. Relationship between Consistency and Employees Commitment

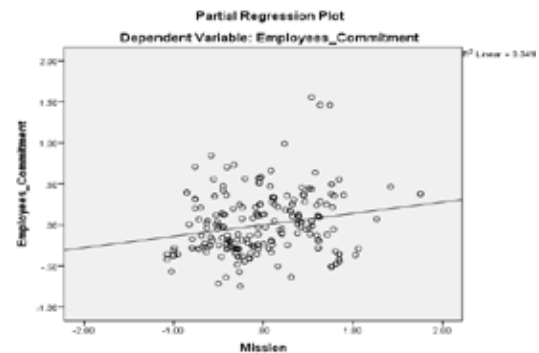Figure 4. Relationship between Adaptability and Employees Commitment

Figure 5. Relationship between Mission and Employees Commitment

Normality assumption test: According to (Gujarati & Porter, 2009) normality assumption says the variables, error terms(εi) has normal distribution with mean zero and variance σ2 for all. Normality assumption can be checked either graphically or numerically. Graphically it can be checked by histogram. Numerically it can be checked either by Kolmogorov-Smirnov and Shapiro-Wilk normality test or by skewness and kurtosis indicators. (Saunders, Lewis, & Thornhill, 2009) However the researcher in this thesis used the graphic (histogram) method to show normality of: his data as follows in figure 4.2.

Therefore, as we can see from the graph since most of the data's is included in the line graph and since it neither skewed to the right nor to the

Figure 6 .Normality Assumption Test (graphically)

left, the researcher has concluded that his data has no normality problem.

Detecting multi collinearity problem: Multicollinearity issue is not detecting whether it is present or not it is a question of degree. There should no high degree (perfect) linear relationship among independent variables. If the variables are perfectly linear estimation of the regression coefficients would be difficult. (Gujarati & Porter, 2009)

As a rule of thumb if our VIF in our SPSS output is < than 10 and tolerance level greater 10%, there is no multi collinearity problem. so, we can continue doing our regression analysis. However, if our SPSS output shows > 10 VIF and tolerance level less than 10%, there is a multi co linearity

problem so we should take remedial measures before proceeding to regression analysis Damodar N. Gujarat and Dawn C. Porter (2009). Based on the above scholars' idea, the researcher has checked whether his data has multi collinearity problem or not as follows:

Table 10. Result of Multi collinearity test

Coefficients		
Model	**Collinearity**	
	Tolerance	**VIF**
Involvement	.373	2.680
Consistency	.257	3.897
Adaptability	.268	3.728
Mission	.507	1.971

Source: Own Survey, computed in SPSS, 2020

From the above SPSS output, we can easily observe the VIF of all variables are < than 10 and we have tolerance level greater 10% all, thus we can conclude that our data is again free from multi collinearity problem.

Detecting Autocorrelation Problem: The assumption autocorrelation tells us that the error term at time t is not correlated with error term at any other point of time. It occurs most frequently in time series data (Gujarati & Porter, 2009) Though there are many ways of testing
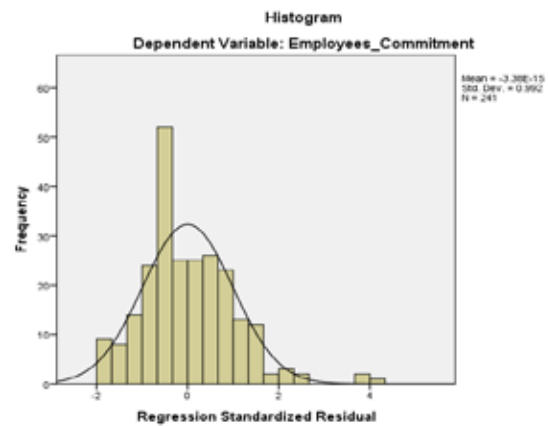
autocorrelation in different literatures, in this research the researcher has used the Durbin Watson method. As a rule of thumb, the DW (Durbin – Watson) statistic should be between the range of 1.5 and 2.5 for the independent observation that is acceptable (Garson, 2012).

Having the above Durbin-Watson rule in mind, the researcher tried to compute autocorrelation in SPSS and displayed the output in the following table

Table 11. Autocorrelation model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.755a	.570	.563	.36843	1.792
a. Predictors: (Constant), Mission, Involvement, Adaptability, Consistency					
b. Dependent Variable: Employees' Commitment					

Source: Research Data, 2020

In the above table, the value of Durbin – Watson statistic is 1.792. and we can see that it is between acceptable ranges. This implies that our data has no Autocorrelation problem.

Homoscedasticity assumption test: The assumption of homoscedasticity refers to equal variance of errors across all levels of the independent variables. This means that errors are spread out consistently between the variables. This is evident when the variance around the regression line is the same for all values of the predictor variable. Homoscedasticity can be checked by visual examination of a plot of the standardized residuals by the regression standardized predicted value. Ideally, residuals are randomly scattered around zero (the horizontal line) providing even distribution.

To assess homoscedasticity, the researcher created a scatter plot of standardized residuals versus standardized predicted values using SPSS and found that heteroscedasticity was not a major problem as shown in the figure below
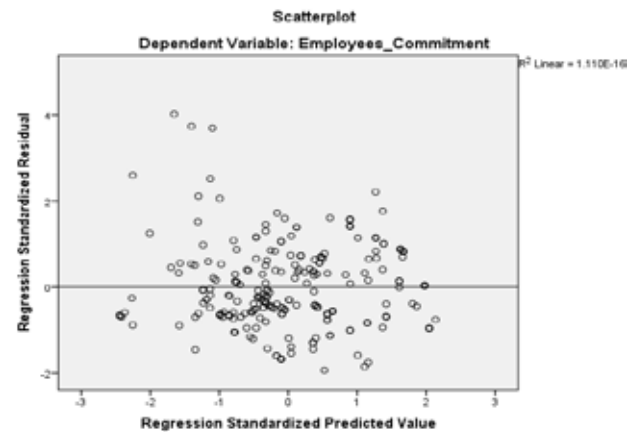

Figure 7 Homoscedasticity assumption test

Regression analysis: After the data was checked for the above required multiple regression assumptions and researcher confirmed that it has passed all the assumptions tests, multiple regression analysis was carried out to determine how well the regression model fits the data (model summary), independent variables statistically significantly predict the dependent variable (ANOVA) and statistical significance of each of the independent variables (regression coefficients)

Table 12. ANOVAᵃ Model fit

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.453	4	10.613	78.188	.000ᵇ
	Residual	32.034	236	.136		
	Total	74.487	240			
a. Dependent Variable: Employees_Commitment						
b. Predictors: (Constant), Mission, Involvement, Adaptablity, Consistancy						

From table 4.10, it is apparent that the regression model 'between the organizational culture and employees' commitment. Has an F statistic of 78.188 and a probability value of 0.000 clearly indicate that the model was significant.

Table 1   Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1 (Constant	.988	.130		7.627	.000	.733	1.243		
Involvement	.141	.059	.166	2.374	.018	.024	.258	.373	2.680
Consistancy	.116	.071	.138	1.639	.102	-.023	.255	.257	3.897
Adabtablity	.286	.067	.352	4.268	.000	.154	.417	.268	3.728
Mission	.139	.044	.191	3.187	.002	.053	.225	.507	1.971

Dependent Variable: Employees' Commitment

In this study, four explanatory variables were identifying to determine a significant difference on employees' commitment at 5% level of significance. The estimated regression model is :

$$Y = B + B_1 1 + B_2 2 + B_3 3 + B_4 4 + \varepsilon$$

$$= 0.988 + 0.141X_1 + 0.116 X_2 + 0.286X_3 + 0.139 X_4 + \varepsilon$$

Hence, the coefficient explains the average amount of change in dependent variable that is caused by a unit of change in the independent variable. Accordingly, the un standardized beta coefficients (β) tell us the unique contribution of each factor to the model. A small p value (<0.05) indicates the predictor variable has made a statistically significance contribution to the model. On the other hand, a high p value (p >0.05) indicates the predictor variable has no significant contribution to the model (George and Mallery, 2003).

The above multiple regression analysis table revealed that adaptability has a positive and significant effect on employees' commitment with β = 0.286, at 95% confidence level (p <0.05). The Beta value (β=0.286) shows that if there is one unit increase in adaptability, there will be 28.6% increase in employees' commitment. Besides since adaptability has higher the absolute value of the beta coefficient compared to other variables of organizational culture dimensions it has higher effect on employees' commitment.

Involvement also has a positive and significant effect on employees" commitment with β= 0.141 at 95% confidence level (p<0.05). The Beta value (β) i.e. 0.141 shows that if there is one unit increase in involvement, there will be 14.1% increase on employees" commitment.

Similarly, Mission has a positive and significant effect on employees' commitment with β= 0.139, at 95% confidence level (p <0.05). The Beta value (β=0.139) shows that if there is a one unit increase in employees" identification of organizational mission, there will be 13.9% increase in employees' commitment. However contrary to the above three dimensions though consistency has positive effect on employees' commitment with β= 0.116, its effect is insignificant since its p value is greater to 5% (p>0.05)

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THE EFFECT OF FARMERS COMMUNITIES OF PRACTICES ON THEIR SUSTAINABLE LEARNING AND ENGAGEMENT

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ABSTRACT

The objective of the paper is to find the relationship between farmers communities of practice on their learning and engagement. Agriculture sector is one of the most unorganized sectors, and at the same time most of the Indian population depends on this sector for livelihood. It is very challenging for governments to administered and steering the diffusion of agricultural innovation. Identifying the factors which can fasten their leaning and engagement through which these innovations can transfer to all farmers in a short time. The agricultural extension division is playing a key role in the process. To address the objective, data was collected from agricultural farmers from five states of southern India. A structured questionnaire was developed and used to collect data from the respondents. Specific data analytical tools were used to analyze the data, the results show a positive relationship between the study variables.

Keywords:
Agricultural Farmers, Agricultural Innovations, Communities of Practice,
Learning and Engagement.

INTRODUCTION:

Agriculture is the real lifeline of any nation. In India, the agriculture sector which comprise more than 50 per cent of the total workforce and contributes around 17-18 percent to the country's GDP (Economic Survey of India, 2018). Though the farming activity seem to be homogeneous in nature lot of diversity do exist. India is growing with an extensive transformative change. Exponential growth in population, expanding urbanization, growing middle income groups, changing dietary preferences of urban people, reducing farm land and accelerated climate change are the emerging challenges for sustainable agriculture with high production. The national agriculture research system is also transforming with the exposed challenges and creating new avenues for tacking challenges. The agricultural innovation by these research institutions encompasses the development of new techniques and technologies, transfer, adoption and diffusion in to the formal agricultural system. The system includes players such as International and National institutions (policies, norms and practices), scientific community, different farming groups, NGOs, individual and group of farmers. Notably, these agricultural innovations are specific to the socio-economic, cultural and technological context.

The main challenge facing agricultural extension in the 21st century is how to develop low-cost sustainable approaches for service provision that go beyond extending messages to playing a key role in promoting farmers as the principal agents of change in their communities. These approaches need to enhance farmers' learning and innovation and improve their capacities to organize themselves for more efficient production and marketing and to demand extension services (David, 2007; Davis et al., 2009; Leeuwis van den Ban, 2004).

The challenges to the agriculture extension and farming communities are many, it can be attributed to the highly intricate and unorganized nature of the Indian agricultural sector, which can be considered the largest unorganized sector in the country. The size of land holdings significantly influences a farmer's income, with the average land holding size in India being approximately 1.15 hectares. This poses a challenge for small-scale or micro farmers, hindering their ability to engage in mass production and diversify into multiple crops. As a consequence, the overall growth of farmers is adversely affected.

Agriculture-dependent households experience an average monthly income as low as 10,218. The escalating capital requirements for farmers further compounds their financial challenges. Over the past decade (2013-2023), the cost of pesticides has surged by 44%, adding to the economic burden on farmers.

Diffusion of innovation into grassroots-level farming involves the investment of time, money, and various resources to introduce and implement new agricultural practices among small-scale farmers. Initiatives like the Krishi Vigyan Kendras (KVKs) plays an important role in this process. These centers, supported by the Indian Council of Agricultural Research (ICAR), serve as knowledge hubs at the grassroots level, providing farmers with training and demonstrations on innovative farming techniques. Time is invested in educating farmers about modern technologies and sustainable practices. For example, KVKs organize workshops and field demonstrations to introduce water-saving irrigation methods, like drip irrigation.

Farmers in states like Maharashtra, through these sessions, learn how to optimize water usage, reduce costs, and enhance crop yields over time. In this study, the researcher focuses on the communities of practice, where farmers form into groups to address specific issues in farming which intern enhances their learning and engagement in their communities.

REVIEW OF LITERATURE:

In order to spread information and give voice to underrepresented groups, community-based learning programmes often use existing networks of practice. Participatory action research, apprenticeships, and peer mentorship are just a few examples of programmes that help people learn from one another, develop their abilities, and work together to solve community problems (Lave, 2011). These projects aim to reinforce social cohesiveness and inclusive growth at the community level by combining formal and informal learning approaches.

According to Wenger (1998), "communities of practices" consist of groups of people who frequently engage in the sharing of information, ideas, and experiences pertaining to a shared interest, profession, or passion. In agricultural settings, communities of practice (CoPs) facilitate communication, knowledge sharing, and innovation among farmers, extension workers, researchers, and other interested parties. Community of Practices (CoPs) help spread innovation in farming by bringing people together through shared practices, workshops, and projects. When people in a community share what they know, it's like a treasure trove of information that everyone may benefit from (Wasko & Faraj, 2005). Knowledge transmission, both tacit and explicit, learning, and innovation cannot exist without it. Improved agricultural practices and outcomes are the result of farmers' access to, absorption of, and use of new information, which is made possible by effective knowledge sharing processes within CoPs

In order for communities of practice (CoPs) to effectively share information, social capital and trust are crucial (Putnam, 2000). Strong interpersonal ties, mutual trust, and shared norms create an atmosphere of openness and collaboration, which is characterised by high levels of social capital. When farmers have trustworthy friends they can confide in, they are more likely to impart new techniques and lessons learned collectively (Pretty & Ward, 2001).

Knowledge sharing in agricultural communities is greatly affected by the availability of information and resources (Foster & Heeks, 2013). New methods can be more easily adopted and shared by farmers who have access to trustworthy information, extension services, and technology resources. Qureshi et al. (2015) found that ICTs such mobile phones, online platforms, and radio programmes greatly help farmers gain access to vital resources and overcome information obstacles.

According to Senge (1990), knowledge exchange and creativity are fostered by CoPs that have an organisational support system and a learning culture. Facilitating the interchange of ideas and practices among farmers are organisations, organisations, and projects that place a premium on ongoing learning, experimentation, and the sharing of information. Learning and growth are driven by participatory techniques, which include farmer field schools, demonstration plots, and peer learning groups (Sumberg & Okali, 1997). Knowledge exchange inside CoPs may only be effectively facilitated by means of reliable communication channels and platforms (Klerkx & Leeuwis, 2008). Opportunities for face-to-face contacts and information sharing are provided via traditional channels including agricultural exhibitions, community meetings, and extension programmes. Furthermore, farmers are able to have access to knowledge, communicate with specialists, and share their experiences in real-time using ICT-based platforms such online forums, mobile applications, and social media (Van Mele et al., 2011). When it comes to encouraging farmers to share what they know, incentives and motivation are key (Lerner & Tirole, 2002). Farmers are more likely to take part in CoPs if they are financially rewarded, publicly acknowledged, and acknowledged for their efforts to share information. Additionally, farmers give their knowledge and experience for the collective benefit of the society due to

intrinsic incentives such compassion, reciprocity, and social recognition (Nahapiet & Ghoshal, 1998). Farmers are more likely to embrace and scale up innovations when there is effective information exchange within CoPs (Davis & Davis, 2009). The dissemination process is accelerated when farmers share their successes, mistakes, best practices, and lessons learned (Rogers, 2003). Additionally, through social influence processes and peer-to-peer learning, innovations are championed by early adopters inside CoPs, which in turn leads to greater diffusion and uptake (Burt, 2004).

According to Van Mele et al. (2011), creativity, co-creation, and adaptability are all promoted by collaborative information exchange within CoPs. In order to tackle local problems and seize local possibilities, academics, farmers, and other interested parties work together to create context-specific solutions (Klerkx & Leeuwis, 2008). Sustainable, relevant, and practical information, technology, and tactics may be co-produced by stakeholders through participatory research, farmer-led experiments, and co-design workshops (Scoones et al., 2007). According to Putnam (2000), when farmers share knowledge, it helps them feel more empowered and builds social capital. This, in turn, makes them more resilient and encourages them to work together. Knowledge sharing programmes help rural communities bond via the development of mutual respect, friendships, and networks (Krishna & Uphoff, 1999). Development results that are more inclusive and sustainable are the result of farmers who are empowered to access resources, advocate for themselves, and participate in decision-making processes (Lynch et al., 2011).

The term "Communities of Practice" (CoPs) is used by Wenger (1998) to describe online networks of people who voluntarily band together to pursue common goals in the form of mutual aid and education. The results are corroborated by studies done by Lave and Wenger (1991), who highlighted the informal character of CoPs and how they help members share information. According to Wenger (1998), the power in CoPs is decentralised, and the importance of shared knowledge and learning among members is a key factor in group dynamics. Members of CoPs actively participate in knowledge sharing initiatives, according to study by Blackmore et al. (2010), which implies that the organisation functions on the principles of cooperation and participatory decision-making. Communities of Practice play a vital role in fostering knowledge sharing, innovation, and the adoption of sustainable practices among farmers. By creating spaces for collaboration, learning, and the exchange of experiences, CoPs enable innovative farmers to enhance their agricultural practices, address challenges, and contribute to the overall development of the farming community. Recognizing the importance of CoPs and providing support for their establishment and maintenance can lead to improved outcomes in agricultural innovation and sustainable farming. Generation of new knowledge through these groups is possible only when people are constantly interacting with one another to share experience and understanding to produce new understandings of new knowledge. Barston and Tusting (2005) mentioned that participation in the groups is an essential aspect of practice-based learning. Brown and Duguid (2001) pointed that these CoPs acts a repository of explicit knowledge (formal in nature) as well as tacit knowledge (intangible and informal in nature) and holds the key to any change process. These groups encourage members to generate a common history or culture by sharing their practices, cases, methods, and repeated interactions (Wenger et al., 2002). Aleksandra Dolinska et al (2016), examines the farmers role in the innovation process through communities of practice (CoPs). In the multiple stakeholders' settings CoPs create a scope for the farmers through their interactions and learning. Sewell et al. (2014) described it as "sharing power with

farmers" which means gaining negotiating capacity. Leeuwis and Aarts (2011) identified that constructing narratives have a direct effect on innovation process within the CoPs and it gives a sense and space for change.

Learning and Engagement

Nieuwenhuis, Loek FM (2002) described a linear model, which explains that research is followed by technological development which is followed by dissemination activities and finally application in the grass root level. The learning needed in the grass root level can be characterized as adaptation to new knowledge and technology. The paper concluded that innovation processes have a hybrid nature: one being the linear, hierarchical model which is applicable for introducing external technology on the shop floor; while the second being innovation that can be seen as informal learning process, in which social networks plays an important role. Farmers are observed to be active in informal learning process, this stresses the need for analyzing informal learning. Interactive learning and innovation should be analyzed from a perspective of uncertainty. In linear approach, it is difficult to predict farmers impulse for learning. Learning skills for interactive innovation is also a part of the innovation process. Innovative farmers are quite capable in this kind of selective processes but, on the other hand, they protect themselves against an excessively chaotic context by staying in strong, known networks. Paradoxically to be continuously innovative they need new impulses from weak, unknown networks. Feder et.al (1993), reviewed both theoretical and empirical literature on adoption of agricultural innovations and the policy interventions promoting technology adoptions. The impact of factors such as credit, information availability, tenure, education, risk, and farm size on farmer adoption behavior, has been a common focus of adoption studies. Both individual adoption behaviors and aggregate diffusion patterns has been developed.

OBJECTIVE:

The objective of the study is to find the relationship between communities of practice and learning and engagement.

H1: there is a positive relationship between communities of practice and learning and engagement of farmers.

RESEARCH METHODOLOGY:

SAMPLING

Sample is a small representative segment of the target universe of the research drawn systematically to collect the needed data for any scientific study. The sampling frame was South India and the data about population was retrieved from the Ministry of Agriculture. There were 5 states of south India during 2021. The population for the present study is agricultural farmers from five states in South India.

SAMPLE SIZE AND TECHNIQUE

In research, the term "sample size" refers to the minimum number of individuals needed to draw valid conclusions. The sample size was calculated scientifically using Israel's formula (Israel, G. D., 1992). Determining sample size is very much essential to determine the research's reliability. The final sample size was 552 based at 5% error in mean estimates.

The purpose and scope of the research compelled to choose probability sampling method to solve the current problem without any bias and with accuracy. Stratified random sampling technique was rather suitable and technically sound method of sampling used in this research. It involves stratification of the population in to small homogeneous groups known as strata which are smaller consistent units (strata) and from them draws at random a sample. The advantage of this method is it divides the greater population into homogenous stratus and helps to draw a representative sample based on the proportion of the strata (Fei Shi, 2015, Milton J.S and Arnold J C, 2002). Hence from the weightage we give to

the strata we could justify the sampling technique as stratified proportionate random sampling. To have a good representation of the population and for inferential purpose proportionate sampling method was used so that this allocation considers the size of strata as well as variability. Analysis of the preliminary data was carried out using SPSS, version 20.0. In order to analyze the measurement model and evaluate the assumptions, the Analysis Moment of Structures Software (AMOS, version-20.0) was utilized for Structural Equation Modelling (SEM). The next sections elaborate on the aforementioned statistical software and methods and offer an explanation for their use.

RESULTS & DISCUSSION

Confirmatory factor analysis is the prerequisite for path analysis. Confirmatory factor analysis (CFA) has emerged as a pivotal technique in such contexts, offering a comprehensive method for comparing the hypothesized measurement model structure with the observed one (Rios & Wells, 2014). Consequently, CFA enjoys widespread adoption in the field, with approximately 50% of researchers relying on it to evaluate primary data (Crede & Harms, 2019). Confirmatory factor analysis or measurement model for community of practices, interaction with farmers is shown from the figure 1.
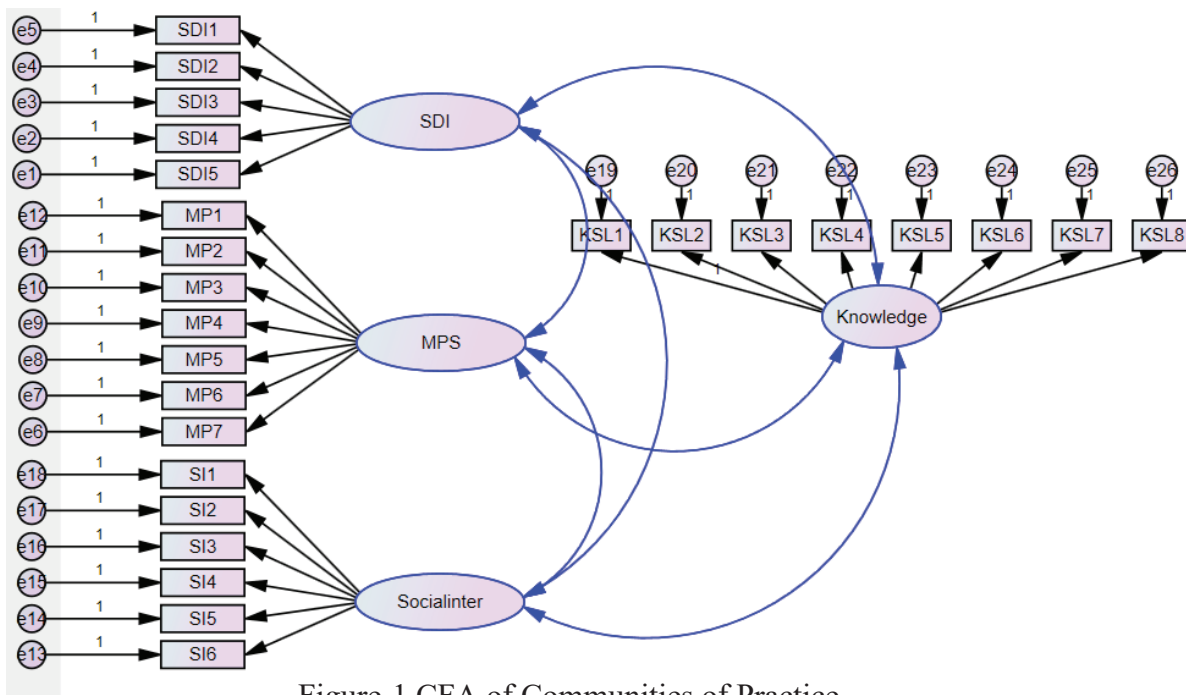

Figure-1 CFA of Communities of Practice

Chi-square value for the overall model fit was 1646.384 for 424 degrees of freedom (p< 0.001). Fit indices for the above model were Normed fit index (NFI) = 0.897; Comparative fit index (CFI) = 0.954; Good of Fit index (GFI) = 0.978, Root mean square error of approximation (RMSEA) = 0.064. In addition, all the indicators loaded significantly on the latent constructs. The values of the fit indices indicate a reasonable fit of the measurement model with data (Byrne, 2001). Therefore, these fit indices indicate the acceptability of the measurement model.
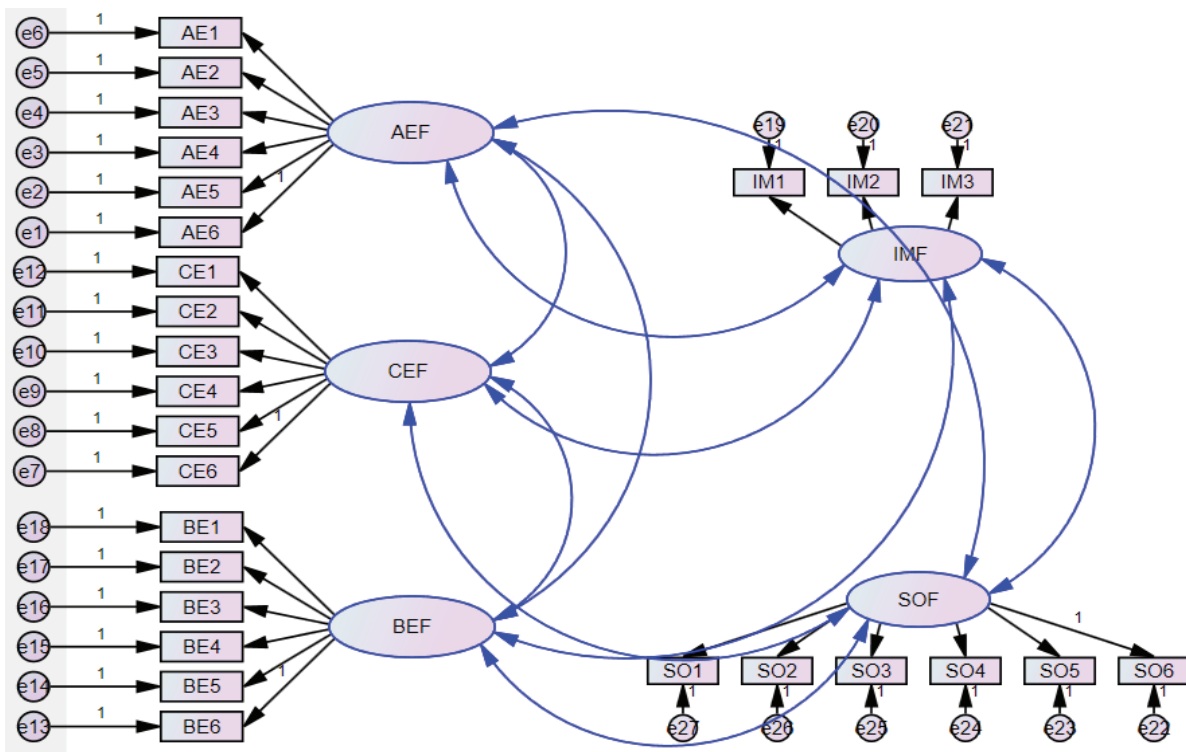
Figure-2: CFA of Learning and Engagement

Chi-square value for the overall model fit was 563.940 for 314 degrees of freedom (p< 0.001). Fit indices for the above model were Normed fit index (NFI) = 0.898; Comparative fit index (CFI) = 0.952; Good of Fit index (GFI) = 0.991, Root mean square error of approximation (RMSEA) = 0.039. In addition, all the indicators loaded significantly on the latent constructs. The values of the fit indices indicate a reasonable fit of the measurement model with data (Byrne, 2001). Therefore, these fit indices indicate the acceptability of the measurement model.

