ORIGINAL RESEARCH PAPER

Management

MBTI AS AN INSTRUMENT TO STUDY THE EXISTENCE OF DOMINANT PERSONALITY TYPE AND THINKING AND FEELING PREFERENCE AMONG EXECUTIVES OF AN INDIAN OIL REFINING AND OIL EXPLORATION COMPANY.

KEY WORDS:

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ABSTRACT

Studies on personalities types of executives based on Myers Briggs Test indicators have proven useful in understanding and improving decision making. A survey was conducted among 91 executives of Numaligarh Refinery Limited, in Golaghat district of Assam (India),and Oil india Ltd in Duliajan, in Dibrugarh district to ascertain if there exist a dominant personality type among the executives. The scope of study is limited to the executives of Numaligarh Refinery Limited and Oil India Ltd. The survey reflected that the dominant personality type among the executives are Thinking and Judging. It is observed that the Thinking and Judging preference is in line with the previous studies carried out by existing research which clearly depicts the overall orientation of executives across the globe. ISTJ, ESTJ and ENTJ are the top three notable personality types as observed in the presented data in table with 23.08%, 19.78% and 12.09 % , INFJ and ENFP (8.86%). The least frequent types are ISFP, ESFP, INFJ and ISFJ. Despite the major type being ESTJ, ST's are most likely to prefer management, While SF's are prefer to stay out of management . Executives shows thinking Preference of around 53% compared to the general population which reports 40% (MBTI manual Table 14.1) . Also there was stark difference in Sensing and Intuition in the management population. The reported type between Sensing and Intuition which was roughly 56/44, however, in a normative sample of Adults (MBTI manual tabl1 14.1) the representation is 27% for Intuition. Analysis on the basis of data gathered from various MBTI study has revealed that there is some gender difference in Thinking - Feeling dichotomy (Kendall ,1988) It was observed that women are more oriented towards Feeling type (approx. 75%). The research explored the possibility whether this pattern hold true for executives. The Study concludes that there is significant difference in Thinking and Feeling type on the basis of gender.

INTRODUCTION TO THE RESEARCH PROBLEM

The American Psychological Association defines personality as "individual differences in characteristic patterns of thinking, feeling and behaving". Previously, it was believed that every individual's mind operates in a similar fashion. However, in practice it is found that every individual has a different value system, reasoning and interest. Assuming that every individual behaves similarly will provide a misrepresentation on their behaviour, motive and thinking.

In the studies carried out earlier to this work, it was found that there is positive correlation between personality types and performance in various work environment. The research carried out in various parts of the world has shown that there is unique representation of personality types at various managerial levels. Roach (1986) conducted his study in various organisations and at various level of hierarchy. He observed that there is always high representation of ISTJ (Introverted Sensing with extraverted Thinking) ESTJ (Extraverted Thinking with introverted Sensing) and ENTJ (Extraverted Thinking with Introverterd Intuition) in every level of hierarchy. Similarly multicultural type distribution sample of managers carried out by Ashbridge Business school in Hertfordshire UK, for India, US, Canada, Mexico, Pacific, Canada, Korea, showed higher representation ISTJ, ESTJ, and ENTJ. In India, for managerial level, the type representation as per study carried out by Ashbridge Business school for managers and leaders attending development programme at Ashbridge has produced interesting results. According to this study, the major personality types identified were ISTJ-22.8%, ESTJ-34.0% and ENTJ-15.2%. The rest were distributed among the remaining personality types. It is important to note that no study was reportedly carried out in Oil industry in India to determine the personality type among the executive.

The role of organization development is to reorient the organization to cope with the challenges thrown to it on account of change in the global business environment. In order to cope with the changes and remain viable it is necessary to create an effective organization which can respond quickly and efficiently. In this new BANI (B- Brittle A-Anxiety N-Non- Linear I- Incomprehensible) environment after the Covid-19 pandemic, organisations will have to implement measures to strengthen teams by inculcating a spirt of collaboration, redefining the organizational structure. They will have to be more oriented towards empathy dealing with people's issue. They have to develop an innovative eco-system debunking the previously known obsolete methods of doing business. (Denison and Mishra,1995) has defined four components of effective organizations viz. employee initiative; flexibility and accountability; including employee in decision making defining clear mission, flexible and responsive leadership.

