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Corporate Social Responsibility with Special Reference to
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Akanksha Kapoor Dhawan, Dr. Satish Kumar Garg

An Analytical Study of Factors Affecting Investors'
Decision Related to Investment In IPOs
*Dr. Akhil Agnihotri, Dr. Jaideep,
Dr. Purushottam Kumar Tripathi, Ravi Bhushan Tripathi*

Assessing the Feasibility of Project Appraisal Methods in the Oil and
Natural Gas Industry: A Case Study of ONGC's ABC Project
Ms. Dharini Raje Sisodia, Mr. T Chetan Kumar

Gender Effects on Assertiveness and Different Personality Traits
Nirupa Lakshmi, Rupa Lakshmi

To Study the Impact of Strategic Human Resource Management on firm
Performance in Emerging Market
Amisha Gupta, Manish Kumar Rao

Capacity Development
Maj Vivek

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Army Institute of Management and Technology (AIMT), Greater Noida (established in the year 2004) is a Reputed Management Institute (recognized by the All-India Council for Technical Education and affiliate d to Guru Gobind Singh Indraprastha University, Delhi) under the aegis (AWES) Army Welfare Education Society, the umbrella organization that runs 127 Army Public Schools and 13 professional colleges across the country.

AIMT conducts a two-year full time residential MBA and three- year full time residential BBA courses and MBA in Analytics for the wards of army personnel only in areas of Marketing, Finance, Human Resource, Information Technology, International Business and Operation Analytics. The Institute strives to impart value-based and character-centric management education to foster and refine perseverance, leadership, integrity, positive attitude, and skills which students imbibe right through their formative time spent in the Army Environment. The teaching pedagogy involves ingenious amalgamation of faculty-supervised case studies, simulations, role plays, management games etc. Students-driven activities include participation in forums like Marketing Club, Finance Club, HR Club, IT Club, Uddyami Club etc. to provide a non-formal forum for growth of dormant talents under the benign guidance of faculty members.

Within a short span of its existence the institute has developed a strong and vibrant Institute-Industry interface with more than 1000 corporate linkages. Students from 2018-20 batche have found placements in leading Indian and MNCs like HUL, ITC Ltd., MMT, Puma, Decathlon, American Express, Oppo, HDFC Bank, IndusInd Bank, Mindwork, Prism, Ashiyana Housing Lt., Radisson Hotels, Jaro Education etc. Taking in account growing needs of industry, many capsule courses like ERP, Business Intelligence, Investment and Security Analysis etc. are being conducted to enhance employability of students. The Institute has enlarged the scope of Management training by conducting Management Development Programmes for 1000 Judicial Officers, workshops for corporate executives, ex-servicemen etc



EDITOR-IN-CHIEF

Dear Readers,

It is my pleasure to introduce the latest edition of AIMT journal, which features a diverse range of research articles from esteemed scholars and practitioners in the field of management theory and practice.

In this edition, our contributors delve into topics such as corporate social responsibility, financial decision making, project appraisals, organization behavior, capacity building and strategic human resource management. Through their research, they offer valuable insights and solutions to the challenges faced by managers in today's rapidly changing business landscape. The book review section provides a snapshot of much appreciated book 'Pushing the envelope: All the way to the top' authored by Harvey Mackay.

We are grateful to our contributors for their hard work and dedication in producing these articles, which we believe will be of great interest and value to our readers. We are also thankful to our editorial board for their careful review and feedback on each submission.

As always, our goal is to provide a platform for the exchange of ideas and the advancement of knowledge in the field of management. We hope that this edition of our journal will contribute to the ongoing discussion and debate in this field and inspire further research and innovation.

We invite you to read and engage with these articles, and to share your thoughts and feedback with us. Thank you for your continued support of our management research journal.



A handwritten signature in blue ink, appearing to read 'J.K. Sahu', written over a horizontal line.

Air Commodore (Dr) J.K. Sahu (Retd)
Director, AIMT

CONTENTS

Research Papers

Corporate Social Responsibility with Special Reference to Cement Industry of Satna District (M.P.)	1
An Analytical Study of Factors Affecting Investors' Decision Related to Investment in IPOs	6
Assessing the Feasibility of Project Appraisal Methods in the Oil and Natural Gas Industry: A Case Study of ONGC's ABC Project	15
Gender Effects on Assertiveness and Different Personality Traits	24
To Study the Impact of Strategic Human Resource Management on firm Performance in Emerging Market	30
Capacity Development	39
Book Review Prof. Shalini Sharma	51

Corporate Social Responsibility with Special Reference to Cement Industry of Satna District (M.P.)

Akanksha Kapoor Dhawan*
Dr. Satish Kumar Garg**

ABSTRACT

The cement sector is taken as most polluting industry as compared to other industries in the world. The establishment of such industry has been creating varieties of severe problems and issues to the community and society. The current review deals with the initiatives considered by cement industries in context of CSR for the welfare and upliftment of the affected community in and around the area, where it is established. Societal and environmental sustainability are linked with development for economic sector. The most important vital element of any enterprise in long run can be maximizing or earning profit, but by safe-guarding environmental and also social issues. Thereof, enterprise need to set up a proper balance between economical benefits with social in addition to environmental contributions with proper execution of enterprise responsibility towards environment as such : Waste reduction, minimization of cost on fuels, material, environmental management as well as eco-efficiency. Through this paper an attempt is made towards CSR by cement companies analogously, provisions for New Companies Act, 2013. Data is collected through secondary data and also various compilation of unpublished and published sources, are also used as other sources of data.