THE RELATIONSHIP BETWEEN CoP AND LEARNING AND ENGAGEMENT

Structural equation modeling (SEM) is used to examine the hypothesized relationships. SEM is employed because it is generally considered more suitable for mathematical modeling that involves complicated variable relationships. SEM allows analysis of both the measurement model and the structural model. It can not only address measurement errors but also allows examining the factor analysis and hypothesis testing together (Gefen et al., 2000).

In order to establish the direct and indirect of

COP L&E community of practices and learning and engagement and to select the best fit model. The independent variable significantly influences the dependent variable. While partial – mediation folds if the independent variables still have significant effects. Results of the structural equation modeling indicate an adequate model fit with the data Chi-square value for the overall model fit was 4343.081 for 62 degrees of freedom (p< 0.001). Fit indices for the above model were Normed fit index (NFI) = 0.921; Comparative fit index (CFI) = 0.949; Good of Fit
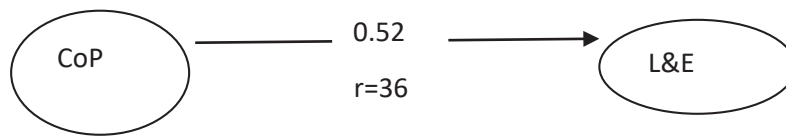
Figure-3 SEM for testing the path model of CoP and Learning and Engagement

From the above structural model, it is evident that Community of practices was positively related learning & engagement (b= .52; p<0.05) thus, H1 supported. Results of the structural equation modeling indicate an adequate model fit with the data Chi-square value for the overall model fit was 4343.081 for 62 degrees of freedom (p< 0.001). Fit indices for the above model were Normed fit index (NFI) = 0.921; Comparative fit index (CFI) = 0.949; Good of Fit index (GFI) = 0.985, Root mean square error of approximation (RMSEA) = 0.053. In addition, all the indicators loaded significantly on the latent constructs. The values of the fit indices indicate a reasonable fit of the measurement model with data (Byrne, 2001). Therefore, these fit indices indicate the acceptability of the path model.

CONCLUSIONS

It was clear from our study that the farmers had a shared identity, through their association, practice and culture. They common concerns are showed through the results remarkably. The wider group of people and organizations are influencing farmers' practices rather than only influencing their views and attitudes. This includes all the influential environment of their communities of practice within which the farmers' own network of practice operates and interacts and is of crucial importance to farming practice. We conclude that theories about communities of practice, and particularly those about networks of practice, provide a useful lens through which to view the particularities of the farming community's identity, knowledge sharing, and learning. They have proved useful in highlighting a number of features that are significant to farmers' practices and that raise implications for policy.

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A COMPARATIVE ANALYSIS OF BAJAJ AUTO VERSUS HERO MOTORCORP STOCKS OF NSE NIFTY

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ABSTRACT

The Indian stock markets emerged as one of the efficient and dynamic securities market all over the world because of adopting international standards in its operations. India is the world's third-largest Automobile market. The sector contributes nearly six per cent to India's GDP and thirty five per cent to manufacturing GDP and also percent percent of the country's total exports and accounts for worth more than $222bn. Since, the automobile sector in the economies is growing highly in India today with a rapid movement for the presence of electric vehicles. Hence, the present study has chosen two largest market competitors i.e. Bajaj Auto and Hero MotorCorp of the automobile sector. The study has set the objectives to determine the returns earned by the selected Automobile companies and also to calculate the mean values i.e. Avg. returns for Bajaj Auto and HMC stocks listed on NSE NIFTY, to determine the risk i.e. standard deviation of the selected stock during the study period and to calculate the coefficient of variation i.e. risk/return for the selected stocks, to identify the highest and lowest market price of the selected stocks and to provide necessary suggestions based on the comparative risk-return analysis and the volume traded among the selected stocks of the Automobile sector in NSE NIFTY. The study used Judgmental sampling technique and selected the sample companies based on their level of competition faced in the market and similar services offered during the last five years. The maximum the risk the maximum will be the returns hence for the investors seeking higher returns can invest with HMC compared to Bajaj Auto. It is also suggested to the investors for lower risks and low returns better to choose the Bajaj Auto stocks when compared to the HMC Stocks. The average returns are

Keywords: Stock Exchange, Automobile sector, Bajaj Auto, HMC, Investment)

INTRODUCTION

The performance of the economies depends on its stock market operations. The Indian stock markets emerged as one of the efficient and dynamic securities market all over the world because of adopting international standards in its operations. The two well-known largely operating stock markets in India are the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE). Many large companies enter the capital markets for raising funds initially by participating in the primary market operations through Initial Public Offerings (IPO), Rights Issue, Follow on Public Offerings (FPOs), preferential issues and Debentures/ Bonds to the general public. Later these securities are traded in secondary markets on duly fulfilling the listing process on Stock Exchanges like Bombay Stock Exchange (BSE) or National Stock Exchange (NSE) by receiving the approval of Securities Exchange Board of India (SEBI). The Sensitivity Index (Sensex) also referred as S& P BSE Sensex, is the benchmark of BSE comprising the top 30 listed companies whereas the NSE owns NIFTY, also referred as NIFTY50 as it consists of 50 diversified stocks in its index belonging to 13 sectors of the economy managed by India Index Services and Products limited, presently known as NSE indices Limited, which is a specialized company focused upon the index as a core product.

ABOUT AUTOMOBILE SECTOR

India is the world's third-largest Automobile market. India holds a strong position in the international heavy vehicle like tractors, heavy trucks, second largest two wheeler manufacturer after china and second largest bus manufacturers, produced a total 22.93 Mn vehicles including passenger vehicles, commercial vehicles, three wheelers, two wheelers and quadricycles from April 2021 to March 2022. The sector contributes nearly 6 per cent to India's GDP and 35 per cent to manufacturing GDP and also 8 percent of the country's total exports and accounts for worths more than $222bn. The foreign direct investments (FDI) are allowed up-to 100 percent. Some of the largest market competitors contributing to the two wheeler industry were Hero, Bajaj, TVS Motors, Honda, Suzuki and Royal Enfield. The present study has chosen two largest competitors in Automobile sector of India. The two-wheeler brand Bajaj Auto, the most valuable two-wheeler company in the world and Hero MotoCorp, the only two-wheeler listed company to achieve the milestone of one hundred million units sold.

NEED FOR THE STUDY

Investment in stock is a high risky aspect rather than investment in other physical assets like mutual funds, bank deposits, gold, silver, real estate etc., mainly due to the unexpected market fluctuations. It is obvious that higher the risks higher the returns can be. At the same time the Indian stock markets are known for their high volatility and high risk. The increased purchasing power of people also drastically increased the investments in different tangible and intangible assets. The investors decision for investments is mainly influenced by the analysis of risk-returns associated with them. The automobile sector in the economies is growing highly in India today with a rapid movement for the presence of electric vehicles. Hence the present study has chosen two largest market competitors i.e. Bajaj Auto and HMC of the automobile sector.

REVIEW OF LITERATURE

Promod Kumar Patyoshi (2016) studied the Sensex returns with that of sample banking stock returns. Found that the correlation analysis reveals that Sensex returns is high correlation with Axis bank returns & negative correlation between ICICI Bank returns. On the other hand, using duplicate analysis found that Sensex return as well as all the stock returns positive average daily returns except ICICI Bank returns for the selected period.

Ravi B & SK Patil, (2018), highlighted the correlation between risk and return of the Sensex & banking stocks of BSE 30 (Sensex) Viz. HDFC Bank, ICICI Bank, Axis Bank & SBI with the Sensex during the period 2001 Jan to Dec, 2015. The study revealed that Sensex returns are highly correlated with Axis Bank returns & negatively correlation between ICICI Bank returns. The Sensex generated high return, as compared to all other stock apart from Axis Bank returns SBI return shows the highest volatility during the period whereas it is lowest in Sensex returns. In the case of T-Test & P-Value it can conclude that returns of different stock returns that there is no significant difference b/w Sensex & the banking stock returns.

S. Gouthami, Nalla Bala Kalyan (2018) emphasized on the market fluctuations relations to the prices of scripts though it is difficult to observe a pattern for price movements but efforts made using fundamental & technical analysis. Their study observed that the financial position & performance of the firms are in correlation with present market prices using fundamental analysis. Trends followed by the scripts using historical data through the technical analysis.

P.Subrahmanyam& Nalla Bala Kalyan(2018) studied the risk return of selected securities can help the investors to pick up the securities based on their choices to technical analysis, historical data taken to observe the trends followed by scripts. Their study emphasized on the market fluctuations relation to the price of the selected scripts used both fundamental & technical analysis observed the financial position & performance of the firms in correlation with market prices whereas through technical analysis.

scripts used both fundamental & technical analysis observed the financial position & performance of the firms in correlation with market prices whereas through technical analysis.

Sushma K S, Charitra C M and Bhavya Vikas

(2019) made assessments of the risk and returns of the selected financial services companies' stocks and also to understand how the occurrence of an event can cause fluctuations in the stock prices of a company. Their study found that there was no significant difference between the performance of the selected 8 companies before and after the demonetization. The study found that the selected financial service companies earning very good returns; they had good improvement in their asset quality and reduction in the non-performing assets. The study also found that the companies like SBI, Mahindra & Mahindra and HDFC Bank had strong correlation with the market but they had high volatility in their prices.

E Rajesh (2019) studies to analysis the risk & return of selected bank stocks of NSE index stocks historical data was tested by mean Standard Deviation, Beta and Correlation. The study concluded that although average of daily returns of the NSE NIFTY50 Index are positive the selected banks stocks negatively except with the ICICI Bank.

M.Giri Kumari & G L Narayanappa (2019) analyzed securities listed on BSE Bankex. Their study gave an idea on the performance of public sector banks & private sector banks. Also revealed volatility of the selected bank securities based on market benchmark and concluded that public sector banks are highly volatile when compared with the private sector banks.

R. Slotiga, S. Sowbarnika & M. Jayanth (2019) their study revealed the intricacies involved with the automobile sector the analysis was made on daily, monthly & yearly basis the study has resulted in positive between the automobile companies viz has Motors Corp. Ltd., Mahindra & Mahindra Limited, Bajaj Auto Limited., they concluded that a firm's risk and expected returns directly affects its share prices. if an investor must earn highest returns than the investor must appreciate that this can be accrued by acutely a commensurate increase in risk.

Sryatha, Meena Maheswari (2021) their study examined the risk & return of select stocks of technologies, steel & pharmaceutical sectors of BSE Sensex and segregated them as best, good, any performer & risky. Highlighted that there sectors are driving the Indian economy, by registering a significant growth year after year so by timely & right invest decisions can gain a good returns & are highly liquid.

Sonia Lobo & Ganesh Bhat S (2021), studied India Infoline Limited returns with a high beta value, the standard deviation and beta value of the Nippon have accounted for the lowest indicating most stable returns and suggesting low risk of investment, JSW holdings monthly returns are negatively skewed whereas AB Capital and IIFL finances monthly returns are positively skewed. Based on the T- Test performed in the study suggested there is a significant different between the monthly returns of the S & P BSE finance index and JSW holdings. Finally, the outcome of correlation coefficient calculation revealed that all the stocks are positively correlated with S & P BSE Finance index. The correlation coefficient of Chola Mandalam recorded the highest with S & P BSE finance index and Nippon logged the least. Their study also suggested that before investing in securities investors should conduct fundamental analysis rather than relying solely on technical analysis diversifying portfolio will reduce the unsystematic risk.

Afreen Tabassum & Baskaran (2022) in their study they selected IT companies of NIFTY tested on NSE found that the mind the company provides average returns among the selected 10 companies with a moderate risk of 0.49 & Infosys has highest value of beta i.e. 0.87 with a S.D. of 6.3 indicating that this stock has high risk. L & T company with above 0.28 indicating this as a low risk stock. TCS & HCL Technologies provides the lowest returns among all the IT Companies.company with above 0.28 indicating this as a low risk stock. TCS & HCL Technologies provides the lowest returns among all the IT Companies.

OBJECTIVES OF THE STUDY

The present study set objectives for comparing the risk - return and volume of the selected stocks of NSE NIFTY. The detailed objectives include:

• To determine the returns earned by the selected Automobile companies and also to calculate the mean values i.e. Avg. returns for Bajaj Auto and HMC stocks listed on NSE NIFTY.
• To determine the risk i.e. standard deviation of the selected stock during the study period and to calculate the coefficient of variation i.e. risk/return for the selected stocks
• To identify the highest and lowest market price of the selected stocks and
• To provide necessary suggestions based on the comparative risk-return analysis and the volume traded among the selected stocks of the Automobile sector in NSE NIFTY.

METHODOLOGY OF THE STUDY

Research Design

This refers to the plan through which the sources of data, sample selection, tools and techniques used for the purpose of analyzing the data. The present study adopted descriptive research design for analyzing the risks, returns and volumes traded of the selected NSE NIFTY automobile sector stocks

Sources of Data and Study Period:

The data is collected from secondary sources like NSE official website, company websites, Yahoo Finance website, Textbooks, and articles published in journals, magazines, newspapers and websites. The data is collected for a period of 60 months i.e. from 1st Aug 2018 to 1st July 2023 (Five years) related to the selected companies of NSE NIFTY for the purpose of calculation of returns, mean / average return, standard deviation (risk), covariance and correlation.

Sample Selection:

Using Judgmental Sampling technique two largest companies from Automobile sector were being selected based on the level of competition being faced in the market and similar services being offered by them viz. Bajaj Auto and Hero Motor Corporation.

Tools used for Analysis:
Using Microsoft Excel the following statistical tools were used to analyze the stock values.
• Mean
• Standard deviation
• Covariance
• Minimum and Maximum Returns

ABOUT BAJAJ AUTO LIMITED:

Bajaj Auto Limited established in the year 1945, currently one of the top five competitors in manufacturing and sales in the two-wheeler market segment. Initially Bajaj Motors imported and sold two & three-wheeler vehicles in India. The company took a manufacturing license from the GoI with an agreement from Piaggio to manufacture the Vespa line of scooters in India. Gradually, Bajaj Auto has expanded its product line to three wheelers, electric scooters, motorcycles and low-cost cars. They currently hold majority stakes in Austrian bike manufacturer KTM, Force Motors and Yulu. They are the third largest motorcycle manufacturer in the world and second largest in India. Bajaj Auto went on to diversify into three entities – Bajaj Auto Ltd (Automobiles), Bajaj Finserv Ltd (NBFI) and Bajaj Holdings & Investment Ltd. They currently hold a 19.2 % market share in the two-wheeler market segment in India. Previously they held a market share of 18.6 % F.Y. 2021. They were the first two-wheeler manufacturer to mark an achievement of crossing a market cap of 1 Trillion rupees, making them the most valuable two-wheeler manufacturer in the world. This achievement is credited to the fact that Bajaj Auto has made reliable motorcycles and scooters over their 70 year history. Low maintenance cost, affordable spare parts and massive scale of manufacturing, making their products accessible

across the country. Also notable is the rapid growth in the presence of electric vehicles in the market in the L3 segment, growing by a staggering 837% (100,000 units sold) in 2022 from 10K units in 2021.

across the country. Also notable is the rapid growth in the presence of electric vehicles in the market in the L3 segment, growing by a staggering 837% (100,000 units sold) in 2022 from 10K units in 2021.

ABOUT HERO MOTOCORP (HMC)

HMC is one of the largest two-wheeler manufacturers in the world established in the year 194 Formerly known as Hero Honda and enjoys a market share of 37% in its segment in India. The company has a merger between Hero Cycles, and Honda, a Japanese motorcycle manufacturer. Both companies sold two wheelers in India under the merger name Hero Honda until the year 2010 when the merger ended through a buy-out. Hero Group bought the 26% Stake owned by the Honda Group, ending the merger between the two companies. Another 26% was bought by the Munjal family over a series of off-market transactions. After the de-merger, Hero began exports to Latin America, West Asia and Africa, as they were no longer restricted by their previous agreement with Honda. HMC also owns 34.5% equity stake in Ather Energy, an electric scooter start-up based in Bangalore. By July 2011, Hero was rebranded to HMC and has been operating under the new name ever since. After Hero's exit from the merger, they have ramped up production, research and development and production of motorcycles. Throughout India it has five manufacturing facilities – Dharuhera, Neemrana, Haridwar, Halol and Gurugram. These facilities contribute to the elevated difference between sales of HMC and all its top competitors combined. Hero has the largest market share in the two-wheeler segment in the country and is also the largest two-wheeler manufacturer in the world. They have also recently announced their collaboration with American Motorcycle manufacturer Harley – Davidson which is a potential growth factor in the years to come.

Hero is also one of the few Indian manufacturers to sponsor riders for the world-famous Dakar Rally.

Date	Op	Cp	Return (r)= (Cp-Op)/Op	Avg. Return (r') #NAME?	d (r-r')	d2
08-01-2018	2717	2744.85	1.025	1.146	-0.121	0.0146334
09-01-2018	2765	2687.45	-2.8	1.146	-3.9507	15.608057
10-01-2018	2687	2593.7	-3.47	1.146	-4.6183	21.328471
11-01-2018	2613.1	2745.7	5.074	1.146	3.92843	15.432538
12-01-2018	2760	2720.15	-1.44	1.146	-2.5898	6.7072926
01-01-2019	2735	2554.55	-6.6	1.146	-7.7438	59.966507
02-01-2019	2560	2900.6	13.3	1.146	12.1587	147.83377
03-01-2019	2914	2911.1	-0.1	1.146	-1.2455	1.5513106
04-01-2019	2947.95	2984.1	1.226	1.146	0.08028	0.006445
05-01-2019	2984.1	2925.9	-1.95	1.146	-3.0963	9.5873418
06-01-2019	2945	2827.05	-4.01	1.146	-5.1511	26.533746
07-01-2019	2838.4	2516.5	-11.3	1.146	-12.487	155.9225
08-01-2019	2485.05	2788.3	12.2	1.146	11.057	122.25666
09-01-2019	2788.3	2941.8	5.505	1.146	4.35915	19.002157
10-01-2019	2945	3247.35	10.27	1.146	9.12056	83.184556
11-01-2019	3250	3176	-2.28	1.146	-3.4229	11.716402
12-01-2019	3163.1	3185	0.692	1.146	-0.4536	0.2057932
01-01-2020	3183	3180.05	-0.09	1.146	-1.2387	1.534324
02-01-2020	3173.6	2890	-8.94	1.146	-10.082	101.65129
03-01-2020	2920	2022.35	-30.7	1.146	-31.887	1016.8088
04-01-2020	2000	2623.3	31.17	1.146	30.019	901.14051
05-01-2020	2623.3	2710.5	3.324	1.146	2.17806	4.743926
06-01-2020	2730	2826.05	3.518	1.146	2.37232	5.6278871
07-01-2020	2838.05	3004.95	5.881	1.146	4.73479	22.418283
08-01-2020	2990	2967	-0.77	1.146	-1.9152	3.6681089
09-01-2020	2947	2881.1	-2.24	1.146	-3.3822	11.439068
10-01-2020	2940	2886.9	-1.81	1.146	-2.9521	8.7150466
11-01-2020	2918	3173.55	8.758	1.146	7.61171	57.938166
12-01-2020	3175.1	3444.05	8.471	1.146	7.3246	53.649729
01-01-2021	3446	4005.8	16.24	1.146	15.0989	227.97748

02-01-2021	4064	3798.7	-6.53	1.146	-7.6741	58.89108
03-01-2021	3798.7	3670.6	-3.37	1.146	-4.5182	20.414153
04-01-2021	3704	3833.75	3.503	1.146	2.35697	5.5553065
05-01-2021	3815	4192.8	9.903	1.146	8.75701	76.685212
06-01-2021	4204.9	4133.85	-1.69	1.146	-2.8357	8.0411419
07-01-2021	4141	3829.6	-7.52	1.146	-8.6659	75.098176
08-01-2021	3874	3727.85	-3.77	1.146	-4.9186	24.192468
09-01-2021	3754	3832.65	2.095	1.146	0.9491	0.9007831
10-01-2021	3820	3707.25	-2.95	1.146	-4.0976	16.790085
11-01-2021	3721.8	3240.3	-12.9	1.146	-14.083	198.33901
12-01-2021	3280	3249.25	-0.94	1.146	-2.0835	4.3409723
01-01-2022	3258.7	3564.65	9.389	1.146	8.24271	67.9423
02-01-2022	3577	3530.35	-1.3	1.146	-2.4502	6.0032976
03-01-2022	3530.35	3653	3.474	1.146	2.32816	5.4203146
04-01-2022	3636	3729.55	2.573	1.146	1.42688	2.0359969
05-01-2022	3720	3864.1	3.874	1.146	2.72766	7.4401212
06-01-2022	3877.2	3706.6	-4.4	1.146	-5.5461	30.75899
07-01-2022	3667.95	3914.45	6.72	1.146	5.57438	31.073659
08-01-2022	3919.95	4084.85	4.207	1.146	3.06069	9.367824
09-01-2022	4010	3527.75	-12	1.146	-13.172	173.50645
10-01-2022	3527.75	3671.85	4.085	1.146	2.93876	8.6363065
11-01-2022	3686.55	3750.7	1.74	1.146	0.59411	0.3529627
12-01-2022	3744.05	3616.05	-3.42	1.146	-4.5648	20.837013
01-01-2023	3617	3818.25	5.564	1.146	4.418	19.518753
02-01-2023	3829.45	3661.2	-4.39	1.146	-5.5396	30.686962
03-01-2023	3670	3884.75	5.851	1.146	4.7055	22.141717
04-01-2023	3904.8	4431.95	13.5	1.146	12.3541	152.62267
05-01-2023	4431.95	4567.15	3.051	1.146	1.90457	3.6273838
06-01-2023	4587	4691.55	2.279	1.146	1.13326	1.2842856
07-01-2023	4685.2	4878.45	4.125	1.146	2.97869	8.8725962
				$\sum d =$	0.00652	$\sum d^2$ =4205.5489

Chart 1. Bajaj Auto Stock Returns during the last 5 years i.e. from 1st Aug 2018 to 1st July 2023
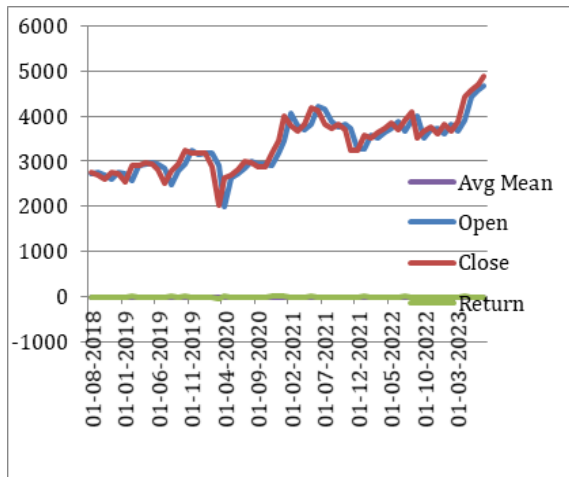
Interpretation:
It is found that from the above Table 1 and Chart 1 the maximum returns i.e. 31.17 earned by the Bajaj Auto in the month of April, 2020 and earned a minimum return i.e. 0.692 in the month of December 2019. The company also showed negative returns i.e.-30.14 during the month of March 2020. Hence it is concluded that the minimum returns were recovered within one month to maximum returns i.e. from 1st March 2020 to 1st April 2020. The sum of covariance is 0.00652 and the variance is 4205.5489.