In order to achieve this, it is imperative for organizations to understand what personalities are dominantly found in their respective organization. This will help the organizations depute appropriate individuals to suitable positions in an organization. Hence, the purpose of the study is to find existence of dominant personality type amongst the executives of Oil industry in upper Assam region of Assam.

Literature Review :

Roach (1986) in this study he tried to examine the distribution of types among different levels of organizational decision.

The total sample consisted of 298 organizational decision maker 70 subjects were classified as supervisors, 161 as managers, and 67 as executives. This study tends to support the previous study. There were almost twice as many STJ's at the lower level than at the top and almost three times as many NTJs at the upper level than at the bottom.

Lower level decision makers are more likely to be practical (ST) while those at the upper level are more likely to be theoretical (NT). The higher the level of organizational decision-maker, the less likely it will be that he or she will be Sensing and Feeling, and the more likely it will be that he or she will be Intuitive and Thinking.. However, it is important to emphasize that all types have much to contribute to the overall success of an organization and that all types are necessary if high quality decisions are to be realized.

Desai T.A., Sharda.K.(2009). Understanding the "Business Type": The study primarily concentrated on two research objectives. To identify the psychological types of Business student and Business executive and to compare the psychological type between business student and business executive on four dimensions - extraversion-introversion (EI),sensing-intuition (SN), thinking-feeling (TF), and judging-perceiving (JP). In the study it was found Business student are mostly INTJ while Business executive are predominantly ISTJ. It is Mainly to maintain policy, procedure and stable performance. ISTJ are good planner and executes the plan with a time frame. This characteristics is required for smooth running of organization.

Reynierse (1995), in his study of Study of Manager in Japan observed that in the middle managerial level Japanese prefer ISTJ but opts for ENTJ at the CEO level . It is mainly because at higher level they shall have to be creative , unconventional and imaginative to explore new areas of opportunities, market growth and for product innovation.

Boonghee Y.,Neelankavil. J.P., Gloria M. D., Lim.R.A (2013). In their study of 1405 managers in the four Asian countries .The overall dominant personality emerges as Extroversion , thinking and Judging ,which is in line with the previous research across various variety of cultures all over the world (Kirby 1997). There is cross country difference among personality type which confirm that there is influence of culture and environment in shaping the preferences. Also there is variation of personality on the basis of demographic pattern and satisfaction in work depending on personality type.

Cole K (1991) in his study of Local Government Managers with managers from Private companies and general population of North Carolina, observed that more local Government managers are more introverted, Sensing, thinking and Judging than managers of private companies or to the local population. This is perfectly ok for running government organization which tends to be rules and procedure based. Whereas private managers are more intuitive in order to keep pace with the dynamics of the changing environment. Local Government manager also needs to be more creative on account of fiscal uncertainty , new technology and young demanding work force.

Rodrı́guez V. J.M., Fernández.J.M.M., Balsera. J.V. ,Nieto.A.G. December 2012.
Tried to explore Project based learning (PBL) with personality types. Through MBTI personality type it wanted to tap the personality types in communication, problem solving and decision making .The most significant observation from this study is that in case of project based work. It greatly depends on the coordinator's profile. If the coordinators has strong leadership qualities as in ENTJ or ESTP the group success is predicted. In case of weak leadership and less motivation it will result in low performance or failure.

Major issues and conflict arises in a project when there is a equal mixture of Perceiving (P) type vis-a vis TJ profile. Perceiving desires open type of environment whereas Judging types follows strict regimented approach of compliance, timelines and rules. And more trouble arises if the coordinator is ISTJ which possess strong authoritarian approach. Similarly conflict arises Goal oriented approach-Thinking (T) is mixed with feeling (F) type.

2. OBJECTIVE OF THE STUDY:
Research Objective 1: To Identify if there is a dominant MBTI personality type among managers of Oil Industry of Upper Assam.