The Table 2 and Chart 2 below shows that the maximum returns of HMC i.e.36.261 found in the month of April 2020 and minimum of 0.4983 in the month of December 2019, whereas negative returns i.e the exact minimum returns -23.9786 in the month of March 2020. Hence for both the companies the minimum and maximum returns falls in the same month and in the same year i.e. March and April 2020 respectively.

Table 2. HMC Stock Returns during the last 5 years i.e. from 1st Aug 2018 to 1st July 2023

Date	Op	Cp	Return (r)= (Cp-Op)/Op	Avg. Return (r') #NAME?	d (r-r')	d2
08-01-2018	3296	3253.8	-1.28034	0.106	-1.38634	1.9219339
09-01-2018	3280	2933.25	-10.5716	0.106	-10.6776	114.01213
10-01-2018	2910	2762.35	-5.07388	0.106	-5.17988	26.831155
11-01-2018	2778	3055.2	9.9784	0.106	9.8724	97.464281
12-01-2018	3050	3104.25	1.778689	0.106	1.672689	2.7978869
01-01-2019	3089	2613.95	-15.3788	0.106	-15.4848	239.77795
02-01-2019	2629.45	2628.1	-0.05134	0.106	-0.15734	0.0247546
03-01-2019	2649.9	2553.15	-3.65108	0.106	-3.75708	14.11566
04-01-2019	2573	2511.85	-2.3766	0.106	-2.4826	6.1632997
05-01-2019	2511.85	2680.25	6.704218	0.106	6.598218	43.536478
06-01-2019	2712	2581.5	-4.81195	0.106	-4.91795	24.186202
07-01-2019	2596	2356.1	-9.24114	0.106	-9.34714	87.36896
08-01-2019	2335	2572.05	10.15204	0.106	10.04604	100.92285
09-01-2019	2572.05	2704.75	5.159307	0.106	5.053307	25.535909
10-01-2019	2715.7	2704.2	-0.42346	0.106	-0.52946	0.2803317

11-01-2019	2708	2433.55	-10.1348	0.106	-10.2408	104.87366
12-01-2019	2431	2443.05	0.495683	0.106	0.389683	0.1518527
01-01-2020	2454.9	2501.85	1.91251	0.106	1.80651	3.2634769
02-01-2020	2489.85	2051.75	-17.5954	0.106	-17.7014	313.341
03-01-2020	2100	1596.45	-23.9786	0.106	-24.0846	580.06669
04-01-2020	1590.1	2166.7	36.26187	0.106	36.15587	1307.2469
05-01-2020	2166.7	2360.85	8.960638	0.106	8.854638	78.404621
06-01-2020	2360.75	2546.95	7.887322	0.106	7.781322	60.54897
07-01-2020	2556	2676.5	4.714397	0.106	4.608397	21.237327
08-01-2020	2700	3006.05	11.33519	0.106	11.22919	126.09464
09-01-2020	3030.05	3147.3	3.869573	0.106	3.763573	14.164482
10-01-2020	3165	2799.8	-11.5387	0.106	-11.6447	135.59911
11-01-2020	2888	3108.85	7.647164	0.106	7.541164	56.869155
12-01-2020	3120	3110	-0.32051	0.106	-0.42651	0.1819132
01-01-2021	3115	3256.05	4.528091	0.106	4.422091	19.554893
02-01-2021	3300	3224	-2.30303	0.106	-2.40903	5.803427
03-01-2021	3255	2913.6	-10.4885	0.106	-10.5945	112.24293
04-01-2021	2949	2819.15	-4.40319	0.106	-4.50919	20.332802
05-01-2021	2779.95	3007.5	8.185401	0.106	8.079401	65.276719
06-01-2021	3016.5	2902.6	-3.7759	0.106	-3.8819	15.069116
07-01-2021	2905	2763.3	-4.8778	0.106	-4.9838	24.838215
08-01-2021	2770.1	2741.85	-1.01982	0.106	-1.12582	1.2674678
09-01-2021	2759	2832.5	2.664009	0.106	2.558009	6.5434085
10-01-2021	2827.2	2657.1	-6.01655	0.106	-6.12255	37.485599
11-01-2021	2675	2449.3	-8.43738	0.106	-8.54338	72.989365
12-01-2021	2480	2462.1	-0.72177	0.106	-0.82777	0.6852036
01-01-2022	2463	2724.3	10.60902	0.106	10.50302	110.31333
02-01-2022	2748	2535.45	-7.73472	0.106	-7.84072	61.476858
03-01-2022	2535.45	2294.15	-9.51705	0.106	-9.62305	92.603098
04-01-2022	2185	2506.65	14.72082	0.106	14.61482	213.59294
05-01-2022	2460.2	2773.9	12.75099	0.106	12.64499	159.89588
06-01-2022	2799.9	2719.7	-2.86439	0.106	-2.97039	8.8231952

07-01-2022	2715	2818.05	3.795582	0.106	3.689582	13.613015
08-01-2022	2834.95	2837.7	0.097003	0.106	-0.009	8.09E-05
09-01-2022	2820	2549.2	-9.60284	0.106	-9.70884	94.261547
10-01-2022	2538.5	2676.85	5.450073	0.106	5.344073	28.559114
11-01-2022	2690.25	2851.9	6.008732	0.106	5.902732	34.84224
12-01-2022	2855	2738.85	-4.0683	0.106	-4.1743	17.424762
01-01-2023	2738.85	2763.25	0.890881	0.106	0.784881	0.6160386
02-01-2023	2775.55	2419.1	-12.8425	0.106	-12.9485	167.66359
03-01-2023	2415	2347.35	-2.80124	0.106	-2.90724	8.4520338
04-01-2023	2385	2558.6	7.27883	0.106	7.17283	51.449492
05-01-2023	2558.6	2759.9	7.867576	0.106	7.761576	60.24206
06-01-2023	2758.85	2910.1	5.482357	0.106	5.376357	28.90521
07-01-2023	2875	3078.85	7.090438	0.106	6.984438	48.782377
				$\sum$d=	0.013653	$\sum$d^2 = 5170.5895

Chart 2. HMC Stock Returns during the last 5 years i.e. from 1st Aug 2018 to 1st July 2023
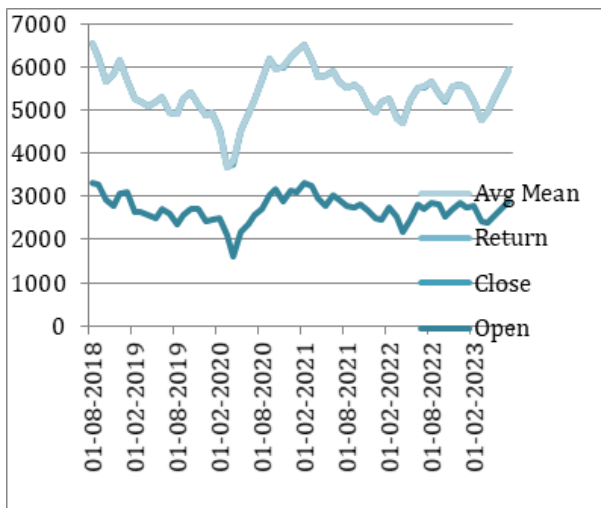
Table 3. Comparative Analysis of Bajaj Auto Vs HMC Stock Risk and Return during the last 5 years i.e. from 1st Aug 2018 to 1st July 2023

	Bajaj Auto	Hero Motor Corp
Max. Returns	31.17	30.14
Min. Returns	30.74	-23.9789
Avg. Return	1.146	0.106
Standard Deviation	8.442777377	9.361469445
Variance	71.28048983	87.63711017
Covariance	7.367170486	88.31574948

Chart 3. Comparative Risk Return Analysis of Bajaj Auto Stock Vs. Hero Motor Corp
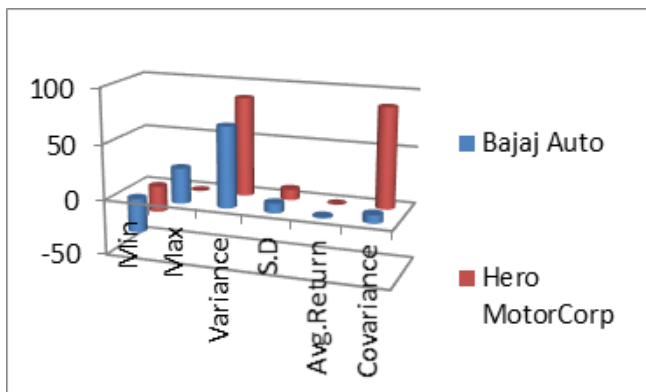
Interpretation: From the Table 3 and Chart 3 it is found that that Bajaj Auto is performing well in terms of maximum returns and the risk, variance and covariance are also found better compared to the HMC values.

Table 4. Bajaj Auto Vs HMC Stock Volumes traded on NSE NIFTY

Date	Volume of Bajaj Auto	Volume of HMC
08-01-2018	9942396	6661974
09-01-2018	10553099	8009101
10-01-2018	11420760	14295194
11-01-2018	7115498	7173677
12-01-2018	7793001	13397297
01-01-2019	9988068	11991861
02-01-2019	11832212	16557689
03-01-2019	13203582	14953216
04-01-2019	8626225	16857672
05-01-2019	11893479	12592166
06-01-2019	7609656	13466702
07-01-2019	12057664	21520512
08-01-2019	11464238	27125913
09-01-2019	10623779	20693067
10-01-2019	10000030	17036419
11-01-2019	7016469	15273660
12-01-2019	7683441	18230401
01-01-2020	10157779	13911559
02-01-2020	10114668	22304450
03-01-2020	17482885	26204530
04-01-2020	15648184	31556392
05-01-2020	20620496	42918890
06-01-2020	19885284	46048933
07-01-2020	20772627	31714342
08-01-2020	18366165	36813299
09-01-2020	20851449	32869222
10-01-2020	25683718	40978931
11-01-2020	16295671	36307276
12-01-2020	17701860	21198526
01-01-2021	25932974	28906985
02-01-2021	13414834	26412322
03-01-2021	16025837	20358974
04-01-2021	13453110	16448086
05-01-2021	10719090	20655384
06-01-2021	7703042	15887268
07-01-2021	11181750	10344914
08-01-2021	8362441	11729264

09-01-2021	11354363	13614264
10-01-2021	7981343	9770053
11-01-2021	8026970	13948058
12-01-2021	10167029	9733164
01-01-2022	10209965	12932662
02-01-2022	7378607	16200932
03-01-2022	8829811	20152597
04-01-2022	7965648	17658313
05-01-2022	9741297	18291511
06-01-2022	16681906	15863831
07-01-2022	9029908	9862014
08-01-2022	6995673	14465729
09-01-2022	9362637	15906392
10-01-2022	7460056	8914026
11-01-2022	7220939	12404777
12-01-2022	4916322	7138639
01-01-2023	7737153	5336785
02-01-2023	6167650	8809408
03-01-2023	7107277	7116566
04-01-2023	8415644	8555327
05-01-2023	8633407	14363331
06-01-2023	6831471	15714648
07-01-2023	4285135	10645282

Chart 4. Comparison of Bajaj Auto Vs HMC Stocks' Volumes traded on NSE NIFTY
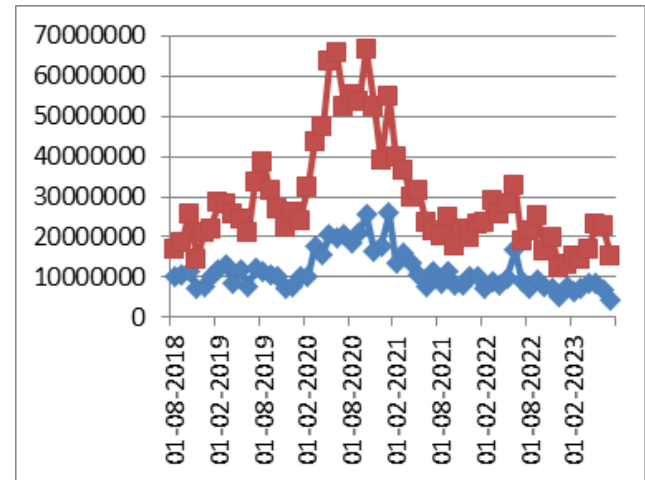
Interpretation: it is found from the Table 4 and Chart 4 that the volume of Bajaj Auto Shares are low compared to the volume of the HMC stocks during the last 5 years i.e. from 1st Aug. 2018 to 1st July 2023.

SUGGESTIONS

• The maximum the risk the maximum will be the returns hence for the investors seeking higher returns can invest with HMC compared to Bajaj Auto.
• It is also suggested to the investors for lower risks and low returns better to choose the Bajaj Auto stocks when compared to the HMC Stocks.
• Although the volume of stocks traded in HMC is more the maximum returns earned through investment in Bajaj Auto are high hence it is suggested to the investors to invest in Bajaj Auto rather than making the investments in HMC stocks.
• It is suggested to the investors for large volumes of investment it is better to invest with HMC compared to the investment in Bajaj Auto.

CONCLUSION

The present study is based on the analysis of the securities listed in NSE NIFTY for deriving a conclusion to prefer the investments among the two major automobile companies Bajaj Auto and HMC. Risk is considered to the chance of variations in actual return whereas return is considered as the gain in the value of investment. The covariance of the Bajaj Auto and HMC reflects the strong relationship between risk and return. The returns on an investment portfolio help to evaluate the financial performance of the investment. During the last five years the average returns are found high with respect to the Bajaj Auto against HMC. Therefore, it is concluded that the investment in Bajaj Auto is preferred compared to the HMC stocks of NIFTY.

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UNRAVELING LEADERSHIP DYNAMICS: AN IN-DEPTH EXPLORATION OF COGNITIVE, PHYSICAL, EMOTIONAL, BEHAVIORAL, AND CROSS-CULTURAL LEADERSHIP EFFECTIVENESS

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ABSTRACT

In today's globalized and interconnected world, effective cross-cultural leadership is crucial for organizations, especially in the IT sector, where collaboration with diverse teams is common. This study explores the complexities of cross-cultural leadership, emphasizing the need for leaders to adeptly navigate cultural diversity. By analyzing cultural dimensions and leadership effectiveness, the study aims to characterize participants, assess cognitive, physical, emotional, and behavioral factors, and evaluate cross-cultural leadership effectiveness.

The study identifies four dimensions of Cultural Intelligence (CQ): cognitive, physical, emotional, and behavioral. Cognitive CQ involves understanding and adapting to diverse cultural nuances, while physical factors emphasize adapting to various physical environments. Emotional CQ focuses on managing emotions in diverse cultural contexts, and behavioral CQ involves effective communication, conflict resolution, and relationship building across cultures.

The study underscores the critical role of effective cross-cultural leadership in fostering understanding, collaboration, and organizational success in today's diverse and globalized workplace. By enhancing leaders' Cultural Intelligence across cognitive, physical, emotional, and behavioral dimensions, organizations can better navigate the complexities of cross-cultural management and leverage cultural diversity as a source of innovation and competitive advantage.

Keywords:
Cross-cultural leadership, Cultural intelligence (CQ), Cognitive dimension, Physical dimension, Emotional dimension, and Behavioral Dimension

INTRODUCTION

Cross-cultural leadership unveils a dynamic landscape marked by the intricate challenge of managing cultural diversity effectively. As organizations increasingly become microcosms of global diversity, navigating the complexities of cross-cultural management becomes not only a challenge but also an imperative for fostering productive collaborations.

The organizations in the IT sector face an ongoing challenge to manage the workforce to adapt to the dynamic nature of the industry (M, Chethan et al., 2023). An impressive 75% of IT projects in Bangalore entail collaboration with teams from around the globe, underscoring the vital need for cross-cultural leadership effectiveness. The interconnected nature of the world also has historical disparities in wealth, culture, religion, ideology, class, gender, and race (Piketty & Saez, 2014). Despite the ease of communication, these disparities continue to impede true unity and collaboration in a world where various factors contribute to divisions.

The call for effective cross-cultural leadership becomes even more pronounced as organizations grapple with the complexities of operating in a globalized environment, emphasizing the importance of fostering understanding and collaboration across diverse cultural, social, and economic landscapes. Through an analysis of the interaction between cross-cultural leadership and cultural dimensions, this study reveals the approaches the leader and managers should use to navigate the challenges posed by a diverse

List of Abbreviations used in the study.

CQ	Cultural Intelligence	EF4	Tolerance for Ambiguity
CCLE	Cross Cultural Leadership Effectiveness	EF5	Resilience (CulturalShock)
CV	Categorical variables	BF1	Communication Style
JD	Job Description	BF2	Leadership Style
EQ	Education Qualification	BF3	Team Building
TE	Total Experience	BF4	Conflict Management
AI	Annual Income	BF5	Relationship Building
CF1	Cognitive Complexity	CCL1	Empowerment
CF2	Cognitive Flexibility	CCL2	Team Building
CF3	Cognitive Perseverance	CCL3	Developing capabilities
CF4	Cultural Metacognition	CCL4	Shared Values
CF5	Cross-Cultural Communication	CCL5	Agreement
PF1	Physical Appearance	CCL6	Coherency
PF2	Gestures and BodyLanguage	CCL7	Change
PF3	Clothing and Attire	CCL8	Customer Orientation
PF4	Spatial Awareness	CCL9	Continuous Learning
PF5	Physical Environment	CCL10	Strategic Direction
EF1	Empathy	CCL11	Goal and Objectives
EF2	Openness to Experience	CCL12	Vision
EF3	Cultural Self-Awareness		

LITERATURE REVIEW

In today's globalized world, leaders must possess the essential competency to work across cultures. This skill is crucial for organizations that find themselves interconnected and are compelled to adapt to evolving global trends, and societal demands, related to excellence, quality, and advancements in research to address the growing diversity at workplace (Mohamed Hashim et al., 2021). Culture plays a significant role in shaping the leadership styles of employees and their interactions. Sociologists define culture by both its tangible and intangible aspects. Material culture pertains to physical objects like buildings, instruments, and clothing, while non-material culture encompasses abstract concepts that individuals hold about their culture. These include their religions, beliefs, rituals, norms, language, institutions, ethics, morality, and various other nonphysical elements (Vyain et al., 2014). We have included a new component in our study under the CQ dimension, i.e. Physical Factors to address the tangible aspect.

When a leader completes their task and attains their goal, people will say, "We accomplished this ourselves," signifying the leader's utmost effectiveness. This sentiment echoes the wisdom of Lao Tzu (circa 500 BC).

A Leaders shape the organization's narrative and objectives, while managers are tasked with ensuring smooth operational functioning. A true leader is someone whose actions inspire others to aspire to greater dreams and goals, encouraging learning, action, and growth. Additionally, leaders must exhibit a willingness to learn and adapt to evolving circumstances, considering the continuous evolution and change within organization. Lord and Maher (1991) stress the importance of considering leadership perceptions, as being acknowledged as a leader is a fundamental prerequisite for possessing the authority and influence necessary for effective leadership.

As businesses venture into new markets and collaborate with teams representing diverse cultural backgrounds, the significance of effective cross-cultural leadership becomes imperative for achieving success. The primary element of effective cross-cultural leadership is cultural intelligence, signifying the capacity to comprehend and adapt to diverse cultural situations. Leaders with elevated CQ levels demonstrate improved abilities to communicate, collaborate, and establish trust with individuals from diverse cultural backgrounds. Additionally, they are more adept at managing cultural differences and resolving conflicts that may emerge in cross-cultural settings.

Cultural intelligence (CQ) comprises a multifaceted structure encompassing four distinct dimensions of intelligence: cognitive, physical, emotional, and behavioural (Van Dyne et al., 2012). The physical dimension is newly added to measure its impact on our study. The first dimension, Cognitive CQ, involves an individual's comprehension of various cultures and countries, encompassing both general cultural knowledge and culture-specific knowledge about other societies.

Cognitive complexity (CF1) involves the ability to consider multiple perspectives, grasp the nuances of a situation, and think critically about cultural differences. Individuals with high cognitive complexity can effectively recognize and adapt to diverse cultural nuances. This aspect is related to how individuals mentally process and organize information in a multi- dimensional manner (Woznyj et. al., 2019). Cognitive complexity has demonstrated associations with various factors such as performance, leadership, and attitudinal aspects like organizational justice, pay satisfaction, and organizational commitment. Although closely related, it is distinct from cognitive ability (Vogelgesan et. al., 2014; Graso, 2011; Khatri et. al., 2001; Carraher & Buckley, 1996). These findings have implications for understanding the role of cognitive complexity in diverse contexts.

Cognitive flexibility (CF2) refers to the ability to transition between different modes of thinking and adapt to new and changing situations. This skill is crucial for cultural intelligence as it allows individuals to adjust their behaviour according to different cultural norms and expectations. Managers with high cognitive flexibility appreciate diverse perspectives, and take decisions based on cultural diversity (Laureiro-Martínez & Brusoni, 2018). Cognitive perseverance (CF3) is the ability to persist in the face of cultural challenges or barriers and continue to work towards a goal despite setbacks or difficulties. Research suggests that individuals with high cognitive perseverance exhibit a resilient approach to cognitive tasks, demonstrating determination and persistence.

Cognitive perseverance aligns with the demand for adaptability in cross-cultural leadership. Cultural metacognition (CF4) is an individual distinction to a transient state than a fixed trait. It involves an individual's consciousness and awareness of cultural elements during social interactions (Earley & Ang, 2003). Cultural metacognition helps us understand how leaders reflect on their own cultural assumptions and biases, and actively work to expand their cultural knowledge and understanding.

The research study also examines how leaders in the software industry in Bangalore effectively communicate with team members from diverse cultural backgrounds, including the use of active listening, clarifying questions, and other cross-cultural communication skills. Cross-cultural communication (CF5) research typically focuses on understanding how individual variances impact our ability to interact effectively. As most individuals grow up within one culture, interacting with those from different backgrounds can be challenging (Fink, G et al., 2006). Engaging with diverse cultures enhances our capacity for effective communication and positive outcomes. Fink et. al, also suggest that cross-cultural researchers should comprehend to how cultural dimensions, norms, and personality traits are interconnected. This heightened awareness aids in managing one's own and others' cross-cultural interactions (Fink, G et al., 2006). As the world becomes more interconnected, effective cross-cultural communication emerges as a critical skill. Within Bangalore's tech ecosystem, language barriers, different communication styles, and varying levels of English proficiency can hinder effective collaboration. A seemingly innocuous word or phrase can hold different meanings in various cultural contexts, leading to misunderstandings that impact teamwork and project outcomes.

The second dimension, Physical factors, pertains to an individual's capacity to adapt to different physical environments and situations, including their comfort level with diverse climates, living conditions, and physical demands in varied cultural settings. Physical Appearance (PF1) refers to how an individual looks and perseverance can affect the diverse cultural settings, encompassing factors like skin color, body type, and facial features. Researchers aim to offer a comprehensive overview of existing literature on the correlation between physical appearance and social influence. This exploration

includes the impact of physical attractiveness, weight, and height on social influence processes, investigating whether a social influencer's appearance affects their effectiveness and through what mechanisms. Studies in human perception suggest that physical attractiveness communicates warmth, social-emotional competence, expertise, and intellectual competence (Chaiken, 2022). Nonverbal communication is a crucial aspect of cultural intelligence, with different cultures having distinct norms regarding gestures, facial expressions, and body language (PF2). Gestures play a significant role in enhancing communication, especially in conveying spatial topics and providing additional information not covered by accompanying speech (Hostetter, 2011). Individual Clothing and Attire (PF3) can impact on how they are perceived in various cultural contexts. Different cultures adhere to different norms concerning appropriate dress, and understanding these norms is crucial for effective communication. Contemporary shifts toward a more casual workplace culture have influenced clothing choices and how they are perceived (Sotak et al., 2023). Different cultures have varying norms regarding personal space, and comprehending these norms is essential for effective communication and relationship-building. Spatial awareness (PF4) contributes to increased flexibility in work practices (Kingma, 2018). The physical environment (PF5), including factors such as climate, landscape, and infrastructure, can also impact cultural intelligence. Understanding how diverse cultures interact with their physical environment is crucial for effective communication and relationship-building. Providing employees with training on the physical environment acts as a mediator, connecting environmental ethics to an employee's performance and competitive advantage (Singh et al., 2019).

Emotional CQ, the third facet, focuses on a person's ability to understand and manage emotions, both their own and others', in cross-cultural interactions. It involves recognizing and responding to different emotional expressions, both verbal and non-verbal, across diverse cultures and contexts. Empathy (EF1) refers to the ability to comprehend and share others' feelings. It allows individuals to connect and understand each other from diverse cultural backgrounds. Initiating programs focused on Cultural Intelligence (CQ)

training aims to nurture empathy and promote harmonious coexistence among culturally diverse groups in multicultural societies, concurrently advocating for the enhanced social standing of historically marginalized communities (Sharma & Hussain, 2019). Openness to experience (EF2) signifies an individual's readiness to explore new ideas and concepts. This emotional factor can impact cultural intelligence by influencing a person's willingness to learn about different cultures and adapt to new cultural environments. The study by Şahin et al. (2014) reveals that traits like extraversion and openness to experience enhance the advancement of Cultural Intelligence (CQ) in the context of international assignments. Emotional intelligence empowers individuals to attain their goals, with key abilities such as self-awareness, self-control, empathy, and strong social skills playing a pivotal role in fostering collaboration and competitiveness among colleagues. Cultural self-awareness (EF3) is the ability to recognize and understand one's own cultural biases and preferences. It enables individuals to acknowledge their cultural assumptions and adapt to different cultural perspectives (Goleman, 2015). Tolerance for ambiguity (EF4) refers to an individual's ability to handle uncertainty and ambiguity, crucial for cultural intelligence. It enables individuals to navigate through the complexities and ambiguities of different cultural settings by embracing uncertainty and effectively managing the discomforts in the organization (Sharma & Singh, 2019). Resilience (EF5) is the ability to adapt and rebound from challenging situation. Individuals with high emotional intelligence exhibit superior capabilities in managing and controlling their emotions, understanding each other's emotions, engaging more effectively in interpersonal interactions, and leveraging their emotions to enhance adjustment in diverse multicultural settings. This, in turn, mitigates culture shock and enhances resilience (Kai Liao et al., 2021). Behavioral CQ, is related to the skill of adjusting one's spoken and non-verbal conduct effectively to align with the behaviors observed in diverse cross-cultural environments. In this context, cognition and emotion encompass mental capacities, while physical and behavioral capability involve tangible actions (Ang et al., 2007). Communication styles (BF1) not only encourages interaction with expatriate colleagues but also equips them with the ability to adjust communication styles effectively during these interactions (Ratasuk & Charoensukmongkol,

2020). Leadership style (BF2) significantly influences how feedback is communicated and its frequency, with cultural differences posing challenges in superior-subordinate communication and diminishing feedback effectiveness. Additionally, leadership style plays a crucial role in shaping the nature of feedback, creating a mediation pathway between leadership style and self-efficacy (Gumah et al., 2021). Team building (BF3) builds and manages teams across cultures, addressing differences in communication, work styles, and expectations and emerges as a pivotal factor for organizational success. In the IT sector, where diverse talents converge, leaders' ability to foster a cohesive team environment across cultural boundaries becomes paramount. Research consistently emphasizes the positive correlation between robust team building practices, cultural intelligence, and enhanced organizational performance. Conflict management (BF4) involves a comprehensive understanding of conflict, covering triggers, the conflict cycle, Conflict Management Styles (CMSs), and behaviors. The primary goal is not the eradication of conflict but identifying diverse strategies to handle it effectively. This entails controlling the detrimental elements of conflict while fostering its constructive aspects (Caputo et. al., 2019). Relationship building (BF5) stands as a cornerstone for effective collaboration and organizational success. Leaders prioritize open communication, acknowledge and respect cultural differences, actively working towards creating an inclusive environment. Research consistently demonstrates that robust relationship building not only enhances team cohesion but also significantly influences organizational performance.

METHOD
The study aims to explore the existing 20-item Cultural Intelligence (CQ) scale and the 12-item Cross-Cultural Leadership Effectiveness (CCLE) scale. A quantitative survey was conducted among IT Managers and Leaders within the Bangalore IT landscape, gathering data from a sample of 440 participants, of which 413 were considered with no missing values. The categorical characteristics of the participants were measured using variables such as Age, Job Designation, Educational Qualification, Total Experience, and Annual Income. Informed consent was obtained from all participants, ensuring their voluntary participation and confidentiality of their responses.

Results and Findings

Descriptive Statistics Overview: CV, CF, PF, EF, BF and CCLE.

N = 413	Age	JD	EQ	TE	AI
Mean	2.08	2.36	3.71	2.59	2.69
Median	2	2	4	2	3
Mode	2	2	3	2	3
Std. Deviation	0.912	0.866	0.736	1.182	0.778
Variance	0.832	0.749	0.542	1.397	0.606
Skewness	0.488	0.575	0.481	0.308	0.156
Kurtosis	-0.331	0.603	-0.961	-0.837	-0.029
Range	4	4	3	4	4
Minimum	1	1	2	1	1
Maximum	5	5	5	5	5

Table 1: Descriptive statistics for Categorical Variables

The average age (mean) is 2.08, with a relatively small standard deviation of 0.912. This indicates that, on average, the age of the subjects is close to the middle of the possible range (1 to 5). The data has a positive skewness (0.488), suggesting a slight tail to the right. The kurtosis is negative (-0.331), indicating that the distribution is less peaked than a normal distribution. Job Designation average is 2.36, with a standard deviation of 0.866. The distribution is slightly positively skewed (skewness = 0.575), indicating a tail to the right. The kurtosis (0.603) suggests a distribution with heavier tails than a normal distribution. The mean educational qualification is 3.71, and the distribution is relatively narrow, as indicated by the low standard deviation (0.736). The data is positively skewed (0.481), and the negative kurtosis (-0.961) suggests a flatter distribution with lighter tails than a normal distribution. The average total experience is 2.59, with a relatively better standard deviation of 1.182. The skewness (0.308) is positive, indicating a slight right tail. The kurtosis (-0.837) suggests a distribution with lighter tails than a normal distribution. The mean Annual income level is 2.69, and the distribution has a low

standard deviation of 0.778. The skewness (0.156) is positive, suggesting a slightly right-skewed distribution. The kurtosis (-0.029) indicates a distribution with lighter tails than a normal distribution.

N = 413	CF1	CF2	CF3	CF4	CF5
Mean	4.61	4.57	4.5	4.52	4.47
Median	5	5	5	5	4
Mode	5	5	5	5	4
Std. Deviation	0.489	0.506	0.529	0.519	0.509
Variance	0.239	0.256	0.28	0.27	0.26
Skewness	-0.433	-0.393	-0.282	-0.292	0.001
Kurtosis	-1.822	-1.569	-1.273	-1.433	-1.731
Range	1	2	2	2	2
Minimum	4	3	3	3	3
Maximum	5	5	5	5	5

Table 2: Descriptive statistics for Cognitive Factors

The mean score of CF1 is 4.61 indicating a relatively high level of performance, with a median of 5.00, suggesting a slightly left-skewed distribution. The most frequent score is 5, and the standard deviation (0.489) suggests a low to moderate amount of variability in the scores. The negative skewness (-0.433) and kurtosis (-1.822) indicate a distribution with heavier tails than a normal distribution (leptokurtic), and the range of 1 indicates a small spread of scores. The mean score of CF2 is 4.57, reflecting a relatively high level of performance, and the symmetric distribution is indicated by a median of 5.00. With a standard deviation of 0.506, there is a moderate amount of variability in the scores. Similar to CF1, negative skewness (-0.393) and kurtosis (-1.569) suggest a leptokurtic distribution. The range of 2 indicates a moderate spread of scores. The variable CF3 demonstrates a mean score of 4.50, indicating a moderate to high level of performance. The symmetric distribution is evident from the median of 5.00. The standard deviation (0.529) suggests a moderate amount of variability, and negative skewness (-0.282) and kurtosis (-1.273) indicate

shows a mean score of 4.52, indicating a moderate to high level of performance. The distribution is symmetric with a median of 5.00, and a standard deviation of 0.519 suggests moderate variability. Negative skewness (-0.292) and kurtosis (- 1.433) continue to indicate a leptokurtic distribution. The range of 2 suggests a moderate spread of scores. CF5, has a mean score of 4.47, reflecting a moderate to high level of performance. The nearly symmetric distribution is indicated by a median of 4.00. The standard deviation (0.509) suggests a moderate amount of variability, while negative skewness (close to zero) and kurtosis (-1.731) again suggest a leptokurtic distribution.

N = 413	PF1	PF2	PF3	PF4	PF5
Mean	4.03	4.34	4.14	4.47	4.46
Median	4	4	4	5	4
Mode	4	5	4	5	4
Std. Deviation	0.874	0.711	0.783	0.568	0.545
Variance	0.764	0.506	0.613	0.322	0.298
Skewness	-0.587	-0.963	-1.019	-0.471	-0.292
Kurtosis	-0.397	0.895	1.83	-0.762	-1.032
Range	3	3	4	2	2
Minimum	2	2	1	3	3
Maximum	5	5	5	5	5

Table 3: Descriptive statistics for Physical Factors

The mean score of PF1 is 4.03 suggesting a moderate level of performance, and the symmetric distribution is supported by a median of 4.00. The most frequent score is 4, with a standard deviation of 0.874 indicating moderate variability. Negative skewness (-0.587) and kurtosis (-0.397) suggest a slightly left-skewed and platykurtic distribution, respectively. PF2, demonstrates an average score of 4.34, indicating a relatively high level of performance. The distribution, with a median of 4.00, shows some degree of skewness to the right. The most frequent score is 5, and the standard deviation of 0.711 suggests moderate variability. Negative skewness (-0.963) and kurtosis (0.895) indicate a left-skewed, leptokurtic distribution. PF3, exhibits an average score of 4.14, indicating a moderate level of performance. The distribution is symmetric, as evidenced by a median of 4.00, with the most frequent score being 4. The standard deviation of 0.783 suggests moderate variability. Negative skewness (-1.019) and kurtosis (1.830) reveal a left-skewed, leptokurtic distribution. PF4, has an average score of 4.47, suggesting a moderate to high level of performance. The right-skewed distribution is indicated by a median of 5.00, with the most frequent score being 5. The standard deviation of 0.568 suggests moderate variability. Negative skewness (-0.471) and kurtosis (-0.762) suggest a slightly left-skewed, platykurtic distribution. PF5, has an average score of 4.46, indicating a moderate to high level of performance. The distribution is relatively symmetric, with a median of 4.00 and the most frequent score being 4. The standard deviation of 0.545 suggests moderate variability. Slight negative skewness (-0.292) and kurtosis (-1.032) indicate a distribution with heavier tails than a normal distribution (leptokurtic).

N = 413	EF1	EF2	EF3	EF4	EF5
Mean	4.44	4.49	4.47	4.46	4.45
Median	4	4	4	4	4
Mode	4	4	4	4	4
Std. Deviation	0.53	0.501	0.505	0.527	0.527
Variance	0.281	0.251	0.255	0.278	0.277
Skewness	-0.115	0.034	0.055	-0.13	-0.211
Kurtosis	-1.25	-2.009	-1.858	-1.324	-0.595
Range	2	1	2	2	3
Minimum	3	4	3	3	2
Maximum	5	5	5	5	5

Table 4: Descriptive statistics for Emotional Factors

EF1 exhibits a mean of 4.44, indicating a relatively high level of effectiveness. The distribution is relatively symmetric, as evidenced by a median of 4.00, with the most frequent score being

4. The standard deviation of 0.530 suggests moderate variability, and the negative skewness (- 0.115) and kurtosis (-1.250) indicate a slightly left-skewed, platykurtic distribution. EF2 has a mean of 4.49, indicating a relatively high level of effectiveness. The distribution, with a median of 4.00, shows a relatively symmetric pattern, and the most frequent score is 4. The standard deviation of 0.501 suggests moderate variability, while the slight positive skewness (0.034) and kurtosis (-2.009) indicate a distribution with heavier tails than a normal distribution (leptokurtic). EF3 presents an average score of 4.47, indicating a relatively high level of effectiveness. The distribution is relatively symmetric, with a median of 4.00 and the most frequent score being 4. The standard deviation of 0.505 suggests moderate variability, and the slight positive skewness (0.055) and kurtosis (-1.858) indicate a distribution with heavier tails than a normal distribution (leptokurtic). EF4 has a mean of 4.46, indicating a relatively high level of effectiveness. The right-skewed distribution is indicated by a median of 4.00, with the most frequent score being 4. The standard deviation of 0.527 suggests moderate variability, and the negative skewness (-0.130) and kurtosis (-1.324) suggest a slightly left-skewed, platykurtic distribution. EF5 demonstrates an average score of 4.45, indicating a relatively high level of effectiveness. The distribution is relatively symmetric, with a median of 4.00 and the most frequent score being 4. The standard deviation of 0.527 suggests moderate variability, and the slight negative skewness (-0.211) and kurtosis (-0.595) indicate a slightly left-skewed, platykurtic distribution.

N = 413	BF1	BF2	BF3	BF4	BF5
Mean	4.46	4.46	4.46	4.47	4.46
Median	4	4	4	4	4
Mode	4	4	4	4	4
Std. Deviation	0.518	0.541	0.541	0.523	0.541
Variance	0.269	0.292	0.293	0.274	0.293
Skewness	-0.069	-0.33	-0.367	-0.124	-0.358
Kurtosis	-1.507	-0.441	-0.425	-1.408	-0.429
Range	2	3	3	2	3
Minimum	3	2	2	3	2
Maximum	5	5	5	5	5

Table 5: Descriptive statistics for Behavioral Factors

BF1 represents an average score of 4.46, signifying a relatively high level of perceived benefits. The distribution appears relatively symmetric, as indicated by a median of 4.00 and the most frequent score being 4. With a standard deviation of 0.518, the scores exhibit moderate variability. The negative skewness (-0.069) and kurtosis (-1.507) suggest a distribution with lighter tails than a normal distribution (platykurtic). BF2 indicates an average score of 4.46, indicating a relatively high level of perceived benefits. The distribution appears relatively symmetric, with a median of 4.00 and the most frequent score being 4. The standard deviation of 0.541 suggests moderate variability. Negative skewness (-0.330) and kurtosis (-0.441) indicate a slightly left-skewed, platykurtic distribution. BF3 exhibits an average score of 4.46, suggesting a relatively high level of perceived benefits. The distribution appears relatively symmetric, with a median of 4.00 and the most frequent score being 4. With a standard deviation of 0.541, the scores display moderate variability. Negative skewness (-0.367) and kurtosis (-0.425) suggest a slightly left-skewed, platykurtic distribution. BF4 has an average score of 4.47, indicating a relatively high level of perceived benefits. The distribution appears

relatively symmetric, with a median of 4.00 and the most frequent score being 4. The standard deviation of 0.523 suggests moderate variability. Negative skewness (-0.124) and kurtosis (-1.408) indicate a slightly left-skewed, platykurtic distribution. BF5 shows an average score of 4.46, indicating a relatively high level of perceived

benefits. The distribution appears relatively symmetric, with a median of 4.00 and the most frequent score being 4. The standard deviation of 0.541 suggests moderate variability. Negative skewness (-0.358) and kurtosis (-0.429) indicate a slightly left-skewed, platykurtic distribution.

N = 413	CCL1	CCL2	CCL3	CCL4	CCL5	CCL6	CCL7	CCL8	CCL9	CCL10	CCL11	CCL12
Mean	4.41	4.39	4.47	4.47	4.40	4.37	4.38	4.47	4.38	4.38	4.47	4.50
Median	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00
Mode	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	5.00
Std. Deviation	0.53	0.52	0.52	0.52	0.53	0.55	0.57	0.54	0.56	0.53	0.53	0.58
Variance	0.28	0.27	0.27	0.27	0.28	0.30	0.33	0.29	0.31	0.28	0.28	0.33
Skewness	-0.1	0.1	-0.1	-0.1	0.0	-0.1	-0.3	-0.4	-0.2	0.1	-0.3	-1.0
Kurtosis	-0.5	-1.3	-1.5	-1.5	-1.1	-0.9	-0.8	-0.5	-0.8	-1.1	-0.5	2.1
Range	3.00	2.00	2.00	2.00	2.00	2.00	2.00	3.00	2.00	2.00	3.00	4.00
Minimum	2.00	3.00	3.00	3.00	3.00	3.00	3.00	2.00	3.00	3.00	2.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Table 6: Descriptive statistics for Cross Cultural Leadership Effectiveness

CCL1, yields an average score of 4.41, indicating a relatively high level of agreement. The distribution appears symmetric with a median of 4.00 and a mode of 4. Slight negative skewness (-0.114) and kurtosis (-0.486) suggest a distribution with lighter tails than a normal distribution (platykurtic). CCL2 has an average score of 4.39, indicating a relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight positive skewness (0.115) and kurtosis (-1.276) suggest a distribution with heavier tails than a normal distribution (leptokurtic). CCL3 shows an average score of 4.47, indicating a

relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight negative skewness (-0.107) and kurtosis (-1.503) suggest a distribution with heavier tails than a normal distribution (leptokurtic). CCL4 displays an average score of 4.47, indicating a relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight negative skewness (-0.088) and kurtosis (-1.505) suggest a distribution with heavier tails than a normal distribution (leptokurtic). CCL5 exhibits an average score of 4.40, indicating a relatively high level of agreement. The

distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight negative skewness (-0.018) and kurtosis (-1.097) suggest a distribution with lighter tails than a normal distribution (platykurtic). CCL6 shows an average score of 4.37, indicating a relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight negative skewness (-0.099) and kurtosis (-0.862) suggest a distribution with lighter tails than a normal distribution (platykurtic). CCL7, encompassing 413 observations, yields an average score of 4.38, indicating a relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight negative skewness (-0.259) and kurtosis (-0.751) suggest a distribution with lighter tails than a normal distribution (platykurtic). CCL8, has an average score of 4.47, indicating a relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight negative skewness (-0.351) and kurtosis (-0.464) suggest a distribution with lighter tails than a normal distribution (platykurtic). CCL9 shows an average score of 4.38, indicating a relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight negative skewness (-0.174) and kurtosis (-0.813) suggest a distribution with lighter tails than a normal distribution (platykurtic). CCL10 yields an average score of 4.38, indicating a relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight positive skewness (0.077) and kurtosis (-1.126) suggest a distribution with heavier tails than a normal distribution (leptokurtic). CCL11 displays an average score of 4.47, indicating a relatively high level of agreement. The distribution is relatively symmetric, with a median of 4.00 and a mode of 4. Slight positive skewness (0.077) and kurtosis (-0.514) suggest a distribution with lighter tails than a normal distribution (platykurtic). CCL12,

based on 413 observations, shows an average score of 4.50, indicating a relatively high level of agreement. The distribution is right-skewed, with a median of 5.00 and a mode of 5. Negative skewness (-0.966) and kurtosis (2.125) suggest a distribution with heavier tails than a normal distribution (leptokurtic).

CONCLUSION

The descriptive statistics present insightful findings regarding various factors affecting IT Managers and Leaders within the Bangalore IT landscape. Firstly, the average age and job designation level indicate a moderate profile among participants, suggesting a stable workforce within the IT industry in Bangalore. Secondly, participants demonstrate a high level of educational qualification, implying a well-educated workforce within the IT sector. Furthermore, the average total experience of participants is moderate, suggesting a healthy mix of seasoned leaders and emerging talent within the IT landscape of Bangalore. In terms of income, participants report a moderate annual income level, indicating diversity in income levels but a majority earning a moderate income, aligning with the broader economic landscape of the region.

Moving on to cognitive, physical, emotional, and behavioral factors, participants generally exhibit high levels of performance and effectiveness across these domains. The slightly left-skewed distributions indicate a tendency towards higher scores, suggesting that IT Managers and Leaders in Bangalore possess strong capabilities in these areas.

Additionally, participants demonstrate a high level of agreement on various cross-cultural leadership effectiveness aspects, as indicated by the relatively symmetric distributions and moderate variability in scores. This suggests a shared understanding and alignment among IT

IT Managers and Leaders in Bangalore regarding important leadership values and practices.

In conclusion, the findings highlight the diverse skills and experiences of IT Managers and Leaders in the Bangalore IT landscape, indicating a well-educated and experienced workforce with strong cognitive, physical, emotional, and behavioral capabilities. The high level of agreement on cross-cultural leadership effectiveness further underscores shared values and practices among leaders in the region. Moving forward, qualitative analyses, comparative studies, and cross-cultural training initiatives present promising avenues for further research and practical interventions to enhance effectiveness.

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A STUDY ON YOUTH PERCEPTION TOWARDS FINANCIAL PLANNING

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ABSTRACT

Financial planning is a methodical process for achieving one's objectives in life. A financial plan serves as a roadmap for your financial future. In essence, it assists you in maintaining control over your earnings, outlays, and assets so that you may manage your finances and accomplish your goals.Financial planning plays a crucial role in ensuring economic stability and well-being for individuals and society as a whole. However, studies show that young people frequently lack the necessary knowledge and awareness of financial planning strategies, potentially creating financial difficulties in later life. This study intends to examine how young people view financial planning and the variables that affect their attitudes and actions. Where saving and investing were once seen as crucial components of a young adult's income, today's society places more emphasis on asset acquisition than financial preparation. The newly hired youth's financial literacy is getting worse every day. The study ahead examines a number of topics, including the financial literacy of recently hired young people and the decisions they are making in the financial industry.

This research paper aims to analyses the perception of youth towards financial planning by examining the awareness, benefits, challenges, and scope for future investments among the youth. The study will focus on understanding the view and adaption of financial planning by young adults. Research Methodology used is questionnaire. The questionnaire was developed to collect data from youth between the age of 18-30. The total responses were around 201 and the method used to select the samples was convenience random sampling. The results showed significant and positive response regarding the perception of youth towards investing and financial planning along with its benefits and challenges.

Jamovi was used to analyses the data and generate ANOVA for hypothesis testing. Through this the research will explore the potential benefits received through financial planning according to youth. The paper will also examine the obstacles that will come along with planning the investments. The study will provide us with an insight on awareness of youth towards different types of investment alternatives and their plan to invest in them at present and in near future.

Keywords:
Youth, Financial planning, Investment alternatives, Potential benefits, Managing finances

INTRODUCTION

Financial planning is the process of determining a person's life goals, taking an inventory of their finances and other assets, and taking the necessary actions to help them be accomplished within the allotted time frame. It is a technique for evaluating a person's financial need. To guarantee that people have stable and secure financial situations, financial planning is an essential part of personal finance. There are several tools available in the market that may be customized to meet the demands of various planning objectives. The degree of financial literacy and the perception of financial planning among the youth continue to be key concerns due to the expanding financial challenges and uncertainties that young people today confront.

The primary considerations in financial planning include the time horizon for reaching life goals, determining risk tolerance, one's need for liquidity, standard of living, and the requirement for growth or income. This research paper seeks to explore the perception of youth on financial planning and the factors that influence their financial decisions. The study aims to shed light on the financial behaviour of young people, their understanding of financial planning, and their attitudes towards financial management.

The aim of this research is to offer insights into the level of financial literacy among the youth and how the various factors like education, cultural background, socioeconomic status has an impact on their financial planning, through a thorough review of the literature and the use of surveys. The research paper will employ a mixed-method approach, combining both quantitative and qualitative research methods to gather and analyze data. This will involve conducting surveys with young people to gain insights into their attitudes towards financial planning, as well as their current financial behaviors and habits. Questionnaire with sample size of 201 respondents and the sampling method used here was convenient random sampling. The

secondary data was collected by reviewing the literature related to the topic of research Perception of Youth towards Financial Planning and also by referring to other related websites and articles.

LITERATURE REVIEWS

Mohd Rahin Ariffin, Zunaidah Sulong and Amalina Abdullah (2017). The researchers studied that the financial literacy is still low and many people failed to manage their finances effectively. The objective of this paper is to determine the financial literacy level and students' perception towards saving behavior. The findings showed that saving behavior, peer influence and parental socialization had positive correlation with financial literacy. The study found that financial literacy and perceived financial benefits explained 27.5% of the variance in saving behavior. The study found that gender, age, family income, and educational level were not significant predictors of saving behavior. Convenience sampling method was used. The sample consisted of 289 undergraduate students from a public university in Malaysia.

Martha Henn McCormick, the researchers studied that the current financial crisis, children and youth are uniquely impacted by household finance complexities. The research explores the state of youth financial education and policy, including definitions and measures of effectiveness. The study found that youth financial education is effective in improving financial knowledge, attitudes, and behaviors. The study also found that the effectiveness of financial education can be enhanced through various factors, including the quality of the financial education program, the teaching method, and the timing of the education.

Ganriela Topa, Montserrat Hernandez-Solis and Salvatore Zappala (2018) The study contributes to better understanding how and when investment literacy drives well informed and responsible financial behavior. The result

RESEARCH METHODOLOGY

Research Questions

•What are the different types of investment alternatives you are aware of?

•What are the main obstacles you face in managing your finances effectively?

•How do you think financial planning can benefit you?

•Do you have any financial goals for the future? If yes, what are they?

OBJECTIVES

● To study the current level of financial literacy among youth.

● To study the factors that influence youth financial decision-making, including family background, education level, and cultural values.