Research Objective 2: To study whether the selected executives' personality type varied according to Gender.

Accordingly, a hypothesis was formulated for the objective stated above.

H_o: There is no dominant MBTI personality type existing among executives at NRL and OIL
H_o1:The Male and Female Managers at NRL have no difference in feeling preference due to gender.

3. RESEARCH METHODOLOGY:
The research methodology is concentrated in collection of structured information relating to personality types of executives of NRL and OIL located in upper Assam. Since previous research has been carried out across different countries, the information to be collected is known and specific in nature so a survey method with descriptive design is adopted for this study.

3.1. Population and sample.
The population for our study are the executives working in Oil industry of Assam. The two organizations selected for our study are OIL and NRL. Out of all the organizations, OIL and NRL portray various industrial linkages as required to provide an appropriate representation of the industry in Assam. The selection of organizations was judgemental as the researcher possesses sufficient understanding of the industry as well as the population necessary for the study. The population is homogenous in a way that there are cross departmental transfers by management decision. Hence the roles played by the executives are dynamic in nature. A sample of 91 people was selected from the total population of 1593, for our study. A confidence level of 95% and a standard error of 10 % was considered for calculation of sample size. (Raosoft, 2004).The sample was drawn using Simple random sampling as a sampling frame of all the entire population was accessible to the researcher.The following formula was used for calculation of sample size.
Sample Size $n = Nx/[(N-1)E^2+x]$
$x = Z(C/100)^2r(100-r)$

Data Collection Tool:
An MBTI (Myer Briggs Type Indicator) form M was used to collect the data. This form is readily available, well defined and used extensively across the world to determine personality types (Myers & Myers, 1995). This tool has been used in various areas of personality and in organisation development. Purpose of this instrument is to provide an insight into value difference rather than to evaluate difference so that better understanding of individual can be acquired (Fitzgerald, 1997). Form M is self-scorable containing 93 items comprising of forced choice and word pairs. All these items are indicator of types which together provide the four-letter personality type of a respondent. This tool is designed to indicate preference of type and not an indicator of what is right or wrong. To garner the accuracy of the assessment, the context of preference and types have been explained to the respondents. An introduction was provided about the entire process in order to provide confidence and interest in the result.

4. PRESENTATION OF COLLECTED DATA
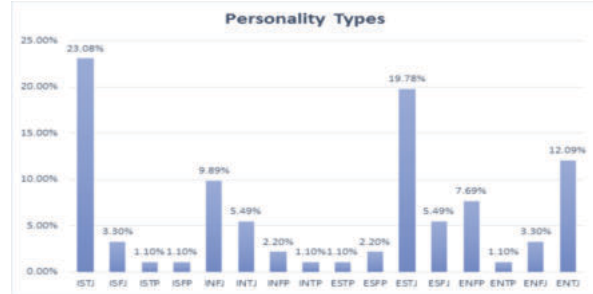### 4.1. MBTI profiles of executives of NRL and OIL
A total of 91 samples were considered with responses complete in all aspects. The results returned from the self-scoring M form have been presented as Table I below. The same data has been visually represented as a line and bar diagram I highlighting the changes in personality across the organizations selected for the study.

Table I: MBTI Personality Profiles of Executives at NRL & OIL

S.No	Type	Total No	Percentage
1	ISTJ	21	23.08%
2	ISFJ	3	3.30%

3	ISTP	1	1.10%
4	ISFP	1	1.10%
5	INFJ	9	9.89%
6	INTJ	5	5.49%
7	INFP	2	2.20%
8	INTP	1	1.10%
9	ESTP	1	1.10%
10	ESFP	2	2.20%
11	ESTJ	18	19.78%
12	ESFJ	5	5.49%
13	ENFP	7	7.69%
14	ENTP	1	1.10%
15	ENFJ	3	3.30%
16	ENTJ	11	12.09%
	Total	91	

Bar DiagramI: Representing the personality types of executives of NRL and OIL

Observations:
ISTJ, ESTJ and ENTJ are the top three notable personality types as observed in the presented data in table with 23.08%, 19.78% and 12.09 % respectively. It is also notable that ESTP INTP and ENTP personality type are almost negligible among executive of OIL and NRL.