● To study the attitudes and beliefs of youth towards financial planning.

● To study the obstacles and difficulties that young people have when trying to engage in financial planning, such as knowledge gaps, resource access issues, or conflicting priorities.

RESEARCH DESIGN

The research design is divided into two stages where the first one is a qualitative method which includes reviewing the literature related to the topic youth perception on financial planning. Aids in understanding how young people see financial planning.

Whereas the quantitative method involves survey of the youths which gives real time data in numerical form. The parameters are then measured and assessed to find the relationship between the variables.

Sampling design

• Sampling method – Systematic sampling
• Sample size – 100 respondents

Data Collection

On the basis of the questionnaire, the perception of youth on financial planning will be identified. The techniques of qualitative and quantitative research can be used to collect and analyses the data.

Analytical Design

Software used for the analysis of the primary data is Jamovi. Using this software statistical analysis such as Anova was conducted to find the relationship between the variables and predict the impact.

HYPOTHESIS

• H1: There is a significant difference between perception of youth on benefits received through financial planning.

• H2: There is a significant difference between the obstacles faced in managing the finances effectively by youth.

DATA ANALYSIS

The 24-27 age group accounts for 40.8% of all respondents. The 18-23 age group is the next largest, accounting for 36.8% of respondents. The overall data shows a relatively balanced distribution of respondents across the age groups, with the 24-27 age group having the largest number of respondents. This means that the survey captured the perspectives of young people at various stages of their early adulthood, allowing for a thorough understanding of youth attitudes towards financial planning.

Age
201 responses
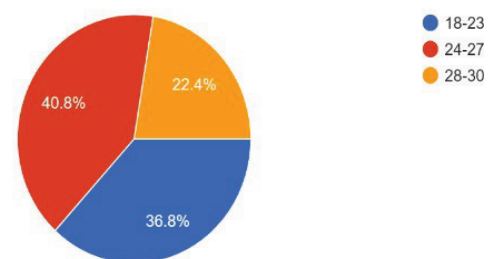
31.8% of respondents reported having no annual income due to being unemployed. About 16.9% of respondents reported an annual income of more than 7 Lakhs. Around 19.9% of respondents reported annual earnings of between 2.2 Lakhs and 5 Lakhs. According to the data, 13.9% of respondents have an annual income of less than 2.5 Lakhs.

According to the data 54.2% of respondents expressed an interest in investing in stocks and 23.4% of respondents are interested in investing in bonds. 63.7% of respondents indicated a desire to invest in mutual funds, 29.4% of respondents are interested in investing in cryptocurrency. 46.3% of respondents said they were interested in real estate and 62.2% of respondents are interested in investing in fixed deposits. 6% of respondents fell into the "Other" category.

Income per annum (if working)
201 responses
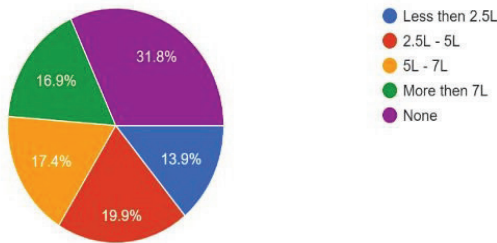
According to the data 54.2% of respondents expressed an interest in investing in stocks and 23.4% of respondents are interested in investing in bonds. 63.7% of respondents indicated a desire to invest in mutual funds, 29.4% of respondents are interested in investing in cryptocurrency. 46.3% of respondents said they were interested in real estate and 62.2% of respondents are interested in investing in fixed deposits. 6% of respondents fell into the "Other" category.

Which type of investment are you interested in?
201 responses
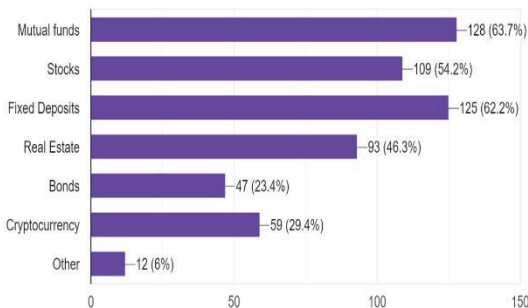
The majority of respondents (46.3%) stated that they are already investing. 16.9% of respondents stated that they intend to begin investing within the next six months. 9.5% of respondents intend to invest within the next 2-5 years.

Approximately 4% of respondents indicated a desire to invest after 5 years. 19.9% of respondents are unsure about their investment plans. According to the survey, 3.5% of respondents do not intend to invest.

From when are you planning to invest ?
201 responses
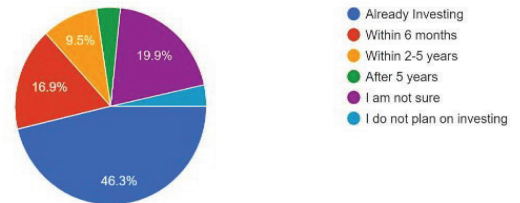
The majority of respondents (50.7%) said they invest 0-5% of their income. Approximately 25.9% of respondents reported investing 6%-10% of their income. 13.9% of those polled invest 11%-15% of their income. About 6% of respondents said they invest 16%-20% of their income. This indicates that a smaller proportion of the surveyed youth invest a greater proportion of their income. 3.5% of respondents invest 20% or more of their income.

How much % of your income do you invest ?
201 responses
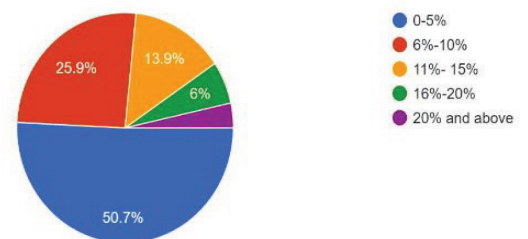
According to the survey, approximately 32.8% are already investing have invested in mutual funds. 31.8% of those who have already started investing have chosen to invest in individual company stocks. Fixed deposits have been chosen by approximately 38.3% of respondents who are already investing. According to the data, 18.9% of those who are already investing have chosen to invest in real estate. Approximately 8% of those who are already investing have bonds in their portfolio. 8% of respondents who are already investing have invested in cryptocurrencies. "Not applicable" category

includes 32.8% of those who have already invested.

If already investing, what are the different types of investment you are investing in
201 responses
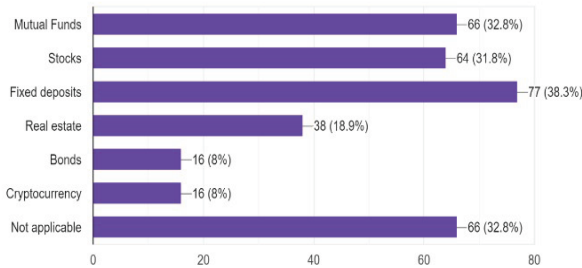
Approximately 40.8% of respondents agree with the statement. This indicates that a sizable proportion of the surveyed youth recognize the value of financial planning in providing them with control over their income, expenses, and investments. The majority of respondents (45.3%) strongly agree with the statement. This suggests that a sizable proportion of the surveyed youth firmly believe in the power of financial planning.

Financial planning helps you be in control of your income, expenses and invest such that you can manage your money and achieve your goals.
201 responses
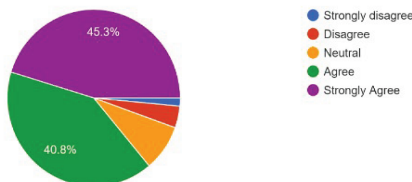
Approximately 14.9% of respondents identified a lack of financial knowledge or education as a significant barrier to effectively managing their finances. 25.9% of respondents cited limited income as a major impediment to effectively managing their finances.41.3% of respondents, high expenses are the most difficult obstacle to effectively managing their finances. 17.9% of respondents cited debt or loan repayments as a significant impediment to effectively managing their finances.

What are the main obstacles you face in managing your finances effectively?
201 responses
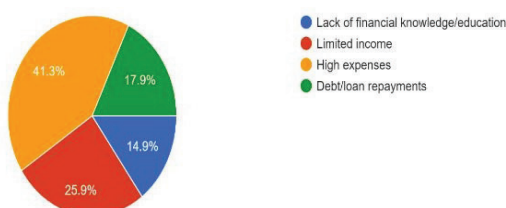
Approximately 20.4% of respondents believe that financial planning can help them achieve financial goals such as purchasing a home, starting a business, or pursuing other significant aspirations. According to the data, 34.3% of respondents see financial planning as a way to better manage their personal finances. 19.9% of respondents, financial planning can reduce financial stress. According to the data, 25.4% of respondents see financial planning as a way to improve their financial security.

How do you think financial planning can benefit you?
201 responses
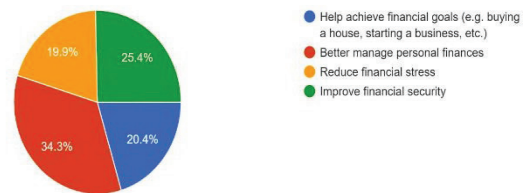
According to the data, 48.3% of those polled have both investment and savings accounts. This suggests that a sizable proportion of the youth polled actively engage in financial planning Around 29.4% of those polled have a savings account but no investments. According to the data, 7% of respondents have investments but no savings account. 15.4% of respondents have no investments or savings accounts.11]

Approximately 85.6% of respondents said yes, it is important to plan for future expenses and saving. This indicates that the youth surveyed understand the importance of financial planning in preparing for future expenses, saving for financial goals, and establishing a solid financial foundation. Approximately 9% of respondents believe that financial planning is unnecessary for young adults. 5.5% of respondents are unsure of the importance of financial planning for young adults.

Do you currently have any investments or savings accounts?
201 responses
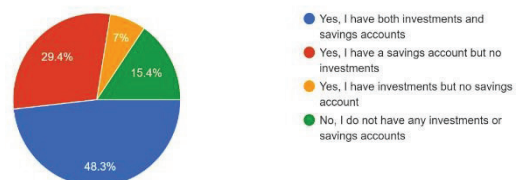
48.3% of respondents are confident in their financial decision-making abilities. According to the data, 9% of respondents are unsure of their ability to make financial decisions. Maybe: 42.8% of respondents gave a "maybe" response, indicating some level of uncertainty or mixed feelings about their ability to make financial decisions.

Do you feel confident in your ability to make financial decisions?
201 responses
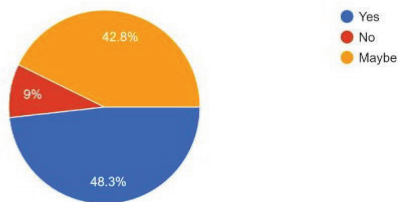
13.9% of respondents have the financial goal of saving for a down payment on a house. 10.4% of respondents have a financial goal of creating an emergency fund. Approximately 17.9% of respondents have a financial goal of repaying their student loans. According to the data, 10.9% of those polled have a financial goal of investing

Hypothesis Testing

H0: There is no significant difference between perception of youth on benefits received through financial planning.

for retirement. Approximately 37.3% of respondents said they have all of the financial goals listed above. This indicates that a sizable proportion of the surveyed youth have multiple financial goals and understand the value of a well-rounded financial plan, 9.5% of respondents do not have any of the aforementioned financial goals.

Do you have any financial goals for the future? If yes, what are they?
201 responses

Do you feel confident in your ability to make financial decisions?
201 responses
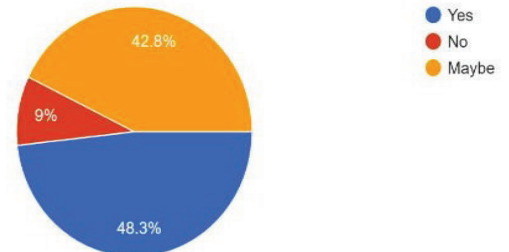
H1: There is a significant difference between perception of youth on benefits received through financial planning.

ANOVA - Age

	Sum of Squares	df	Mean Square	F	P
Financial planning helps you be in control of your income, expenses and invest such that you can manage your money and achieve your goals.	6.96	4	1.740	3.16	0.015
Residuals	107.85	196	0.550		

INTERPRETATION:

● The above ANOVA test examines the relationship between age and the perception of benefits of financial planning among the participants.
● The p-value of 0.015 is below the commonly used significance level of 0.05, suggesting that there is a statistically significant difference between perception of youth on benefits received through financial planning. In other words, age appears to have an impact on how individuals

perceive financial planning.
● p-value < 0.05, therefore accept H1.

HYPOTHESIS TESTING

• H0: There is no significant difference between the obstacles faced in managing the finances effectively by youth.
• H1: There is a significant difference between the obstacles faced in managing the finances effectively by youth.

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ACADEMIC AND SOCIAL ELEMENTS' EFFECTS ON STUDENTS' EDUCATION AND PERFORMANCE: A COMPREHENSIVE REVIEW

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ABSTRACT

Understanding the multifaceted influence of both academic and social elements on students' education and performance is essential for educational policymakers, administrators, and educators. This review provides insights into the interplay between these factors, highlighting the need for comprehensive approaches that address both academic and social dimensions in educational settings. This paper comprehensively reviews the effects of academic and social elements on students' education and performance. It explores the dynamic relationship between academic factors (such as curriculum, teaching methods, and resources) and social factors (such as peer relationships, family dynamics, and socio-economic background) in shaping students' educational experiences and outcomes. Research highlights the importance of a well-structured curriculum that is aligned with students' developmental needs, providing appropriate challenges and opportunities for growth. By recognizing the importance of a balanced and supportive environment, stakeholders can implement targeted interventions and initiatives to maximize students' educational experiences and promote their overall success.

Keywords: Academic Elements, Curriculum, Teaching Methods, Social, Economic, Educational Outcomes, Teaching Strategies.

Introduction

To make any kingdom exceptionally good, education is essential. A great outcome for students' lifestyles and a tool that supports their existence may be produced with the aid of instruction by the institution and the instructor. According to psychology, even if it's a teacher or professor, a person can't have a good conversation with an unfamiliar individual. According to Archer & Cooper (1998) and Davis & Humphrey (2000), effective university counseling services today include excellent student outreach, a close connection to the organization's educational mission, and proof that they have helped students succeed academically. Counseling is also very helpful for student retention in exams. Through preventative programmes intended to increase student retention, counseling services can better assist schools and institutions in achieving their goals. Institutions continue to focus on scholar

retention as an extended-status assignment (Braxton, Bray, & Berger, 2000). According to research, retention rates increase when students are engaged academically and socially in the learning environment, have high regard for their academic performance, and value the supportive relationships they have built at the institution (Pascarella & Terenzini, 1983, 1991). Through this body of literature, the researcher can conclude that universities can improve student performance in terms of academic results and retention in ongoing studies through counselling. This can also help decrease the dropout rate, which is currently the biggest problem for universities and colleges.

One effect is a reduction in the percentage of students who drop out of school; interactions between individuals and the academic apparatus, as well as social interactions, constantly change aims and institutional commitments in ways that lead to endurance or to other forms of dropout (level, 1989; Tinto, 1993). Academically, college students are enrolled in institutions or colleges, but socially, they seek out a confidant with whom to discuss their feelings and problems, much as how they look to their parents for support after

they have lost it.

LITERATURE REVIEW

The relationship between academic and social elements and their impact on student's education and performance has been a subject of interest and study in the field of education. This literature evaluation aims to explore the existing research on how academic and social factors influence students' educational experiences and academic achievement.

ACADEMIC ELEMENTS

Teaching Quality and Methods: Numerous studies have investigated the impact of teaching quality and methods on students' academic performance. Research suggests that effective teaching practices, such as engaging instructional techniques, active learning strategies, and teacher-student interaction, positively correlate with improved educational outcomes.

Curriculum and Course Structure: The curriculum and course structure play a vital role in shaping students' educational experiences. Studies have shown that a well-designed curriculum that aligns with students' needs, interests, and learning styles can enhance motivation, engagement, and academic performance.

Assessment and Feedback: Assessment practices and feedback mechanisms significantly influence students' learning and achievement. Research indicates that formative assessment, timely feedback, and assessment for learning promote students' understanding, self-regulation, and overall academic performance.

SOCIAL ELEMENTS

Peer Relationships and Social Support:
The social environment in educational settings, particularly peer relationships and social support plays a crucial role in students' educational experiences. Positive peer relationships and social support networks contribute to increased motivation, self-esteem, and academic engagement.

School Climate and Classroom Environment: A positive school climate and supportive classroom environment foster students' well-being and educational outcomes. Research highlights that factors such as a safe and inclusive school climate, positive teacher-student relationships, and a sense of belonging can positively influence students' academic performance.

Parental Involvement and Support: Parental involvement and support have been found to significantly impact students' academic achievement. Studies show that students are more likely to succeed academically when parents actively engage in their children's education, provide support, and create a conducive learning environment at home.

Hence the evaluation indicates that both academic and social elements significantly affect students' education and performance. Quality teaching, curriculum design, assessment practices, positive school climates, and parental involvement all contribute to improved educational outcomes. Educators and policymakers should consider these factors when designing educational interventions and strategies to enhance student's educational experiences and academic achievement. Further research is needed to explore the complex interplay between academic and social elements and their long-term effects on students' education and performance.

KEGANIAN PERSPECTIVES

Kegan (1982, 1994) proposed that three connected developmental strains—cognitive, social, and intrapersonal—may be seen when a character progresses towards higher levels of self as part of his theoretical efforts to comprehend human growth strategies. To sum up quickly: The mechanisms by which we reason and interpret events taking place in the world around us are referred to as cognitive development; social development is concerned with relationships with others; and intrapersonal development is concerned with the processes by which we engage in self-reflection and gain increasing levels of self-knowledge (Kegan, 1994).

In the context of education and performance, the Keganian perspective emphasizes the following key points:

Evolving Complexity of Knowledge and Understanding: Kegan suggests that individuals' cognitive development moves from early stages, where knowledge and understanding are more concrete and externally determined, to later, where they become more complex, abstract, and internally constructed. This perspective implies that students' educational experiences and performance can be influenced by their stage of cognitive development. Educators can facilitate learning by providing appropriate challenges and scaffolding that align with students' current developmental stages.

Self-Authorship and Autonomy: One central aspect of Kegan's theory is the concept of self-authorship, which refers to the ability to define one's values, beliefs and identity independently. In the context of education, promoting self-authorship involves fostering students' autonomy, critical thinking, and reflective capacity. When students can explore their perspectives, engage in self-directed learning, and take ownership of their educational journey, they are more likely to perform better academically.

Constructive Developmental Pedagogy: Keganian perspective advocates for a constructive developmental pedagogy that aligns with students' developmental stage. This pedagogical approach recognizes that learners at different stages require different types of support and learning experiences. Educators can design instructional strategies that challenge students to engage in higher-order thinking, promote perspective-taking, and facilitate the construction of knowledge. Such pedagogical practices can enhance students' educational experiences and foster their cognitive growth.

Transformative Learning: Kegan's perspective also emphasizes the potential for transformative learning experiences. When students encounter new and challenging ideas, perspectives, or experiences, they may need to undergo a process of cognitive restricting and meaning-making. Such transformative learning experiences can lead to shifts in students' understanding, beliefs, and ways of engaging with the world. Educators can create opportunities for transformative learning by providing intellectually stimulating environments, encouraging dialogue and debate, and exposing students to diverse viewpoints.

Thus, the Keganian perspective on students' education and performance emphasizes the role of cognitive and psychological development in shaping their learning experiences. By considering students' stage of meaning-making, promoting self-

authorship and autonomy, adopting constructive developmental pedagogy, and facilitating transformative learning, educators can support students' educational growth and enhance their performance.

FUNDAMENTALS OF PURPOSEFUL CONDUCT

Purposeful conduct on students' education and performance plays a crucial role in students' education and performance. Students' intentional and mindful approach encourages them to control their learning journey, skills and academic goals. A few important points can positively impact students' education and overall performance.

Goal setting: Students should establish both short-term goals that are specific, measurable, attainable, relevant, and time-bound (SMART). These goals provide a sense of direction and help students stay focused on their studies.

Self-Motivation: Students with purposeful conduct are self-motivated. They have a strong internal drive to succeed and take responsibility for their own learning. They understand the importance of education and are determined to achieve their goals despite challenges or setbacks.

Time Management: Purposeful conduct requires effective time management skills. Students need to prioritize their tasks, and allocate time for studying, assignments, projects, and other commitments. By managing their time efficiently, students can avoid procrastination and ensure they make the most of their learning opportunities.

Active Learning: Purposeful conduct involves actively engaging in the learning process. Students should participate in class discussions, ask questions, take notes, and seek clarification when needed. They should also make connections between different concepts and apply their knowledge to real-life situations.

Discipline and Consistency: Students with purposeful conduct practice discipline and consistency in their studies. They establish a routine, follow a study schedule, and allocate dedicated time for learning every day. They avoid distractions and stay committed to their academic goals.

Self–Reflection: Purposeful conduct involves regular Self-reflection. Students should assess their progress, strengths, and areas for improvement. They can use techniques like journaling or self-assessment to evaluate their learning strategies and make adjustments accordingly.

RESILIENCE AND PERSEVERANCE:

Purposeful conduct requires resilience and perseverance. Students should develop a growth mindset, viewing challenges as opportunities for growth rather than obstacles. They should learn from failures, bounce back from setbacks, and maintain a positive attitude towards their education.

Collaboration and support: Purposeful conduct recognizes the value of collaboration and support. Students should actively seek help when needed, participate in group activities, and engage in discussions with peers. They can form study groups or join academic clubs to enhance their learning experience.

Seeking Meaning and Connection: Purposeful conduct involves finding meaning and connection in what is being learned. Students should understand the relevance and application of their studies in the real world. They can explore how their knowledge connects to their interests, passions and future career aspirations.

Balance and Well-being: Purposeful conduct encompasses maintaining a balance between academics and personal well-being. Students should prioritize their mental and physical health, engage in extracurricular activities, and take breaks when needed. A healthy work-life balance contributes to overall academic success.

By adopting purposeful conduct, students can enhance their educational experience and improve their performance. It empowers them to take control of their learning journey, develop valuable skills, and achieve their academic goals.

RESEARCH OBJECTIVE

This paper examines the behaviour of BBA students, whose average age is nineteen years old, and the effects of their connections to other academic and social institutions. Several factors immediately impact the student's thoughts and counselling, including the counselling environment, the question sample, and the impact of their interactions with professors at various points in the counselling process.

Tests and careers are equally important for college students, so researchers can also determine the impact of counselling and exquisite sports on students' private lives using qualitative research tools. The length of the examination includes asking the same questions after four to five months. As a result, we will regularly study the data, and researchers may also look at the overall performance.

INVESTIGATION TECHNIQUE

The first degree utilized in this study has developed into a theoretically supported, trustworthy, and legal tool meant to assess university students' capacity for creativity (see Selznick & Mayhew, 2018). Nine conditioned constructs, including intrinsic motivation, proactivity, innovation self-idea, networking, persuasive verbal exchange, teamwork across differences, revolutionary cognition, purpose to innovate, and risk-taking/tolerance, were used to calculate the innovation capacity rankings at the 2nd-order element level. The intrapersonal component of innovation capacity is made up of intrinsic motivation, initiative, and innovative self-idea.

Self-belief in one's capacity to live inspired while pursuing dreams is measured by intrinsic motivation; self-assurance in one's ability to gather the information and assets necessary to identify goals is measured by proactivity; and self-perception of one's own revolutionary potential is measured by innovation self-idea.

Networking, persuasion, and cooperation at a certain point of difference are all part of the social measurement of innovation capability. A person's comfort with creating and maintaining mutually beneficial new relationships is measured by networking; their perceived effectiveness in effectively communicating new ideas and plans to others is measured by persuasive speaking; and their perceived effectiveness in working as a team despite differences is measured by teamwork across differences. 2018; Matthew J. Mayhew, Benjamin S. Selznick, Lini Zhang, Amy C. Barnes, and B. Ashley Staples.

The researcher employed the major data series in this study, who conducted intense interviews or counselling sessions with all 60 BBA students at ARKA JAIN University. Each student's research took more than 15 minutes to ensure they were well-versed in their class's history.

ASSESSMENT

This study is entirely grounded in qualitative research methods, so the researcher interviewed undergraduate students at ARKA JAIN University's control branch to gauge their reactions. The researcher used a question based entirely on the students' responses, and the results were then measured. As this observation is ongoing, the researcher has only identified the students' one-time data, and more will appear when the two years of research are up. We discovered the following facts and figures as well as the problems that the students in elementary school encountered during therapy and discussion. The quality of pupils' achievement continues to be instructors' top priority. It is intended to distinguish between domestically, locally, nationally, and internationally. Researchers, educators, and running shoes have long been interested in examining the factors contributing to satisfied beginners' performance. These factors, both

within and outside of colleges, have an impact on how satisfied college students are with their academic performance. These aspects can be categorized as peer factors, school factors, personal family factors, and scholarly elements (Crosnoe, Johnson, & Elder, 2004).

Apart from other aspects, socioeconomic repute is one of the most studied and discussed issues among educational experts that affects college students' academic achievement. The most prevalent defense is that students' socioeconomic standing has an impact on how well they succeed academically. The majority of experts think that

low socioeconomic status has no bearing on students' academic performance since the basic needs of college students are still unmet, and as a result, they do not do better academically (Adams, 1996). Scholarly accomplishment is significantly influenced by gender, race, and father's work (McCoy, 2005; Peng & Corridor, 1995).