A related study on Indian managers across various organization was done by C.S Mahesh and Janaki Venkat, Asianic Psychologists Press India,2006   The results of the study have been collected as secondary data to draw a comparison of the data as found among managers across organizations in India and the ones collected for the organizations in this study. The study was done a total population of 733. The data from the study done before further validate the results from this study as the notable personality types in the former study were also ISTJ, ESTJ and ENTJ.

4. Data Analysis
4.1.1 H_o: There is no dominant MBTI personality type existing among executives at NRL and OIL.

Chi-square test has been adopted for analysing the data collected in this study. As a pre-requirement for conducting chi-square analysis, the data in the study has been prepared as frequencies. The formula used for chi-square analysis is given below:
$$x^2 = \sum (O - E)^2 \} / E$$

Expected frequency of the personality types are calculated as given below:
E = Number of samples/Number of personality types
E = 91/16
E= 5.68
E= 5.68 (approximately)

Table 2: The MBTI Personality type for NRL and OIL

Types	Observed values (O)	Expected (E)	O-E	(O-E)^2	(O-E)^2/E
ISTJ	21	5.68	15.32	234.70	41.32
ISFJ	3	5.68	-2.68	7.18	1.26
ISTP	1	5.68	-4.68	21.90	3.86

	ISFP	1	5.68	-4.68	21.90	3.86
	INFJ	9	5.68	3.32	11.02	1.94
	INTJ	5	5.68	-0.68	0.46	0.08
	INFP	2	5.68	-3.68	13.54	2.38
	INTP	1	5.68	-4.68	21.90	3.86
	ESTP	1	5.68	-4.68	21.90	3.86
	ESFP	2	5.68	-3.68	13.54	2.38
	ESTJ	18	5.68	12.32	151.78	26.72
	ESFJ	5	5.68	-0.68	0.46	0.08
	ENFP	7	5.68	1.32	1.74	0.31
	ENTP	1	5.68	-4.68	21.90	3.86
	ENFJ	3	5.68	-2.68	7.18	1.26
	ENTJ	11	5.68	5.32	28.30	4.98
Total	91			Chi Square value	102.01

Critical value at x^2 = 24.99

Degree of freedom (df) = K - 1
= 16 - 1
Therefore, computed value of x^2 is 102.01
The critical value at x^2 = 24.99 at 5% significance level (critical tabulated values)
Since the computed value of x^2 is more than the critical value of x^2.
Consequently, the null value can be rejected.
Hence the null Hypothesis is rejected.

RESULT:
Dominant personality types does exist among the executives of NRL refinery at 5% level of significance x^2.

Ho1: The Male and Female Managers at NRL have no difference in feeling preference due to gender
The research conducted by Kendall (1988) found that there are difference in MBTI preference in relation to Gender specially in Thinking and feeling Dichotomy . Huszczo.G., Megan. E. (2013) in his Research Report " Joint Effects of Gender and Personality on Choice of Happiness Strategies", Observed that there is significant difference between male and female population in Feeling and Thinking dichotomy as per Megan male prefers thinking preference between T-F . The female with feeling preference can be attributed to higher usage of feeling preference

John Hackston, 2019 in his research " Personality, gender and the glass ceiling", observed that Women are more oriented to value driven (Feeling) approach in decision making, whereas men prefer to take decisions in an objective and logical manner. The decision making of men is based on impersonal criteria (Thinking) .The study is aimed to ascertain that the same inference is applicable amongst the executive of NRL and OIL.

4.1.2:
Table 3: MBTI personality types and gender

Type	Male	Female	Total
Thinking	48	11	59
Feeling	18	14	32
	66	25	91

Applying Hypothesis Test difference in proportion
The test is called the two-proportion z-test, the test is appropriate because the following conditions are satisfied:
• The sampling method used for each population is simple random sampling.
• The samples are independent of each other
• Each sample consist of at least 10 successes and 10 failures.