In order to maximize learning and influence the quality of educational performance, Walberg's concept of instructional productivity divided nine factors into three groups based on effective, cognitive, and behavioural abilities: aptitude (ability, improvement, and motivation); guidance (amount and quality); and environment (home, study room, peers, and television) (Roberts, 2007).

We should keep in mind the six elements listed below regarding this study while the researcher makes a diagnosis throughout the initial step of counselling.

In addition to other aspects, socioeconomic status is one of the topics that academic experts have investigated and argued the most in relation to how well college students perform academically. The most well-established claim is that immigrants' socioeconomic standing affects their academic success. Most experts think that kids' instructional performance is negatively impacted by their poor socioeconomic status since their fundamental requirements are not met, which prevents them from performing well academically (Adams, 1996). Scholarly accomplishment is significantly influenced by gender, race, and father's work (McCoy, 2005; Peng & Hall, 1995).

The Concept of Educational Productivity by Walberg (1981) determined three groups of nine elements based on strong, cognitive, and behavioural abilities for optimizing learning that

and environment (home, school, friends, and television) (Roberts, 2007).

The researcher identified the six components listed below during the primary counselling part of this study.

INTERNAL COMPONENTS REQUIRED AT UNIVERSITY/COLLEGE LEVEL
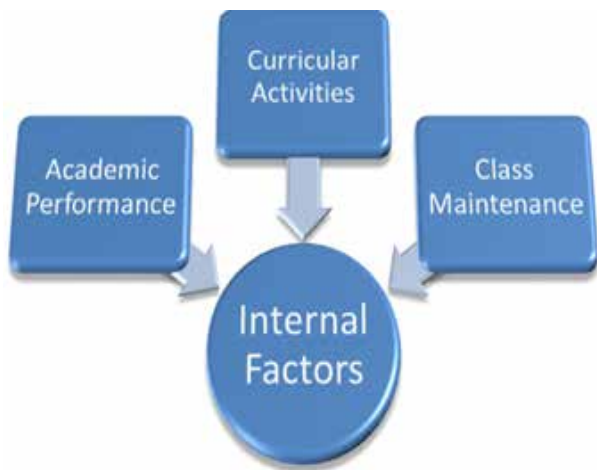
In this research, the researcher has just pointed out the different variables that could unexpectedly impact a student's regular academic performance. The graph reflects this in the above diagram.

OVERALL ACHIEVEMENT AGAINST ACADEMIC STANDARDS

The researcher identified one component of the student's performance outside of the classroom during the counselling in the first phase. Beyond performance plays a significant part in the student's everyday lives. The following are specifically three different categories of pupils' prior performance: 1. exceptional, 2. typical, and 3. poor overall performance.

Take a look at the following approaches to see how we may solve the problem mentioned above.

No	Variable	Adverse effect	Counselling consequences
1	**Superb**	If prior performance has been excellent or positive, undergraduate or graduate student's performance will likely suffer as a result of their intensely optimistic attitudes. Result: mostly lowered results	If we provide these sorts of pupils with the right counselling, it's possible that they won't pass away and will be able to continue in UG and PG programmes for 5 to 6 years. Result: favourable result
2	**Common**	Average performance in this context refers to marks that are less than 65% or 55% but do not result in a failing grade in any subject. The average outcome in previous records demonstrates the mind-affecting nature of the majority of student lectures. In certain instances, it may have occurred for personal reasons. Result: Potentially below the queue once again	Pper one-on-one instruction will enhance student performance and boost their comprehension capacity. As a consequence, the kids' mental faculties will start to function. Result: A typical to encourage improvement
3	**Negative overall performance**	Low grades reveal the pupils' lack of interest. It's conceivable that they are studying diligently while also being mentally inactive and showing interest in other activities.	As a result of poor academic achievement and an unfavourable social image, there is a greater need for counselling at this time since the likelihood of suicide is higher. Counselling is needed in this

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SPORTS AND CULTURAL PERFORMANCE WITHIN THE CURRICULUM

In the UG course, extracurricular activities significantly increase the effectiveness of the mind and mental activity. In the school stage, the mind is not yet mature and not that enthusiastic to question beyond the bounds, but in the UG path, the mental activity is more necessary because it's the level at which they will be able to expand their very own path for career improvement. They may be unsure about the need for self-motivation and self-actualization. Sports are very successful in addressing this culturally and academically. According to our research, sports activities, dancing, drawing, singing, and leisure planning receive a higher percentage of responses from students. These activities serve to stimulate students' minds. At some time between the ages of 18 and 20, the mind needs additional career-related guidance.

CLASS RENOVATION

Among the numerous things that fall within the category of elegant ordinary control that may be described in the following manner are the cleanliness of the classroom, general classroom management, the classroom's surroundings, the location where the lecture will take place, and many more.

Numeral.	Class renovation	Result
1	**Condition of the Classroom**	Because students tend to avoid unclean study spaces, the state of the room's cleanliness has a significant impact on how they perceive it. Students will focus more on the cleanliness of the classroom than the exam if the classroom isn't constantly kept up well. **Answer**: Clean classroom
2	**Comprehensive Administration**	The behaviour of the class representatives, the classroom layout and the pictures displayed on the walls make up overall management. An important function is played in the classroom by effective and inspiring photos on the wall of the lecture hall. **Answer**: One notice board is necessary, inspirational quotes should be posted on the classroom notice board, and management should always be in control.
3	**Lecture hall**	The study space's environment comprises the airflow within the lecture hall and the typical classroom temperature throughout the academic year.

Discipline degree at some point of Lecture.	Again, space throughout the lecture plays a crucial role since each lecture and every point of the lecture are related to one another. If space isn't consistently maintained throughout the lecture, resolving this issue will be very difficult. Therefore, how college students behave is crucial in this situation. **Answer**: Attempt to maintain the topic throughout the lesson.
Room association.	Students, seating affinity also plays a key role. If there are too few benches or too many students in one room, it reflects poorly on the organization and paints a negative image in the students' minds. If seating is more crowded, this is equivalent to having too many students in one room. **Answer**: Put everything together properly and in accordance with the situation as it is today.
Everyday Presence.	The regular attendance of the students plays a significant role in college/university because, if anyone is absent from class, the other students may assume that nothing is going critically important in the classroom, but if we are all present, they will see that something is critically important is happening in class

Accordingly, it is necessary to enhance all of the elements in accordance with this research in the classroom, particularly those that have an impact on teaching at some point. During the course of the college students' interviews, particular elements from this study were discovered.

OUTSIDE FACTORS AT COLLEGE DEGREE
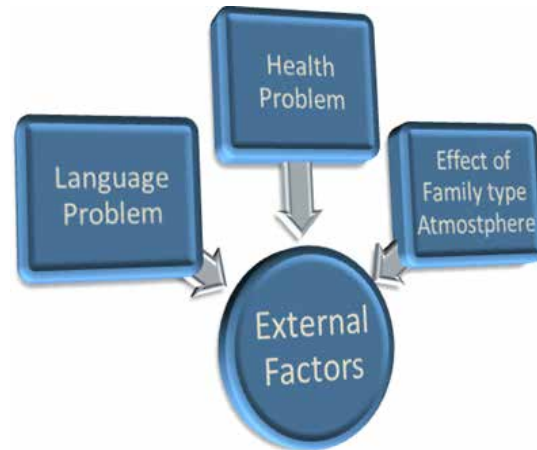
LANGUAGE, A BARRIER

Inability to comprehend the appropriate path in the course language is a problem for brand-new pupils who are not from the course medium. In Gujarat, for example, Gujarati is a relatively common language; thus, if someone enrols in a BBA or MBA programme, they may encounter difficulties due to linguistic barriers. South Indian college students encounter similar linguistic difficulties. This issue has two outcomes: either they abandon their course, or competent counseling may also help them continue their journey.

Numeral.	Linguistic issue	Implications for college students
1	**Positive Affirmation**	Negative effects may occur in students' minds if they cannot complete the course if they are dealing with language difficulties when enrolled in UG and PG courses.
2	**Negative**	However, in this case, we want to try to expand the student's vocabulary. The example is accurate if the students understand the language without difficulty.

FITNESS HASSLE

Students frequently have health issues, whether they are permanent or only temporary. We must provide appropriate therapy in such a situation since one student has dropped out of the programme owing to a fitness issue. Therefore, throughout the therapy, we want to ask the client whether they are now experiencing any fitness problems. Whether so, we need to learn the proper course of action to take since. Otherwise, emergency medicine will continue to be practised in our field.

If Students have a health problem	Try to identify the right cause and offer the right course to them.	Locate the emergency medication that will be most effective.

THE FAMILY ECOSYSTEM IN THE COLLEGES/UNIVERSITIES

As a result of their maximum time spent on campus, college students may feel that their second home is their institution, therefore, we always want to care for them in the same way that we would for our own children. Families provide the ideal setting for getting to know one another and assisting children in making life decisions. As with their brother or sister, the proper advice is required for this, as it can aid in a well-known increase in output. Demographic topics often include the level of education, parental occupation, language, income, and religious connections (Ballatine, 1993).

Their living situation also influences college students' academic achievement. Knowledge can provide parents with a first-rate environment for their children's academic progress. The college administration may give parents advice and support on how to create a wonderful home environment for their children's academic success. Massive lobar (Marzano, 2003). According to Barnard (2004), Henderson (1988), Shumox & Lomax (2001), and other authors, college student's academic performance is heavily dependent on their parents' engagement in their academic pursuits.

CONCLUSION

According to this study's findings, academic achievement, extracurricular activities, and classroom management significantly negatively influence students' ideas. As academicians, we should thus put more effort into improving these

areas. On the other hand, societal factors that we are disregarding are also important for raising students' performance levels. The researcher conducted a study involving 60 college students using a

qualitative research design, and while doing first-time student counselling, she discovered the figures mentioned above. When it comes to educational considerations, we must first evaluate the academic standing and background of the students before taking any action in accordance with the findings. Curricular activities are the second item, and each institution must set up at least eight to ten of them over the course of a year in order to keep students' minds busy and the classrooms in good condition.

It is important to consider social factors while archiving academic materials. The emotional connections between social problems and students' thinking mean that if we effectively address social concerns, our goal of advancing education will also be achieved.

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INSURANCE LANDSCAPE IN 2030

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ABSTRACT

The Indian insurance industry is the 11th largest in the global insurance market. The insurance industry is undergoing a major transformation, driven by new technologies, computing power, connectivity and access to vast amounts of data. Convenience and personalization are redefining the prospects of the insurance sector. Escalating competition, growing costs, and shifting customer expectations are posing challenges for the sector as a whole. Insurance companies must increase their efficiency if they want to be competitive and profitable. The pandemic has made insurers revisit their business models and embrace data-led strategies to grow the business.

Insurance policies must be tailored to individual needs and risk profiles, using data from wearables, smartphones, and other devices. Insurance must adapt to new modes of transportation, such as autonomous vehicles and ride-sharing. Insurance companies must use data analytics to better understand risk and price policies more accurately. In the future, we can expect to see even more use of data analytics, as insurers use it to improve customer service, prevent fraud, and make insurance more affordable.

Artificial intelligence (AI) is poised to have a major impact on the insurance industry in the next decade. AI can be used to improve customer service, make underwriting more efficient, automate claims processing and reduce fraud. AI can be used to analyse large amounts of data to assess risk more accurately. This can lead to more accurate pricing and better underwriting decisions. By embracing AI, insurers can improve customer service, reduce costs, and develop new products and services that meet the needs of a changing customer base. Insurers can use robotic process automation (RPA) to automate tasks such as claims processing and customer service.

This research effort traces the technology journey of the Indian insurance sector in the last few years and explicates how, in the next few years, digital transformation will lead to massive transformation of the insurance business model, ways of working and customer outreach efforts. Digital revolution is expected to completely alter the insurance business landscape in 2030 with customer centricity forming the basis for growth and survival. However, what needs to be underscored is that, despite digitalization of insurance, customer experience while transacting with insurance and greater levels of trust between insurance companies and customers will give the insurance sector sustainable competitive advantage.

Keywords:
Automation, Artificial intelligence, Operational models, robotic process automation, frauds, big data, data analytics

INTRODUCTION

The insurance sector in India is in the cusp of change as it faces both challenges as well as exciting opportunities. The Indian digital economy is expected to grow from Rs 7 lakh crores in 2020 to 9 times by 2030. The last decade has seen sweeping changes in the insurance industry with the industry embracing digitalization to generate greater customer value. Changing demographics of the world population in general and the Indian population in particular and new forms of risk are characterising the dynamics of the insurance business. Technology is enabling insurers to enhance operational efficiencies without losing track of customer needs. Innovations in new products and services, strategic alliances with Insurtech firms and developing data analytics capabilities to offer integrated solutions are some of the actions that are going to chart the course of the future of the insurance sector.

Use of data from wearable devices, social media, and other sources to create personalized insurance products and services and use of artificial intelligence to automate insurance processes, such as underwriting and claims management are examples of how technology is transforming the insurance landscape.

Government's push in enabling JAM (Jan Dhan, Aadhar and Mobile) has made customers comfortable in sharing data with financial services providers.

In this seminal paper, we investigate how the insurance sector has grown in the last decade and how despite technological advances, the insurance penetration continues to be lower. By 2030, one can expect the situation to witness a massive improvement and upturning of conventional insurance business models.

Focus on customer convenience, personalisation, transparency and trust will engender a positive customer experience while transacting with insurers. Data is becoming increasingly important in the insurance industry. Insurers are using data to better understand their customers, to price their products more accurately, and to improve their claims management processes.

To win the customer, the table stakes for insurance are expected to be
• Personalized interactions
• Seamless channel integration
• Integrated offerings
• Continuous and consistent delivery of value
• Breeding of trust
• Protection of data privacy

GROWTH OF INSURANCE BUSINESS IN INDIA

India is the 9th largest life insurance market globally and 14th largest non-life insurance market globally. The Indian insurance market is expected to reach $200 billion by 2027. India will add 140 million middle-class and 21 million high-income households by the year 2030, which would fuel demand for the expansion of the country's insurance market.

As on March 2022, India has 67 insurers of which 24 are life insurers and 26 are general insurers, 5 are stand-alone health insurers, and 12 are reinsurers. The insurance density in India increased to $91 in 2021 from $11.1 in 2001. The insurance penetration in India has been increasing from 2.7% in 2000 to 4.2% in 2021. The new business premium of the life insurance industry grew at 17.91% in FY23.

As against a global average of 9%, the total insurance premium in India increased by 13.5% in 2021. The insurance premium volume is $ 127 billion (Life: 76%; Non-life:24%). In terms of total premium volumes, India is the 10th largest market globally with an estimated market share of 1.9%. In 2021, India's share of the worldwide market for life insurance was 3.23%.

Compared to the global life insurance premium increase of 10%, India's life insurance premium grew by 14.2% in 2021. In 2021, India held a 1% share of the global non-life insurance market. In comparison to the global non-life insurance premium, which grew by only 8.4% in 2021, the Indian non-life insurance sector experienced 11.3% increase.

From 2.2% in FY 02 to 3.2% in FY 22, the life insurance sector's insurance penetration has increased. From 0.5% in FY 2002 to 1% in FY 22, the non-life insurance sector's insurance penetration increased. Between FY 2002 and FY 22, the life insurance density increased from $ 9.1 to $ 69. The density of non-life insurance increased from $2.4 in FY 02 to $22 in FY 22.

Premium Volume	Life Insurance	2021	$97 Bn
	Non-Life Insurance	2021	$30 Bn
Growth in New Business Premium	Life	FY 23	17.91%
New Business Premium	Life	FY23	$45

In FY 22, the life insurance sector reported total written premium income of $ 91 billion (INR 6.93 lakh crore), an increase of 10.2% over FY 21. The private insurers reported a 17.4% increase in premiums, and LIC saw a 6.1% increase.

As of 2019, India's mortality protection deficit is $16.5 trillion, representing an estimated 83% of the country's overall protection requirements. This presents life insurers with a significant potential, with an expected increased life premium opportunity of $78.2 billion per year on average for the period of 2020–30.

In 2020, 73%/62% of clients preferred the online mode for GI/HI products, indicating that customers are now beginning to favour digital modes for their insurance needs. The comfort level of agents using digital technologies has also increased; 63% of agents feel at ease video-calling clients, and >50% are agreeable to online renewals. The second-largest market for Internet users is India. 1 billion people will be online by 2026. Additionally, the pandemic raised awareness of insurance, boosted insurance penetration, and increased demand for protection products, particularly health insurance.

Table 2: insurance penetration and density across the globe

Year	Penetration (%)			Density (USD)		
	Life	Non-Life	Total	Life	Non-Life	Total
2001-02	2.15	0.56	2.71	9.1	2.4	11.5
2002-03	2.59	0.67	3.26	11.7	3.0	14.7
2003-04	2.26	0.62	2.88	12.9	3.5	16.4
2004-05	2.53	0.64	3.17	15.7	4.0	19.7
2005-06	2.53	0.61	3.14	18.3	4.4	22.7
2006-07	4.10	0.60	4.80	33.2	5.2	38.4
2007-08	4.00	0.60	4.70	40.4	6.2	46.6
2008-09	4.00	0.60	4.60	41.2	6.2	47.4
2009-10	4.60	0.60	5.20	47.7	6.7	54.3
2010-11	4.40	0.71	5.10	55.7	8.7	64.4
2011-12	3.40	0.70	4.10	49.0	10.0	59.0
2012-13	3.17	0.78	3.96	42.7	10.5	53.2
2013-14	3.10	0.80	3.90	41.0	11.0	52.0
2014-15	2.60	0.70	3.30	44.0	11.0	55.0
2015-16	2.72	0.72	3.44	43.2	11.5	54.7
2016-17	2.72	0.77	3.49	46.5	13.2	59.7
2017-18	2.76	0.93	3.69	55	18	73
2018-19	2.74	0.97	3.70	54	19	74
2019-20	2.82	0.94	3.76	58	19	78
2020-21	3.2	1.0	4.2	59	19	78
2021-22	3.2	1.0	4.2	69	22	91

Source: IRDA Report – 2021-2022

Positive regulatory interventions are resulting in increased capital flow, improved valuation and the entry of specialized and niche players. The FDI limit has been increased to 74% from 45%. India is all set to become a reinsurance hub. Changes in regulatory sandbox requirements are expected to boost innovations in insurance sector.

IRDA is working on a three-pronged approach – availability, accessibility and affordability. This will help industry achieve the lofty goal of 'Insurance for All by 2047". The mission of 'Insurance for All' by 2047 is expected to increase insurance penetration in the country.
The "Insurance for All" mission is expected to further give a fillip to the efforts of insurers and government to enhance penetration levels of insurance in the country and make insurance an AA (anytime, anywhere) affair.

The success of "Insurance for all" will rely on
1. Distribution effectiveness through digital solutions
2. Measures to improve cyber security
3. Attention to personalization supported by data analytics capabilities
4. Increased capital infusion and consolidation through mergers and acquisitions

Bima Sugam is a digital platform for insurance products and services and intends to empower all insurance stakeholders. IRDA is also mooting a united payments interface for insurance through Bima Sugam, Bima Vistar and the woman centric Bima Vahak. IRDA wishes to double the penetration of the insurance market in India in the next 5 to 7 years (by 2028- 2030). IRDA has permitted insurers to conduct video-based KYC and launch standardized insurance products. Insurers can give rewards for low-risk behaviour of insured.

Working group on standardization of cyber liability insurance has been constituted. PE funds can directly invest in insurance companies. IRDA has also laid plans for transition to a risk-based solvency regime from current regime of capital or factor-based solvency.

Table 3: achievements of government of India in promoting insurance

SR NO	NAME OF THE SCHEME	ACHIEVEMENTS
1	Pradhan Mantri Fasal Bima Yojana (risk coverage against crop damage)	world's number one crop insurance scheme in terms of farmer applications enrolled; world's 3rd largest crop insurance scheme in terms of gross premium. Between 2016 and 2022, 276 Mn applications were received under the scheme, and claims of about $ 16.7 Bn (INR 1.28 lakh crore) have been paid to the farmers
2	Pradhan Mantri Jeevan Jyoti Bima Yojana	144 Mn beneficiaries have been enrolled under the scheme, and more than 6 lakh claims have been disbursed (30 Nov'22)
3	Pradhan Mantri Suraksha Bima Yojana	313 Mn beneficiaries have been enrolled under the scheme, and more than 1 lakh claims have been disbursed (30 Nov'22)
4	AB PM-JAY (world's largest health assurance scheme)	230+ Mn beneficiaries have been provided Ayushman cards, and over 44 Mn hospital admissions have been authorised through a network of 25,969 empanelled healthcare providers, including 11,700 private hospitals (9th March 2023)

The data in the above table indicates how serious the Indian government is in ensuring that the benefits of insurance reach every nook and corner of the country.

INDIA: 6TH BIGGEST INSURANCE MARKET IN 2032

India is the 10th biggest insurance market in the world in 2021 worth $130b growing to $420b by 2032. Life insurance premiums are expected to grow by 9% annually by 2032.

A Swiss Re report mentions that India, by 2032, can become the sixth largest insurance market in the world. The report, titled "The Future of Insurance in India", projects that India's total insurance premiums will grow by an average of 14% per annum over the next decade. India's middle class is expected to grow from 340 million in 2021 to 530 million by 2032. This growth will lead to increased demand for insurance products, as people with higher incomes are more likely to purchase insurance. People are more likely to have assets that they want to protect, such as their homes, their cars, and their investments. The Covid-19 pandemic has created awareness among the Indian population for health insurance and life insurance covers.

In 2021, the penetration of life insurance in India was 4.2%, and the penetration of non-life insurance was 2.3%. These penetration rates are still relatively low, but they are expected to grow in the coming years. The report by Swiss Re estimates that the insurance sector will contribute $100 billion to the Indian economy by 2032. The insurance industry will need to invest $50 billion in new technologies by 2032.

The increasing availability of insurance products is making it easier for people to find the right insurance for their needs. For example, there are now a wide range of life insurance products available, from traditional whole life policies to newer term insurance products. There are also a wide range of non-life insurance products available, such as health insurance, car insurance, and home insurance.

FAST FORWARD: A few key innovations in the Indian insurance sector that will enable the sector leapfrogging into the future

Let us now look at some of the recent innovations in the insurance sector. By 2030, one can hope that similar such innovations that take advantage of structural changes in the sector will transform the business landscape.

Pay-as-you-go-insurance

This is a new type of insurance that charges premiums based on how much you use your insurance. For example, if you drive less, you will pay less for car insurance. If you stay healthy, you will pay less for health insurance. This has the potential to revolutionize the insurance industry. It could make insurance more affordable and accessible for everyone. It could also encourage people to live healthier and safer lifestyles. Such a business model will need insurers to have access to a lot of data about their customers. This data can be used to assess risk and set premiums. Insurers need to develop systems to track how much their customers use their insurance. They also need to develop systems to handle claims.

Internet of Things and Telematics: Game changers for insurance

IoT refers to the network of physical devices that are connected to the internet. Telematics refers to the use of technology to collect and analyse data about driving behaviour. Insurers are using IoT to track the location and condition of assets, such as cars and homes. They are also using telematics to track driving behaviour and set premiums.

IoT and telematics can be used to collect data about claims, such as the cause of the loss and the cost of repairs. This data can be used to improve the efficiency of claims management, which can lead to faster and more accurate claims payments.

Mobility Insurance

Capgemini published The World Property Casualty Insurance report, 2023.
The mobility insurance industry is anticipated to grow from its current $0.65 trillion to $1.38 trillion by 2030. Autonomous, connected, electric, and sharing (ACES) mobility will fuel this expansion. By 2030, revenues (in the automobile business) are anticipated to increase by 35% to $3.8 trillion. Carriers will have to adapt to new individualised business models. The

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The global automotive industry is working towards a future with zero traffic jams, zero emissions, and zero collisions.

India is showing a greater interest in adopting innovative mobility options as compared to its global peers. In India, insurers consider technology capabilities and competition as the key challenges in their journey towards the future of mobility. Talent and product development are key for insurers when evaluating their preparedness for the future of mobility, and Indian insurers appear to be more prepared than their global peers in these areas. Indian insurers need to strengthen their delivery of value-added services to increase customer engagement. Indians prioritize value-added services, enhanced claim processes, and digital distribution over personalized pricing, which is preferred by customers globally.

Individual vehicle ownership is anticipated to reduce as autonomous vehicles (AV) and mobility as a service (MaaS) expand. The focus will probably switch from providing insurance for individuals to providing insurance for fleet owners and AV makers. There will be a need for completely new business models as a result of the B2B emphasis. On a pay-per-use basis, insurance is anticipated to be incorporated into other services like AV rental. The linked mobility environment will require insurers to create far more nimble, quick, and real-time products. The transition from personal to commercial insurance will mark a major shift in how risks are managed by the insurance industry.

Distribution could shift from personal market aggregators and brokers to fleet owners' business policies. As insurance becomes a fully integrated B2B business, new partnerships and methods of operation will be required. It is anticipated that the product would be integrated into other services and products (such as insurance as a service). Pay-per-use (such as the driver paying per mile) and product liability for expensive vehicle parts will be stressed. For urgent journeys across connected tech platforms, instant coverage will need to be accessible. Today clients anticipate that the claims cycle should be

speedier, easier and more natural. In case a vehicle stalls, customers are probably going to anticipate that the supplier should set up for another one to self-drive to them immediately.

OEMs, fleet managers, and ride-hailing services are just a few of the mobility service providers who will put an even greater emphasis on supply chain risk insurance. Telematics and artificial intelligence (AI) are anticipated to make underwriting increasingly automated. The growth of AVs may result in 30 to 50% fewer accidents, which would cause premiums to decline by 40% by 2040.