The standard Error of difference between proportion is calculated by adopting the formula provided in by S.P Gupta (2019)

$$Z = \frac{(p1-p2)-0}{\sqrt{p(1-p)\left(\frac{1}{n1}+\frac{1}{n2}\right)}}$$

Where p= the pooled estimate of the actual proportion
n1=Total No of male executives surveyed
n1= 66
s1= Total no male officers with feeling type
s1 = 18
p1 = 18/66 = 0.272 (No. of male officers with Feeling type / total No. of male surveyed)
n2 = Total no female executive surveyed
n2 =25
s2 = Total no female officers with feeling type
s2 = 14
p2= 14/25 = 0.56 (No of Female officers with Feeling type / total No of female surveyed)

$$p = [(n1xp1) + [(n2xp2)]/(n1+n2)$$
$$p = [(66 \times 0.272) + (25 \times 0.56)]/ (66+25)$$
$$p = 0.351$$
$$1-p = 1-0.351$$
$$= 0.649$$
$$Z = \frac{0.272-0.56}{\sqrt{0.272 \times 0.56 \left(\frac{1}{66}+\frac{1}{25}\right)}}$$

$$z = -0.288/0.092$$
$$z = 3.13$$

Since the computed value of z is more than the tabulated value of 1.96 (at 5 % level of significance), the null hypothesis is rejected. It can be concluded that there is significant difference in feeling type among the male and female officers of NRL.

Similarly, the hypothesis is validated through Chi Square Test. Chi-square test has been adopted for analysing the data collected in this study. It is a non parametric test . It is first used by Karl Pearson in the year 1990. The quantity used x^2 describes the magnitude of by the discrepancies between theory and observation .The formula by S.P Gupta (2019) has been adopted for calculations of Chi-square value.
It is defined as
$$x^2 = \sum (O - E)^2\} / E$$
Where
O - Observed frequencies
E - Expected Frequencies

As a pre-requirement for conducting chi-square analysis, the data in the study has been prepared as frequencies.

Observed frequency of the personality types are calculated as given below:

From Table 4: MBTI personality types and gender Observed Frequencies

Type	Male	Female	Total
Thinking	48	11	59
Feeling	18	14	32
	66	25	91

Table 5 : Applying x^2

Observed frequencies (O)	Expected frequencies (E)	O-E	(O-E)2	(O-E)2/E
48(O1)	E1 =(66X59)/91=43	5	25	0.58
18 (O2)	E2 = (66x32)/91=23	-5	25	1.09
11 (O3)	E3 = 25 x 59/91 =16	-5	25	1.56
14 (O4)	E4 = 25 x 32/91 = 9	5	25	2.78
			$x2$	6.00

Here df = (r-1)x(c-1)
Where r = row

And c = column
df = (2-1)X(2-1)
df=1
Here tabulated value of $x^2 = 6.00$
Critical value of $x^2 = 3.84$ from Chi Square Table at 5% significance level .

RESULT:
Since the calculated value is more than critical value of x^2 from the Chi Square table, the null hypothesis is rejected. The Executives at NRL have difference in Thinking and feeling preference on the basis of gender. Hence, the result from Chi-Square test validates our results of hypothesis testing for population proportions as given in the preceding section.

4.2. Statistical significance of population of various conventional personality type dimension dichotomy
Also based on the survey on the four dimensions extraversion -introversion (EI), sensing-intuition (SN), thinking-feeling (TF), and judging-perceiving (JP), the data are tabulated and analyzed in proportion in E/(E+I), S/(S+N), T/(T+F), and J/(J+P) format. The proportion are represented in as EI, SN, TF and JP and represented in table 5 below.

Table 6: Personality Type (Frequency and Percentage)

Personality Preference	Total No	Percent age	Personality Preference	Total No	Percent age
E	48	52.75%	S	52	57.14%
I	43	47.25%	N	39	42.86%

Personality Preference	Total No	Percent age	Personality Preference	Total No	Percen tage
T	59	64.84%	J	75	82.42%
F	32	35.16%	P	16	17.58%

Table 7: Personality Type E-I Chi Square Table (Frequency and Percentage)

Type	Observed Value (O)	Expected Value(E)	(O-E)^2	(O-E)^2	(O-E)^2/E
E	48	45.5	2.5	6.25	0.137
I	43	45.5	-2.5	6.25	0.137
					0.274

E = Number of samples/Number of preference types
E = 91/2
E= 45.5
Degree of freedom (df) = K - 1
= 2 –
= 1
Critical value $x^2 = 3.84$ at 5% significance level
Table value $x^2 = 0.274$

Table 8: Personality Type S-N Chi Square Table (Frequency and Percentage)

Type	Observed Value (O)	Expected Value(E)	(O-E)^2	(O-E)^2	(O-E)^2/E
S	52	45.5	6.5	42.5	0.92
N	39	45.5	-6.5	42.5	0.92
					1.84

E = Number of samples/Number of preference types
E = 91/2
E= 45.5
Degree of freedom (df) = K - 1
= 2 – 1
= 1
Critical value $x^2 = 3.84$ at 5% significance level
Table value $x^2 = 1.84$

Table 9: Personality Type T-F Chi Square Table (Frequency and Percentage)

Type	Observed Value (O)	Expected Value(E)	(O-E)^2	(O-E)^2	(O-E)^2/E
T	59	45.5	13.5	182.25	4.005

| F | 32 | 45.5 | -13.5 | 182.25 | 4.005 |
| | | | | | 8.01 |

E = Number of samples/Number of preference types
E = 91/2
E= 45.5
Degree of freedom (df) = K -1
 = 2 – 1
 = 1
Critical value χ^2 = 6.68 at 1 % significance level
Table value χ^2 = 8.01

Table 10: Personality Type J-P Chi Square Table (Frequency and Percentage)

Type	Observed Value (O)	Expected Value I	(O-E)	(O-E)^2/E	Total
J	75	45.5	29.5	870.25	19.13
P	16	45.5	29.5	870.25	19.13
					38.26

E = Number of samples/Number of preference types
E = 91/2
E= 45.5
Degree of freedom (df) = K -1
 = 2 – 1
 = 1
Critical value χ^2 = 10.8 at 0.5 % significance level
Table value χ^2 = 38.26

Critical Value of the Chi Square of the Sample Group
* Significance at 0.05 level, chi – square > 3.8
** Significance at 0.01 level, chi – square > 6.6
*** Significance at 0.005 level, chi – square > 10.8

From Table 7 it is seen that for Extraversion and Introversion type at level (a= 0.05) the Chi-square value is 0.274 which is less than its critical value so null hypothesis is not rejected rather we can assume that there isn't enough evidence to suggest that there is no dominant type in type E and I. Similarly from Table 8, the Chi-Square value of S and N is 1.84, which is less than its critical value of 3.84 at (a= 0.05). This dichotomy is uniformly distributed. Whereas in case of the Thinking and Feeling dichotomy from Table 9 , the tabulated Chi square value is 8.01 which is higher than critical value of (a= 0.01) 6.8. On that basis we can say that there is strong evidence to suggest that there Is strong dominant type in Thinking and Feeling type. Similarly, in case of the Judging and Perceiving dichotomy from Table 10, the tabulated Chi square value is 38.26 which is higher than critical value of (☐ = 0.005) 10.8. On that basis we can say that there is strong evidence to suggest that there is strong evidence to suggest that there is dominant preference in Judging and Perceiving type .