2030: CHANGES IN THE INSURANCE LANDSCAPE

The seeds of this change are already being sown now in 2023. Traditional insurance products offered protection against losses, but today's technology driven world has products that prevent risks. Sensors in residential buildings, factories and complexes can prevent threats from fire, gas, water leaks or burglaries. Wearable sensors and health monitors record physical parameters but also are adept in calling up emergency services. Doctors have real time access to patient information. Augmented or Virtual Reality can be used to establish emotional bonds with customers as part of CRM. Customer data can be effectively leveraged to underwrite risks and pay claims.

RPA (Robotic Process Automation), IPA (Intelligent Process Automation) and Artificial Intelligence (AI) will streamline underwriting and claims management, fraud detection, and payments. Use of chatbots as part of conversational commerce will ensure support to customers 24 x 7.

The ease with which insurance transactions can be carried out will determine customer stickiness. It will be imprudent to segment individuals as per demographic criteria alone. Individual customers should understand the insurance product and also identify with it. Social groups who share similar beliefs, attitudes and passions will play a decisive role in influencing people to buy insurance. Claims administration will

continue to be the moment of truth.

Listening to customers will no longer be an option. Selling a single type of insurance policy to the population won't help. Life insurance policies that are customised to specific individuals based on their occupation, age and preferences will become the norm. Agents have to be tech savvy as customers will lose patience with agents who do not render valuable after sales service.

What does this mean for insurance?
Insurance business models have to constantly evolve to keep pace with these changes.
Insurance sector will begin focusing on risk prevention behaviours and rewarding such behaviours instead of providing protection alone. As technology keeps progressing in leaps and bounds, insurance sector has to innovate to introduce new products and services. Newer risks will need new forms of insurance cover.

Let us not forget – in 2030, insurance will no longer be about only selling policies. The insurance sector must provide support to the customer in areas that the customer needs support and use it as a sales pitch. For example - as more and more people face the threat of job loss, unemployment insurance will be in demand. Gig economy demands that insurers cover those employees as well.

In Peer-to-peer (P2P) insurance, a group of people can pool their capital, self-organize and self-administer their own insurance. A set of like-minded people with mutual interests will have superior bargaining power when they approach insurers for bespoke solutions. A small group of family members, friends or individuals with common interests combine premiums to insure against risks. In the event of a loss, money from the pool is used to cover the individual. This is an example of how social networking can be leveraged to offer insurance covers.

Insurers listening to the "Voice of the Customer" and placing it at the very core of their business strategy is what customer centricity all about.

This will need streamlining of internal processes to follow the customer journey. Customer interactions across different touchpoints (telephone calls, emails, instant messages via social media, text messages) will have to be integrated with data capturing protocols and ERP systems. Omni channel approach will give agents real time information about clients which in turn will enable rendering a great service experience to customers.

Companies may set up captive insurance companies to protect capital erosion. Individuals may have their own insurance reserves that can come to their aid in case of an exigency. Selling pure vanilla insurance products may not be the best thing to do. Tied covers will be necessary. For example – paying a motor insurance premium for a two-wheeler can be accompanied with two free maintenance services. Health insurance premiums must have an incentive of free health check-up at least once in two years and option of availing discounts for a visit to a nutritionist.

2030 will see the convergence of banks, insurers, reinsurers and insurtech firms. Bancassurance models will also undergo a sea change. For example – opening up of a new bank account will mandate buying an insurance policy too. On premises legacy systems will move to the cloud. By 2030, it is expected that block chain would have become all pervasive. Block chain increases transparency and fairness in the processing of claims through traceability and can increase operational efficiency by reducing frauds.

By 2030, an insurance card will become mandatory like AADHAR card to avail benefits of public schemes. Insurers will place greater emphasis on predictive models than historic data. Insurance solutions will be integrated into the offerings of other solutions some of which will be need based. For example, real time cargo insurance for logistics operators. Insurance coverage for individual behaviours and events will drive insurance sales. This will involve assessment of risks in real time. Insurers will not just provide insurance covers but also advise customers about anticipating risks. The software

of insurance companies will be using AI solutions to get a better understanding of risks. This can ease fraud detection efforts. By 2030, insurance regulation will play a balancing role between risk, data privacy and insurability.

SIGNIFICANT TRENDS BY 2030
• Cloud based ERP
• Automation – AI, Big data analytics, Augmented reality, Internet of things – these will become table stakes for insurance businesses
• Explosion of data from connected devices
• Data culture and strategy
• Upskilling of insurance workforce
•Customer-centricity as bulwark of all insurance operations
• Trust as the basis for growing business
• Significant progress in institutional insurance coverage
• Regulation as a great business enabler
• Detection of claims in real time through automation
• Reduced lead time between claim intimation and claim processing
• Core competency of insurance sector in managing cyber risks
• Empowered insurance intermediaries – agents and brokers who can also render deeply informed technology-enabled financial advice as part of customer-centric approach.

SUGGESTIONS & RECOMMENDATIONS

Market Trends & Research
Insurers have to be ahead of other sectors in terms of predicting future market trends. Have insurance companies ever had a research department? May be not. But now it is time for a separate research wing that can integrate all research requirements for the insurance business. This research wing can be clubbed with the technology vertical with CTO (Chief Technology Officer) rechristened as CTRO (Chief Technology and Research Officer). These cells will have in-house talent that has the expertise in data analytics. Every insurance company may have their own Insurtech cell which means consolidation of Insurtech into insurance business is a distinct possibility. The innovation cells in each insurance company will act as a

weathervane for predicting market trends.

Innovative performance metrics
There has to be a radical re-thinking in terms of using "percent of GDP" to measure insurance penetration. Since, the premium paid by insured is made up of two components – pure risk and investment, it will be prudent to use the total sum insured underwritten by the industry as a metric rather using premium incomes alone. For example, CII and KPMG have proposed a metric called Coverage Ratio – ratio of cover availed by an individual to an individual's annual income.

Insurance companies must embrace the environmental, social and governance (ESG) agenda to assess the impact of their actions on employees, customers and local communities. Social responsibility has to be cleverly intertwined with insurance marketing and selling.

Investing in insurance education and knowledge dissemination for increasing insurance penetration and reducing information asymmetry
Consumer education about insurance has gained sporadic attention in the last decade. However, an all-out attempt to improve consumer knowledge about insurance has become inevitable. Digital channels provide information and empower customers but let us not forget that there is information overload on the Internet and the probability of misleading information about insurance cannot be completely ruled out. Therefore, entrusting customers with high quality, credible information becomes crucial.

Information exchange within the insurance business is made possible by open insurance. It fosters more transparent and open interactions built on trust, understanding, and a vast amount of data between insurance firms and their clients. Both insurance companies and customers will gain from it because it makes it easier to comprehend everyone's demands. It's a win-win situation where consumers have more delightful insurance experiences and providers gain greater insights about their insurance products.

Digital Revolution

For businesses to survive and prosper in the future, digital transformation is a must. Digital natives are accustomed to using technology and anticipate interacting with companies and organisations digitally. To make better judgements about marketing, sales, and operations, businesses must be able to gather and analyse data. Customers are requesting experiences that are more digital and tailored. Businesses will be at a competitive disadvantage if they do not adopt digital transformation. They won't be able to draw in and keep clients, which increases the likelihood that they'll fail. The digital era is a moment of immense possibility and transformation. Businesses will be well-positioned to flourish in the next years if they embrace digital transformation.

Insurers must strengthen digital payment architecture for on boarding and renewals. Collaboration with Insurtech firms and aggregators will be crucial for growing the business. Insurers must also leverage Ayushman Bharat Digital Mission to drive transparency.

Leveraging data

Data that can integrate insurance information can create a seamless ecosystem. Going forward, understanding customers through data and providing differentiated value propositions for different customer segments like rural, Gen Y, Gen Z, SMEs etc will become crucial. Collaboration among industry players and sharing of common databases can help fight fraud. To enhance data security, insurers must focus on data governance and management practices.

Innovations in Products and Processes

There is a need to explore new segments, new channels and new product categories. Crop insurance, corporate insurance, open insurance, household insurance, lifestyle insurance, fire insurance, cyber insurance and travel insurance will demand greater attention from market actors. Motor insurance sector will continue to benefit from data driven premium calculation. Pay as you go motor insurance will become popular.

Insuring electric vehicles will demand new underwriting protocols.

in Bangalore to enable start-ups to develop products and services. As of now, there are 110 Insurtech start-ups in India. More capital flows can therefore be expected in the insurance sector.

Dematerialisation of insurance policies wherein policies can be stored in a digital format will be an interesting development in the future. Policy renewals, modifications, porting and claims processing will become faster and convenient.

Benchmarking, redesigning and reengineering processes will increase operational efficiency. Machine learning will strengthen and streamline processes/procedures like workflow automation, claims processing, fraud detection and conversational interfaces like chat bot.

Customer centricity to fuel business growth

Insurers have to adopt a customer centric approach by placing customers before profits and use multi-channel and multi-location architecture to offer a diversified product portfolio to customers. Customers can be offered tailor made products like sachet products, on-demand insurance, event based insurance and even pet insurance.

Regardless of technology interventions in the insurance sector, trust will remain integral to the development and sustenance of a mutually rewarding and enduring relationship between the insurers and customers.

What steps are needed from a policy perspective?

1. One-step data repository
2. Data sharing framework for analytics
3. Data security standards and protocols
4. Investments by insurers in Insurtech firms to leverage data and technology
5. Consistent terms and conditions across insurers
6. Increasing the actuarial skill base in India
7. Designing performance metrics to measure customer satisfaction
8. Strengthening digital network infrastructure in India

The insurance industry must strive to focus on governance mechanisms to protect against reputational risks. Confluence of technology and data will define customer experience. Data from connected devices will enable deeper understanding of customer profiles leading to personalized pricing and real time service delivery. Identifying quality data will however remain a challenge. The industry must leverage the power of technology without allowing the dilution of trust factor that can bind the insurers and policyholders together. ESG metrics will need to be embedded with the performance metrics of insurance companies.

CONCLUSION

A report by Red Seer states that the insurance market will reach $222 billion by FY 26. As per policy bazaar.com, the total annual premium of insurance companies is expected to reach Rs 39 lakh crore in FY 2030. World Bank update (India Development Update) in April 2023 notes that Indian economy is a resilient economy despite challenges in the global business environment. Growth is estimated to be 6.9% for 2023 with real GDP growing at the rate of 7.7% year on year during the first three quarters of the fiscal year 2022/23.

All the naysayers of insurance must not forget that insurance contributes to economic progress and social development of a nation. Growth of insurance industry in India is the result of several factors. FDI in insurance, growing awareness about insurance, banks entering insurance sector,

strategic alliances, tech-savvy insurance agents and brokers, improvements in distribution and operational capabilities and a strong regulatory support have made a significant contribution to boost the prospects of the insurance sector in India.

Favourable demographics like 55% population in the age group of 20-59, increase in the middle-class population (140 million middle class income Indian households by 2030) and attempts to make insurance more inclusive is further adding to the charm of insurance both as a business and as a service.

The pandemic deflected attention of consumers to the "protection" value of insurance which had hitherto got side tracked in favour of value propositions like "insurance for tax protection" and "insurance as an investment avenue".

In the past, the Indian insurance market was dominated by a few large state-owned companies. Liberalization of the sector brought about sweeping changes. The public sector insurance companies have matched steps with private insurance companies in terms of enhancing their digital footprint. LIC has made rapid strides in embracing digitalization and rendering excellent customer service. The surge of new private insurance companies entering the Indian market has led to increased competition, which has forced companies to develop new and innovative products in order to attract customers. There are now a wide range of life insurance products available, from traditional whole life policies to newer term insurance products.

The regulatory reforms in India are making it easy for insurance companies to do business in India. The government has relaxed the foreign direct investment (FDI) limit in the insurance sector, and it has also introduced new regulations that are designed to make it easier for insurance companies to use technology. These reforms are making India a more attractive market for insurance companies, and they are expected to lead to further growth in the Indian insurance market.

For a long time, the narrative around insurance

has revolved around investment and tax savings with the protection component being relegated to peripheral importance. However, post Covid-19 pandemic, consumers have realized the importance of protection. This realization will grow stronger and by 2030, insurance policies will be purchased more for their "protection" value than anything else. Insurance will regain its position as a mechanism to protect against death, disease and disability. This behavioural change will certainly have an impact on insurance penetration.

Product simplification will brighten the prospects of the insurance sector and this will make people value insurance for what it is – a financial tool to mitigate risks. Insurance for electric vehicles is an area that will gather momentum. Over the next 10 years, cloud based insurance lifecycle, financial planning bots and telematics will become industry practices. Democratization of data and AI will transform the essence of insurance. Insurance business models will change beyond recognition. Insurers will use artificial intelligence to automate tasks such as underwriting and claims processing. For some lines of business, manual underwriting with specific skill sets will be needed. Computing power, network infrastructures and connectivity will trigger claim settlement.

The insurance landscape in 2030 is expected to be significantly different from what it is today. The rise of Insurtech start-ups, the increasing demand for data-driven decision making, and the need to improve the customer experience are shaping the future of insurance. Insurtech start-ups are disrupting traditional insurance models. They are offering new products and services that are more convenient, affordable, and personalized than traditional insurance. Data analytics is enabling quality decision making in underwriting, pricing and claims through better mapping of customer risk profiles. Customers are increasingly demanding a more digital and personalized insurance experience. Customers expect to buy, use, and renew insurance online.

Reinsurance will be expected to cover risks like nuclear risks, terrorism risks, business interruption losses due to bilateral war between nations, cyberattacks on servers and IT infrastructure. A reinsurance mechanism will be required because the costs resulting from such risks are likely to be too high for insurers to cover individually.

The market for cyber liability will increase significantly in this situation. Cyberattacks are a growing threat to the insurance industry. Insurers will need to invest in cybersecurity in order to protect their data and their customers. Insurers will partner with Insurtech start-ups to offer new products and services.

Seizing new market opportunities in insurance will need insurers to embed more partners into the insurance value chain and develop capabilities to share vast volumes of data quickly and securely. Automation and digitalization will open up new opportunities for elevating the efficiency of insurance market participants. Better automated pricing models and automation of insurance processes will become the norm by 2030 rather than the exception. Insurers have to find ways to adapt to the changing climate and to mitigate the risks associated with it.

The regulatory environment for the insurance industry is constantly changing. Insurers will need to stay up-to-date on the latest regulations in order to comply with them.

Simpler products, a common IT platform, simplified product offerings and omni channel methods of distribution will lead the growth and progress of the insurance sector. Customers will have access to online portals for not just buying insurance policy but also to manage their policies better. It is highly plausible that by 2030, majority of insurance policies will be sold online. Fitness trackers, home assistants, smart phones and smart watches will generate mass of data for the insurance sector. Rather than an individual buying insurance covers separately (house, pet, life, motor etc), it is possible that a composite arrangement is possible through one life and one non-life insurer. Property insurance underwriting will be done using satellite images to gain more risk details about the property. Amazon has

started offering insurance in the US. This is a potential threat for the Indian insurance sector.

The insurance industry is still a very important part of the Indian economy. Insurers play a vital role in protecting people and businesses from financial loss. The insurance industry is expected to grow significantly in the next decade, driven by factors such as rising incomes, increasing urbanization, and the aging population. Insurers must adapt to the changing needs of customers and the increasing competition in the industry.

Indian insurers must make structural improvements to their operating models and cost structures and use technology as an enabler for business growth. Increased digital adoption across all dimensions of the insurance value chain has now become inevitable. A Mc Kinsey report claims that shifting to digital operations will improve productivity and reduce operational expenses by 40%.

By 2030, the insurance growth will rely more on pervasive connectivity between market participants and intelligent use of data. Cognitive automation, deep learning and data will transform the insurance landscape. Smart contracts will enable the instant authorization of payments, reduce the risk of frauds and support claims settlement. The AI-enabled algorithms will generate accurate risk profiles of customers in real time. Sweeping changes in the insurance business model (necessitated by the changes in the socio-economic environment and influence of technology) in the last decade has sharpened the focus on the need to leverage technology, deploy data for decision making and insights and employ customer centric measures to grow and sustain the business momentum. This will establish the base for growth and development of insurance sector in the next few years.

Changes in the insurance operating model will need realignment of customer interfaces, information sharing protocols and data security architecture. Customers are much likely to accept insurance as an essential part of their lives with insurance holding a special place as a financial tool that can mitigate risks and protect from

unexpected events. These are exciting times for the insurance sector in India.

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PREDICTING CUSTOMER CHURN IN BANKING: AN SQL BASED APPROACH FOR COHORTING CUSTOMERS AND MACHINE LEARNING ALGORITHMS FOR DATA VISUALIZATION

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ABSTRACT

Customer churn, or consumers abandoning their engagement with a bank, is a key concern in the banking sector. This research attempts to provide an overview of customer turnover in the banking industry, investigating its origins, repercussions, and mitigation techniques. As customers discontinue their relationship with a bank, it can directly impact the bank's financial performance and overall business sustainability. Customer churn leads to reduced revenue and profitability for the bank. As customers leave for competing banks, the bank may lose its competitive edge and struggle to attract new customers.

By conducting a Postgre SQL-based study, banks can delve deep into their customer data, examining patterns and trends to identify the underlying causes of churn. This analysis enables banks to develop targeted strategies and initiatives to reduce churn rates and retain valuable customers.

In this study, we have conducted cohort analysis using Postgre SQL in order to identify the average number of products of churned customers, the average age of churned customers, the average balance of churned customers, and the average credit score of churned customers. Later, we explored the top 3, 5, or 10 customers based on certain characteristics and highlight trends/patterns. Further, we transferred the structured data from Postgre SQL to Python to visualize and understand the behaviour of the exited customers due to different factors, such as customer age, credit score, tenure, number of products, and geographical location.

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10 customers based on certain characteristics and highlight trends/patterns. Further, we transferred the structured data from Postgre SQL to Python to visualize and understand the behaviour of the exited customers due to different factors, such as customer age, credit score, tenure, number of products, and geographical location.

Keywords:
Business Intelligence, Churn analysis, Cohort analysis, Data visualization, Postgre SQL, Python.

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INTRODUCTION

Customer churn, also known as customer attrition, is the rate at which customers discontinue their relationship with a company or business. It represents the percentage of customers who stop using a company's products or services over a specific period. Churn can be voluntary (customer choice) or involuntary (external factors). Measuring churn helps businesses assess customer retention and identify strategies to reduce attrition, as retaining existing customers is typically more cost-effective than acquiring new ones. Reducing customer churn is crucial for sustaining profitability and fostering long-term customer loyalty. (Bilal, et al.)
PostgreSQL is an open-source database management system with versatile applications. In general, it is used for data storage, web applications, data analysis, geospatial data, and scientific research. In the banking industry, PostgreSQL securely manages customer data, aids in customer segmentation, churn analysis, and predictive analytics. It optimizes marketing strategies, enhances customer service, and supports mission-critical applications. (Kumar, et al.)

Python is a strong and well-liked programming language that has become very popular in data visualisation. It has a variety of libraries and features that make it a great option for producing attractive and educational data visualisations. Python is a well-liked choice for activities involving data visualisation, whether they include data exploration, analysis, or the dissemination of insights to stakeholders. Python's status as the go-to language for data scientists and analysts in numerous fields is further strengthened by its integration with libraries for data manipulation and analysis like NumPy, Pandas, and SciPy.

IMPORTANCE OF POSTGRE SQL IN CHURN ANALYSIS FOR BANKS

Analyzing customer churn in the banking industry through a Postgre SQL is significant due to its direct impact on a bank's financial performance and customer retention. Customer churn, the rate at which customers discontinue their relationship with a bank, can lead to financial losses, increased customer acquisition costs, and reduced market competitiveness. By conducting a Postgre SQL-based study, banks can delve deep into their customer data, examining patterns and trends to identify the underlying causes of churn. This analysis enables banks to develop targeted strategies and initiatives aimed at reducing churn rates and retaining valuable customers. (Singh, et al)
A Postgre SQL-based approach offers the advantage of efficiently handling vast datasets, characteristic of the banking industry. The study allows for seamless querying, filtering, and processing of data, facilitating comprehensive churn analysis and the generation of actionable insights. The insights gained from churn analysis guide banks in enhancing customer experiences and service quality. By understanding the reasons behind churn, banks can identify pain points and areas of improvement, leading to enhanced customer satisfaction and loyalty. This, in turn, strengthens the bank's reputation and fosters long-term customer relationships. (Kumar, et al.).

STUDY OBJECTIVES

• Identify the key drivers that significantly influence churn rates, helping the bank prioritize efforts to address those specific factors.
• Conducting cohort analysis using Postgre SQL in order to identify average number of products of churned customers, the average age of churned customers, the average balance of churned customers, and the average credit score of churned customers.
• To explore the top 3, 5, or 10 customers based on certain characteristics and highlight trends/patterns.
• Data visualization using Python, to understand the behaviour of the exited customers due to different factors, such as customer age, credit score, tenure, number of products, and geographical location.

LITERATURE REVIEW

1.Linares-Mustarós, R. P., García-Sánchez, J. A., & Segovia-Vargas, M. V. "Customer Churn Prediction in Retail Banking: A Data Mining Approach."
This research employs a data mining approach to predict customer churn in the retail banking sector. By analyzing historical customer data, the study aims to identify patterns and factors that contribute to customer attrition. The findings provide valuable insights for banks to develop effective customer retention strategies and enhance overall business performance, ensuring sustained profitability in a competitive market.

2. Abdulaziz, M., & Muhammad, A. N. "Customer Churn Prediction in Retail Banking: A Data Mining Approach Using R."
This study explores a data mining technique using the R programming language to predict customer churn in the retail banking industry. By analyzing customer behaviour and transaction data, the authors aim to develop accurate churn prediction models. The research assists banks in identifying customers at risk of churn and implementing targeted retention strategies, ultimately improving customer loyalty and satisfaction.

3. Mukherjee, B., Sarkar, S., & Sarkar, D. "Predicting Customer Churn in Banking Industry Using Ensemble Learning."
This research utilizes ensemble learning techniques to predict customer churn in the banking industry. By combining multiple algorithms, the authors aim to enhance churn prediction accuracy. The study enables banks to identify high-risk customers, develop personalized retention strategies, and minimize customer attrition.

4. Abbas, S., & Qi, S. "A Review of Customer Churn Prediction in Telecommunication Industry."
This review article explores various customer churn prediction approaches in the telecommunication industry. By summarizing existing research, the study provides an overview of different methodologies and their effectiveness. The research assists telecommunication companies in understanding the state-of-the-art in churn prediction and implementing advanced techniques for customer retention.

5. Mathur, R., & Tayal, D. "Churn Prediction in Telecom Industry Using Advanced Data Mining Techniques."
This research applies advanced data mining techniques to predict customer churn in the telecom industry. By analyzing customer call records, usage patterns, and demographic data, the authors aim to build accurate churn prediction models. The findings help telecom companies identify churn-prone customers, enhance customer satisfaction, and reduce churn-related losses.

6. Khanam, A., & Zulkernine, F. H. "Churn Analysis and Prediction in Telecommunication Industry Using Machine Learning Techniques."
This study utilizes machine learning techniques to analyze and predict churn in the telecommunication industry. By considering various features such as call patterns, customer complaints, and subscription data, the research aims to develop effective churn prediction models. The findings enable telecommunication companies to optimize customer retention strategies and improve service quality.

7. Chris, "A PostgreSQL-based study on banking churn analysis."
This study investigates banking churn analysis using PostgreSQL as the database management system. By utilizing SQL queries and data processing capabilities of PostgreSQL, the research aims to analyze customer behaviour and churn patterns in the banking industry. The study provides insights to help banks implement effective retention strategies and improve customer satisfaction and loyalty.

8. Kaur, & Kaur. "Customer Churn in the Banking Industry: A Literature Review."

This literature review delves into the topic of customer churn in the banking industry. By summarizing and analyzing existing research, the study provides a comprehensive overview of churn-related factors, challenges, and strategies in the banking sector. The review helps researchers and practitioners gain insights into the current state of knowledge on customer churn and informs the development of future studies and practical interventions to address churn in banks.

9. Bilal, et al. "Customer Churn Analysis in Banking Sector: Evidence from Explainable Machine Learning Models."
This study presents an analysis of customer churn in the banking sector using explainable machine learning models. By interpreting model outputs, the research aims to provide evidence-based insights into churn patterns and contributing factors. The findings assist banks in understanding the reasons behind customer attrition and devising targeted retention measures for increased customer satisfaction and long-term loyalty.

10. Singh, et al. "Churn Prediction in the Retail Industry Using PostgreSQL."
This research explores churn prediction in the retail industry, utilizing PostgreSQL as the database management system. By employing SQL queries and PostgreSQL's capabilities, the study aims to predict customer churn in the retail sector. The insights derived from the analysis help retailers develop effective customer retention strategies, optimize marketing efforts, and enhance overall business profitability.

I11. Kumar, et al. "Churn Analysis in the Banking Sector Using PostgreSQL."
This study conducts churn analysis in the banking sector, leveraging PostgreSQL as the database management system. By analyzing customer data and behaviour using SQL queries and PostgreSQL features, the research aims to identify churn patterns and risk factors in banks. The findings enable banks to address churn challenges proactively, retain valuable banking industry as they will aid in developing effective churn reduction strategies. Banks can use this knowledge to improve customer customers, and foster sustainable growth in the competitive financial landscape.