RESULT:
From the Table 7, Table 8, Table 9 and Table 10, it can be concluded that there is strong evidence to suggest that the statistically significant types having dominant personality preference are Thinking and Feeling (T-F) and Judging and Perceiving (J-P).
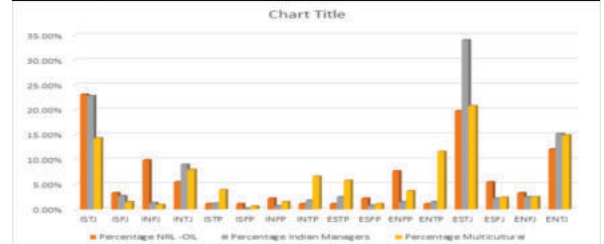
4.3. Comparison of MBTI Personality Types against Executives representing countries across the world with Indian Executives visa-vis executives of NRL and OIL
The studies conducted at Ashbrige Business School in HerfordShire are specifically relevant for this study. A comparison of the observations with this study with the global and Indian studies conducted by Ashbrige Business School in HerfordShire can display glaring similarities and dissimi larities. The significant observations from studies in Ashbrige has been drawn and compared in Table11 below with the observations from this study.

Table 11: Comparison of personality types among global executives and Indian executives with executives from OIL and NRL

MBTI personality Types	From Ashbrige Type distribution table of Global executives: following personality types are observed.	From Ashbrige Type distribution table of Indian executives: following personality types are observed	From Type distribution table of OIL and NRL executives: following personality types are observed
ISTJ	14.3%	22.8%	23.08%
ESTJ	20.8%	34%	19.78%
ENTJ	14.90%	15.2%	12.09%
ENTP	11.6%	1.5 %	1.01%
INTJ	08%	09%	5.49%
ENFP	3.7%	1.5%	7.69%
INFJ	9.89%	1.3%	0.9%

Bar diagram II : Comparison of personality types among global executives and Indian executives with executives from OIL and NRL

It seems some types are more prevalent than others in executive cadre and these types are particularly focused in the top three rows of the type table (ESTJ, ENTJ, ISTJ). Results are validated in case of ISTJ, ESTJ and ENTJ personality types across the globe, India and the oil companies in this study. Although globally, ENTP are considerable, the same has not been observed in Indian executives and NRL & OIL executives. INTJ and ENFP are considerably notable in this study in contrast to low statistical figures reported in global and national studies.

5. Findings:
1. From the Chi Square Test carried out for the executives of NRL and OIL as shown in the table 2, dominant personality types exist among the executive of NRL and OIL.
2. Applying Hypothesis Test of difference in proportion and Chi Square Test on male and female executives of NRL and OIL. The statistics shows that Executives at NRL and OIL have difference in Thinking and feeling preference on the basis of gender.
3. It is observed that some types are over represented than others in executive grade of NRL and OIL. They are ESTJ, ENTJ, ISTJ and INTJ.
4. There is no significant difference in preference of Extraversion and Introversion among the executive of NRL and OIL
5. There is no significant difference in preference in Sensing and Intuitive among the executive of NRL and OIL
6. However Executive of NRL and OIL have an over representation of Thinking preference and under representation with a Feeling preference. Hence, there is a difference in preference between Thinking and Feeling.
7. Executive of NRL and OIL have an over representation of Judging preference and under representation with a Perceiving preference. Hence, there is a difference in preference between Judging and Perceiving.

CONCLUSION:
The The results from this study clearly show that there exists dominant personality in OIL and NRL ,majority of the executives are of ISTJ personality type followed by ESTJ's and

ENTJ's. Whereas personality types like ISTP, ISFP, INFP, INTP, ESTP and ESFP are almost non-existent among the executives. Based on gender the study shows that there is striking difference in preference of Thinking and Feeling type while making decisions. Whereas female gender are much more inclined towards feeling preference the males on the other hand are more oriented to Thinking preference.

A high percentage of executive exhibited Introversion, Sensing, Thinking and Judging preferences. This is fairly common in engineering profession.

Both ESTJs and ISTJ are organized, create systems, they believe in order, procedures and rules. They are extremely reliable, dutiful and follow tradition and regulation to hilt. They are tough minded and takes decision based on organisational needs and not on the basis of emotional considerations. In an organisation like NRL and OIL which operates under strict guidelines and procedures this type personality is required.

Any experimentation or tinkering with the laid procedures can have series consequences. ESTJ in a sense are good communicator and their lack of empathy is made up through their extraversion. STJs are more oriented towards managing established business.