12. Chen, L., & Li, W. "A Novel Hybrid Approach for Customer Churn Prediction in Retail Banking."
This study proposes a novel hybrid approach for predicting customer churn in retail banking. By integrating different methodologies and features, the research aims to improve churn prediction accuracy. The findings provide valuable insights to help retail banks proactively address churn, personalize customer interactions, and optimize customer retention strategies.

RESEARCH GAP

This research paper offers a thorough and promising approach for forecasting customer churn in the banking sector, but there is still a significant research gap with regard to the incorporation of real-time data and the assessment of the model's long-term performance.

The research focuses specifically on using historical data to cohort customers and makes use of different machine learning methods for data visualisation, which unquestionably offers useful insights into customer attrition tendencies. However, the inability to capture dynamic shifts in consumer behaviour and churn-related issues results from the lack of real-time data integration. The dynamic nature of the banking industry necessitates the development of a model that can quickly adjust to shifting consumer preferences and macroeconomic situations.

METHODOLOGY

The study will encompass an analysis of historical customer data from the bank's database, focusing on transactional information, customer demographics, and behaviour patterns. The analysis will cover a specific time frame and may

satisfaction, enhance customer engagement, and optimize marketing efforts, ultimately leading to improved financial performance.

DATA COLLECTION AND UNDERSTANDING

SECONDARY DATA

Variables	Description
CustomerId	Unique ID issued by the bank to the account holder
Surname	Name of the account holder
CreditScore	Credit score of the account holder
Geography	Geographic location of the account holder
Gender	Gender of the account holder
Age	Age of the account holder
Tenure	The total period of time the customer associates with bank
Balance	Current balance of the account holders
NumOfProducts	Total number of products the customer had availed
HasCrCard	Credit card owned by customers
IsActiveMember	Current status of the customer
EstimatedSalary	Estimated salary of account holders
Exited	Churned customers from the bank

From the bank's data warehouse, using SAS Base, a sample of 10,000 customers from a European bank from the period of January to June 2018 was taken. These customers would churn during the period of July to December 2018. The investigation of this project will primarily focus on consumer behaviour before churning, as was already noted. Binary variables will be used to track customer behaviour and highlight the different actions and inactions that may indicate the likelihood of churn. The value '1' indicates that the customer has churned while the value '0' indicates no churn.

TOOLS USED FOR THIS STUDY

• PostgreSQL - A powerful database management system, was utilized to perform cohort analysis in this study on customer churn in the banking industry, allowing for in-depth exploration of customer behaviour over time. PostgreSQL is a potent and well-liked open-source relational database management system, and pg Admin 4 is a free and open-source web-based administration and management application for it. Database administrators, programmers, and other users can easily interact with PostgreSQL databases thanks to its user-friendly interface.

• Python - A versatile programming language, was employed for data visualization in this study on customer churn in the banking industry, enabling the creation of insightful charts and graphs to present key findings and patterns in the dataset.

DATA PREPARATION

The following tasks are performed for data preparation:
• Data Import - A new PostgreSQL database and table are created to store the dataset. The bank dataset is then imported into the newly created table using PostgreSQL's COPY command or any other suitable method.
• Check for missing values - Identifying and handling any missing data points in the dataset, either by imputing missing values or removing the affected rows/columns.
• Handle duplicates - Duplicated and repeated values are eliminated.
• Data type conversion - Variables changed to their appropriate data format (e.g., numerical, categorical, date, etc.) for analysis.
• Handling Categorical Variables - Converted categorical variables and transformed categorical variables into numerical representations using techniques like label encoding or one-hot encoding, depending on the model's requirements.
• Scaling and Normalization - Normalize numerical features, like Credit Score, Age, and estimated Salary, to bring them to a similar scale to avoid domination by features with large ranges.
• Outlier Detection -Identify outliers with any extreme values that might influence the analysis and decision-making process.
• Data Cleaning- Perform data cleaning steps in PostgreSQL to handle missing values and duplicates

DATA ANALYSIS AND INTERPRETATION COHORT ANALYSIS

The following results were obtained from Cohorting the customers from the available sample:
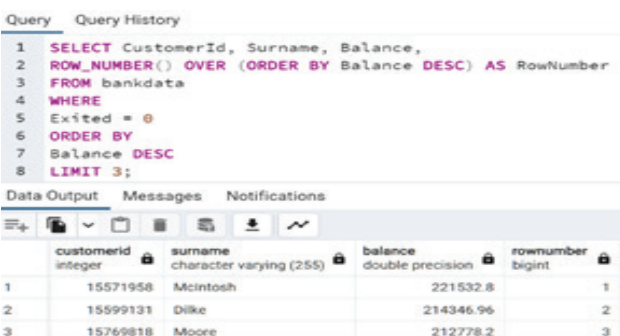
Average Number of Products of Churned Customers	1.5
Average Age of Churned Customers	44.8
Average Balance of Churned Customers	91108.5
Average Credit Score of Churned Customers	645.3

It is obvious that the bank needs to concentrate on enhancing its product offerings given the low average number of items held by churned clients. To better fulfill the demands of clients, this can entail offering new products or improving the functionality of existing ones.

The high average balance and the average age of churned customers suggest that they may have been long-term clients with sizable deposits in the bank. To keep these crucial consumers, it is crucial to concentrate on improving the customer experience. This may entail enhancing customer service, giving individualized services, or introducing loyalty programs.

The fact that churned customers have lower average credit scores than the overall population suggests that creditworthiness is a contributing factor. The bank should concentrate on addressing these issues by giving credit education and counseling to customers in order to help them raise their credit ratings as well as by providing substitute products or services to those who might not fulfill standard credit requirements.

1] TOP 3 CUSTOMERS WITH THE HIGHEST BALANCE:
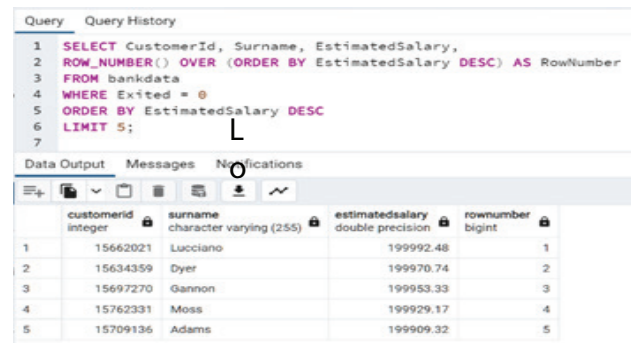
From the above output, we can easily identify that McIntosh, Dilke, and Moore are the top 3 customers with the highest balance. This way, the bank can utilize post SQL to identify the customers with the highest balance.

2] Top 5 customers with the highest estimated salary:
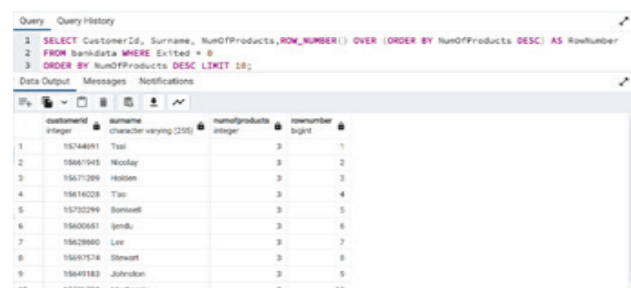
From the above output, we can easily identify that Lucciano, Dyer, Gannon, Moss, and Adams are the top 5 customers with the highest estimated salary. This way, the bank can use Postgre SQL in order to identify the customers with the highest estimated salary.

## 3] TOP 10 CUSTOMERS WITH THE MOST PRODUCTS:

From the above output, we can easily identify that Tsai, Nicolay, Holden, Tao, Boniwell, Ijendu, Lee, Stewart, Johnston, and Mackenzie are the Top 10 customers with the most products. This way, the bank can utilize Postgre SQL in order to identify the customers with most products.

I4] TOP 5 CUSTOMERS TO BE OFFERED A REDUCED INTEREST RATE


From the above output, we can easily identify that Colman, Lo, Sheppard, brooks, and balsillie are the top 5 customers to be offered a reduced interest rate. This way, the bank can utilize the Postgre SQL to identify the top customers to whom the reduced interest rate must be offered

5] DATA VISUALIZATION USING PYTHON
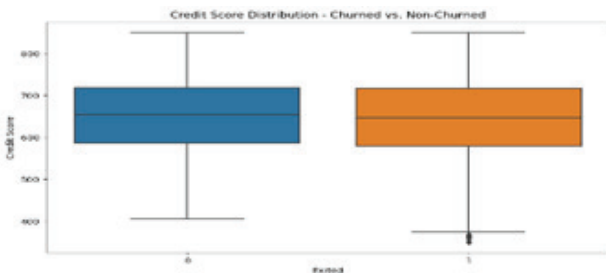
From the above output, we can interpret that most of the customers churn because their credit score falls in the range of 590 to 710, and also the customers who did not churn also fall in the range of 590 to 710. Hence, we can say that there is no contribution of credit score towards customer churn.
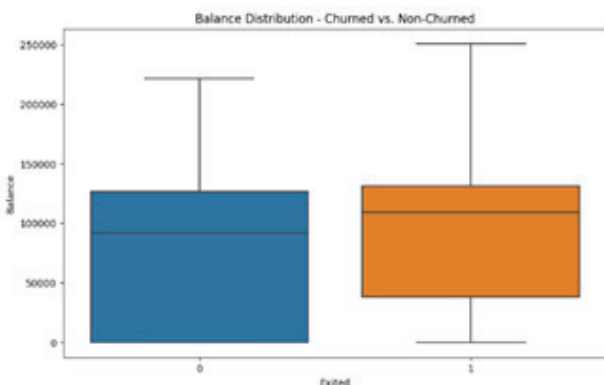
From the above output, we can interpret that most of the customers churn because of their balance have the mean balance which fall in the range of 1,00,000 – 1,50,000, and the customers who did not churn fall in the range of 50,000-1,00,000. Therefore, we can easily conclude that the customers who had slightly higher balance exited the bank when compared to those who did not
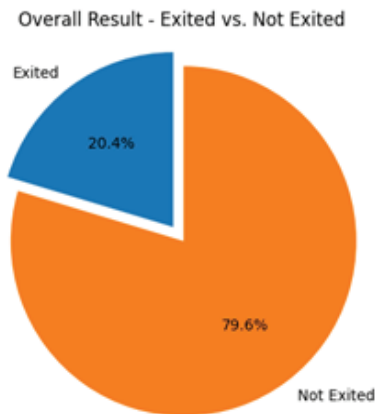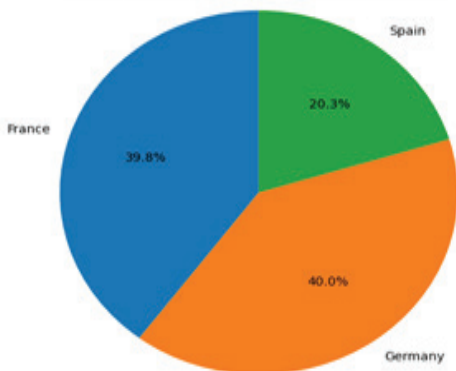

From the above output, we can interpret that nearly 20.4% of the customers existed the bank and 79.6% of the customers did not exit the bank. Therefore, we can conclude that the product and services provided by the bank is good but as to improve in order to retain the existing customers.
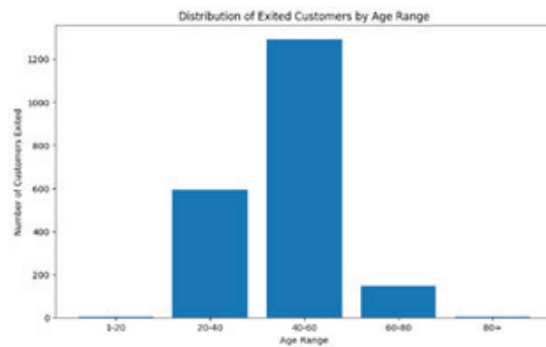
From the above output, we can interpret that more than 1200 customers exiting the bank fall in the age group of 40 to 60 years, nearly 600 customers existing the bank fall in the age group of 20 to 40 years and nearly 200 customers exiting the bank belong to the age group of 60 to 80 years.
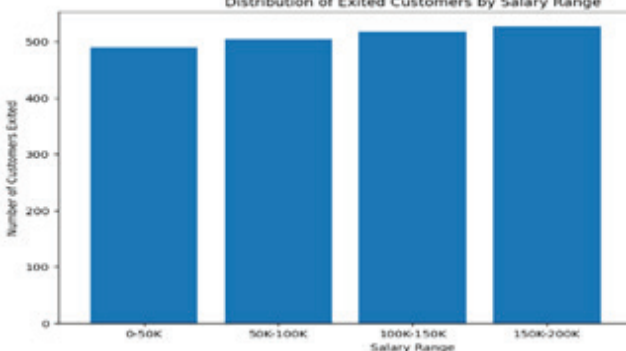
Distribution of Exited Customers by Geography

Distribution of Exited Customers by Tenure Range

From the above output, we can interpret that female belonging to the age group of 40 to 60 years as exited the bank more, when compare to male belonging to the age group of 40 to 60 years. From this we can conclude that the bank to take steps in order to retain its female and male customers belonging to the age group of 40 to 60 years.
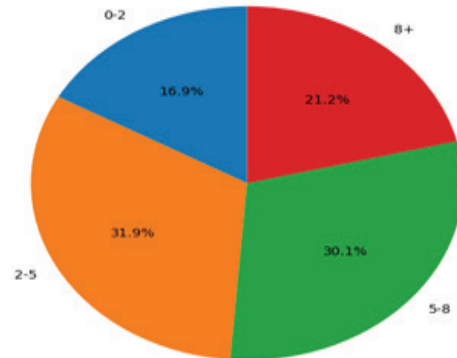
From the above output, we can interpret that 20.3% of the customers who existed the bank belong to Spain, nearly 39.8% of people of customers who exited the bank belong to France and majority of the customers who exited which is nearly 40% belong to Germany.

From the above output, we can interpret that nearly 31.9% of customers who had a tenure range of 2 to 5 exited the bank more, whereas the 5 to 8 tenure range has a 30.1% of customers exiting, 0 to 2 tenure range has 16.9% of customers exiting and finally, eight plus tenure range has 2 1.2% of customers exiting the bank.

Distribution of Exited Customers by Credit Card
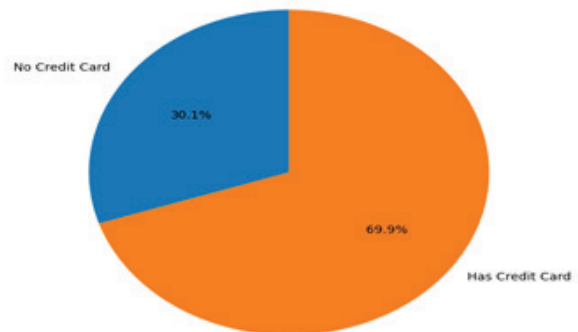

Distribution of Exited Customers by Salary Range

From the above output, we can interpret that most of the customers who's having a salary range of 0K to 50 K and 150 to 200 K have exited the bank, whereas customers salary range of 150K to 200K has exited more when compared to other salary ranges.

From the above output, we can interpret that 69.9% of customers who exited the bank had credit card and 30.1% of the customers who exited the bank did not have credit cards, So we can conclude that the majority of the customers who exited the bank had credit cards.

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FINDINGS, LIMITATIONS, AND SUGGESTIONS

FINDINGS

• The bank should focus on improving its product offerings as churned clients tend to have a low average number of items held. This can involve introducing new products or enhancing the functionality of existing ones to better meet customer needs.

• The high average balance and the average age of churned customers suggest that To retain long-term clients with substantial deposits, the bank must focus on improving the customer experience, including enhanced customer service, personalized services, and loyalty programs.

•T he fact that churned customers have lower average credit scores, the bank should offer credit education and counselling to customers, helping them improve their credit scores. Additionally, providing alternative products or services for those not meeting standard credit requirements can mitigate churn risks.

• Credit score of exited falls in the range of 590 to 710 which is similar to not exited. So, the credit score doesn't significantly impact churn.

SUGGESTIONS

• The bank needs to Improve Product Offerings by Offering personalized products, by Offering competitive rates and fees, focusing on convenience and by Provide financial education.

• Enhance Customer Experience by Simplify the processes, Personalized communication, by Using customer feedback, and by Providing proactive customer service.

• Addressing the Creditworthiness Concerns by Verifying income and Employment, by Monitoring credit behavior, using credit insurance, collaterals or guarantees. Lorem ipsum

• Nearly 79.6% of the customers did not exit the bank, but the bank needs to enhance its Product/service quality to retain churned customers by 20.4%.

• More than 1200 plus customers, who exited the bank belonged to the age group of 40 -60 years, then followed by customers with the age group 20 - 40 years and 60-80 years.

• Female and male customers who churned more belong to the age group 40-60 age group. the bank needs to take steps in order to retain its female and male customers of that age group.

• Majority of the customers who exited belong to Germany which was nearly 40%, followed by France which is 39.8% and then by Spain 20.3%.

• Customers salary range of 150K to 200K has exited more when compared to other salary ranges.

• Tenure range of 2 to 5 exited the bank more i.e., nearly 31.9% of customers. followed by 5 to 8 tenure range with 30.1% churn.

• 69.9% of churned customers had credit cards. 30.1% of the churned customers did not have credit cards.

• credit score range of 550 to 650 and 650 to 750 exited the bank irrespective of whether they were credit cardholders or non-credit cardholders.

LIMITATIONS

Granular data, or specific information about specific consumers and their behaviors, is necessary for cohort analysis. Banks may contain a tonne of data, and as the data becomes more detailed, the database size increases and query performance decreases. This may require optimization methods and slow down the analysis performance.

Cleansing and Integrity of Data for cohort analysis depends on high-quality data. Results can be misled by incomplete or inconsistent data. It can be difficult to ensure data purity and integrity, especially when working with data from several sources inside the bank. For churn analysis to detect long-term trends,

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historical data is frequently needed. The amount of historical data that is currently accessible may be constrained based on the bank's data retention policy, making it challenging to do substantial long-term analysis.

As sensitive consumer information is handled by banks, it is crucial to protect data privacy and security. Data management must be done carefully while conducting cohort analysis in order to avoid security breaches or unauthorized access.

All pertinent contextual information that could affect churn rates may not be included in cohort analysis. There may be omissions of elements like customer encounters, support requests, or consumer feedback, which limits the depth of insights.

CONCLUSION

Customer churn, also known as customer attrition, is the rate at which customers discontinue their relationship with a company or business. customer churn leads to reduced revenue and profitability for the bank. Lost customers mean lost potential income from fees, interest, and other banking services. This can be particularly impactful when high-value customers, such as those with substantial deposits or loans, churn. As customers leave for competing banks, the bank may lose its competitive edge and struggle to attract new customers.

Finally, customer churn can damage the bank's reputation and trust among customers. Frequent churn signals dissatisfaction and can deter potential customers from choosing the bank

So, through this study, we were able to focus on customer churn in the banking industry. We performed cohort analysis using Postgre SQL to identify the average number of products of churned customers, the average age of churned customers, the average balance of churned customers, and the average credit score of churned customers. Later from the results we concluded that the bank should focus on improving its product offerings as churned clients, the bank must focus on improving the customer experience, and also should offer credit education and counselling to customers.

Finally, we transferred the structured data from Postgre SQL to Python for data visualization and to understand the behaviour of the exited customers due to different factors, such as customer age, credit score, tenure, number of products, and geographical location. In the end, we have recommended a few suggestions like Offering personalized products, providing proactive customer service, using customer feedback, monitoring credit behavior, etc to retain its customers.

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RESILIENCE UNLEASHED: A GUIDE TO SUSTAINABLE MENTAL WELLNESS

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ABSTRACT

Within the dynamic environment of the corporate world, professional perfection often clashes with a need for mental health.

I have been a practising corporate professional for almost three decades and with several years in mental health counselling, from which I could see that the environment of work relationships changes constantly and how one's wellbeing is indispensably tied to institutional success.

ITHE CRUCIAL INTERPLAY

Being able to navigate the maze-like tunnels of corporate life involves more than knowledge and acuity, but also a strong capability mindset that can bear with professional challenges. It is known that resilience extols the ability of an individual to bounce back from any temporary setback; however, its continuous use builds long-term mental health.

UNDERSTANDING RESILIENCE BEYOND THE SURFACE

In essence, resilience is the ability to adapt, learn, and develop from adversity, rather than simply recovering from it. This complex knowledge underpins the concept of sustainable mental wellbeing. It's about prospering over time, not just surviving in the now.

REAL-LIFE SCENARIOS: CHALLENGES AS CATALYSTS

Take the example of a failure-plagued, deadline-stymied professional tasked with "endless" project variations. In the short run, resilience helps to withstand these obstacles. Nevertheless, for maintaining mental health, resilience must become a habitual attitude which transforms ever-present threats into stepping stones towards advancement.

BUILDING BLOCKS FOR LONG-TERM MENTAL WELLNESS

Sustainable resilience is made up of various components, each of which contributes to a strong foundation for mental well-being. These include adaptability—accepting change without becoming stressed—and remaining optimistic in the face of uncertainty. This structure is completed by long-term coping techniques.

WORKPLACE INITIATIVES: NURTURING SUSTAINABLE MENTAL WELLNESS

Organisations encourage mental wellness.

However, successful mental health initiatives go beyond episodic workshops and should be part of a larger system including flexible work policies, high quality employees' support programs as well as positive organisational climate.

BALANCING ACT: THRIVING AMIDST CAREER DEMANDS

It is not so much about overcoming challenges, but doing it without damaging the psyche. Striking a balance between the challenges of work and mental well-being is achieved with disciplined time management, stress reduction techniques and establishing fair boundaries.

In the following parts, we'll look into personal experiences of persistent triumph, workplace techniques, and practical activities that lead to a robust and long-lasting mental wellbeing journey. The path to sustained resilience is a marathon, not a sprint, and it is endurance that distinguishes between temporary accomplishment and a lasting legacy of well-being Arun's Odyssey: Triumph Amidst Challenges

Arun, a seasoned executive in the tech industry, found himself at a crossroads when a major project he was overseeing suffered unforeseen delays. When the company was restructured, Arun's job became shaky. Instead of giving in to the rising problems, he used them as catalysts for personal and professional growth. Arun encouraged open talks among his team members, promoting a culture of collaborative problem solving. His strategic leadership under difficulties saved the project and gained him recognition. Arun's tale highlights the transforming potential of resilience when used consistently, illustrating that great leadership is about weathering storms with grace, not just success metrics.

LEELA'S LESSON: DEVELOPING A RESILIENT MINDSET

Leela, a mid-level manager at a competitive

marketing agency, experienced a significant career setback that tested not just her professional abilities but also her emotional fortitude. Leela, reeling from a project failure, sought feedback from her supervisors, transforming criticism into a plan for progress. She engaged in skill-development classes, improving her skills and welcoming the winds of change. Leela's experience highlights the core of resilience—using hardship not as a hurdle but as raw material for personal and professional success. Her tale exemplifies the tenacity required to face disappointments head on, turning them into stepping stones to achievement.

WORKPLACE STRATEGIES: BEYOND THE PERFUNCTORY

Long-term mental wellness is a journey, which organisations that are dedicated to the cause know very well. So, regular check-ins, easy access to mental health resources and the deconstruction of stigma around open conversations about one's emotional wellbeing create a setting where resilience is ingrained rather than an occasional response.

FLEXIBLE WORK ARRANGEMENTS

Organisations have adopted flexible work choices to reflect the symbiosis of personal and professional lives. This considers the uniqueness of challenges and allows employees to overcome them while preserving their mental well-being.

MENTAL HEALTH PROGRAMS

Instead of empty gestures, genuine mental health services that promote long-term wellness are needed. Routine training, access to mental health professionals and stigma reduction measures all help create an environment where help requests are viewed as marks of self-awareness rather than lack thereof.

BUILDING SUPPORTIVE WORKPLACE CULTURES

Working Culture that supports empathy,

teamwork and comprehension builds resilience. However, acknowledging achievements, giving constructive critiques and creating an environment that appreciates different opinions boost the strength of mental wellness.

PRACTICAL EXERCISES FOR SUSTAINABLE RESILIENCE

1. Try to have the employees keep a reflective notebook in which they can monitor challenges, reactions and personal development over time. This approach promotes self-awareness and leads to the acquisition of adaptive skills.
2. Use mindfulness methods, including meditation and deep breath exercises. Such techniques not only save a person from
3. Stress but also assist in approaching problems with clear head and focus.
4. Motivate goal setting, focusing on the importance of flexibility. Goals should be flexible, being responsive to new circumstances while maintaining an aspect of aim.
5. Facilitate peer support networks. By sharing their experiences with one another, colleagues can provide advice and create an environment that promotes harmonious cooperation which reinforces individual as well as social resilience.

CONCLUSION: A RESILIENT TOMORROW.

Sustainability in mental health and wellness is not an impossible dream but rather a journey that requires daily commitments from both single people as well as whole communities. While wandering through the labyrinth of occupational issues, resilience appears like a compass that guides us into more than survival; it leads to flourishing mental health. This journey of personal stories, meaningful office responses and powerful practical results takes us closer to a stronger tomorrow. Embrace the challenges, learn from them and let resilience be your faithful guiding light to lasting mental health.