While visionary NTJ are better suited to manage the future specially in the field of new product innovation and new emerging markets. Since NRL and OIL are in an expansion mode by setting up an entire product pipeline from Paradeep port in Orissa to NRL Refinery in Numaligarh. The number of NTJs in NRL and OIL is comparatively less. Since NRL has shifted from Performance oriented to growth oriented. It might create a dissonance among the STJ executives. They may find it difficult to adapt to the new changing work environment.

REFERENCES

1. Auerbach.E. (1992). Not Your Type, but Right for the Job, The Wall Street Journal, January 6
2. Boonghee Yoo., James P. Neelankavil., Gloria M. De Guzman., Ricardo A. Lim. (2013) Personality Type Preferences of Asian Managers: A Cross-Country Analysis Using the MBTI Instrument. Working Paper 13 ⬜ 010.
3. Boyle. J Gregory. (1995). Myers-Briggs Type Indicator (MBTI): Some psychometric limitations. Humanities & Social Sciences papers.
4. Carlson. J. (1989). Affirmative: In Support of Researching the Myers-Briggs Type Indicator. Journal of Counselling and development. vol.67
5. Carskadson T.G.(1979). Behavioural difference between extraverts and introverts as measured by the Myers-Briggs Type indicator: An experimental demonstration. Research in psychological type, Volume 2.
6. Desai T.A., Kirti Sharda.K.(2009). Understanding the "Business Type": A Comparitive Analysis of Management Students and Business Executives. W.P. No. 2009-11-03.
7. Gardner, W.L., & Martinko, M. J. (1990). The relationship between psychological type, managerial behaviour, and managerial effectiveness: An empirical study. Journal of Psychological Type.
8. Gardner.W.L. Martinko. M.J. (1996). Using the Myers-Briggs Type Indicator to Study Managers: A Literature Review and Research Agenda. Journal of Management .Vol. 22, No. 1, 45-83.
9. Furnham. A., Crump.J.(2015) The Myers-Briggs Type Indicator (MBTI) and Promotion at Work. Psychology. Vol 6, 1510-1515.
10. Furnham.A., and Paul Stringfield. P. (1993). "Personality and work performance: Myers-Briggs Type Indicator correlates of managerial performance in two countries." Personality and Individual Differences. 14, no. 1: 145–153.
11. Hendrickson. K., Giesecke. J. R. (1994). "Myers-Briggs Type Indicator Profile and the Organization" (1994). Faculty Publications, UNL Libraries. Paper 89.
12. L. David.(2001) The Myers-Briggs Type indicator: Evidence of its validity, reliability and normative characteristics for managers in an Australian context.
13. McCaulley .M.H. (1985). The Selection Ratio Type Table: A Research Strategy for Comparing Type Distributions. Journal of Psychological Type, Volume 10.
14. Mangal S.K. Statistics in Psychology and Education (2019). PHI
15. Myers I.S., Mccaulley M.H., Quenk N.L., HAMMER A.L. (2009). MBTI Manual , A Guide to the Development and use of the Myers-Briggs Type Indicator Instrument. Third Edition,
16. Myers K.D., Kirby L.K. (1994). Introduction to Type Dynamics and Deevelopment. 1994 by CPP, Inc.
17. Pollit. I. (1982) Managing Difference in Industry. Research in Psychological type, Volume 53.
18. Raosoft (2004). Raosoft Sample Size Calculator. Raosoft, Inc. Seattle
19. Roach, B. C. (1997). "Organizational decision makers: Different types for different levels." Journal of Psychological Types 12: 16–24.
20. Reynierse, J.H. (1991). The Psychological Types of Outplaced Executives. Journal of Psychological Type, Vol. 22,
21. Reynierse J.H. (1993). The distribution and flow of managerial types through organizational
22. levels in business and industry. Journal of Psychological Type, Vol. 25. Zikmund, W. G., Babin, B. J., Carr, J.C., Adhikari, A., Mitch, G. (2010). Business Research Methods. Ohio, South-Western College Pub. ISBN- 1439080674