Keywords : CSR, Cement Industry, Company Act 2013, Waste Management, Sustainability

INTRODUCTION

Corporate Social responsibility (CSR) refers to all duties and obligations of business directed towards upliftment of society. These duties can be a set of routine functions of carrying on business activity or they may be an additional function carrying out welfare and rehabilitation activities. The people engage in business to earn profit and profit making is not the sole function of the business. It performs a number of social functions, as it is an integral part of society. It takes care of those who are instrumental in securing its existence and survival of owners, investors, employees, consumers, and governments in particular and community in general. CSR acts as a loop between society and the enterprise. As an enterprise works in society and so uses all its resources. So, with regard of it enterprise should serve enterprises by giving back to the society, by acting as a resourceful agent. The enterprise must act responsible towards society and must fulfill environmental norms and should support its neighboring community. Besides all, an enterprise should run transparently in a way to be answerable to its competitor, in a responsible way, and as cement industry being a polluting industry; it must use eco friendly technology, which may reduce carbon gas and other toxic substances which in a way badly impacts the ozone layer leading towards climatic change.

LITERATURE REVIEW

Carroll (1979) argued that, because of his early contributions to social responsibility, Bowen should be called "the founder of corporate social responsibility." He presented a three-dimensional model for social success of corporate, to researchers as well as administrators, which are the social problems that organizations must solve,

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what the ideology of the organization is or what the model of social response is. The discretionary, legal, ethical and economical expectations of businesses in society at any time are segment if social responsibility for business. The company's credibility was achieved through CSR by McWilliams and Seigel(2010), suggesting that businesses offering persuasive products are part of CSR operations, leading to loyalty to the customer and increased sales.

According to Clarkson (1995), stakeholders are such entities which are primary or secondary stakeholders with or claim ownership, rights or interests in a company and its operations. Typical stakeholders include shareholders and investors, staff, consumers, vendors and government and market-based and infrastructure-building societies to which taxes are payable.

Hartmann (2011) has noticed that the food industry is still seeking to enhance customer discharging facilities. Consumers often favor food companies that prefer CSR practices. Pohle and Hittner (2008) proposed that business organizations use CSR as a growth opportunity, and 76 percent agreed that their CSR aspirations were not well known.

According to Swisher, Rezola and Sterms (2006), an environmentally friendly and socially sound society built on a sustainable basis is economically efficient.

Emergence of Corporate Social Responsibilities in Cement Industry

Production of cement comprises of huge quantity of raw materials, heat, energy which in turn results into solid waste and emission of certain gases. After iron and steel industry, cement industry is considered as the second largest construction industry. Cement industry has come up as the most polluted industry. Because of its large volume, the emission of Co₂ gases is under close inspection. Cement Kiln, a waste product which is produced from cement manufacturing, causes severe health problems resulting in respiratory health risks. Thus, it has become a concern for the cement manufactures to reduce Co₂ emissions to 5% as world's complete emissions of green house gases, is caused due to cement production (Loreti Group, 2008).

SCOPE OF THE STUDY

Madhya Pradesh (MP) is the largest cement producer of India which has 23 Cement Plants, within the state. It is followed by Andhra Pradesh, Rajasthan with 19 and 15 plants respectively. The major cement producing centre of MP are Katni, Jamul, Satna, Durg, Maihar, Neemach.

8% to 9% India's total production of cement is from Satna. As this district lies in the limestone belt of India, Satna comprises of a total 10 cement industries which produces and exports cement to different parts of the country. Since there's an abundance of minerals i.e. limestone, dolomite, are required entity for production of cement, this making Satna the commercial capital of Baghelkhand. Poor roads, inadequate electricity and atmospheric wastes from cement unit that causes air pollution are some of the hurdles faced by the city. Though, the city went through a sharp growth during post liberalization era i.e. after 1993. Satna is counted as the rising city of Madhya Pradesh and is amongst one of the SMART City missions of Government of India, as it got selected in, third phase under 'SMART city mission'. 'Satna' is recognized as the 'Cement city' of India.

OBJECTIVES

The Objectives are classified as under:

1. To have an understanding of CSR laws under the Company Act, 2013
2. To understand the present scenario of Corporate Social Responsibility

CORPORATE SOCIAL RESPONSIBILITY NORMS UNDER THE COMPANIES ACT, 2013: AN OVERVIEW

The ministry of corporate affairs had explained under section 135, schedule VII under the Company Act 2013 regarding the provisions under company rules 2014, and policies regarding CSR which came with effect from April 1, 2014. The activities of Corporate Social responsibilities is applicable to all those companies irrespective of being public or private having a turnover of Rs. 1000 Crores or net worth of Rs. 500 Crores or a Net profit of Rs. 5 Crores which in requires to spend at least 2% its average income that is net profit for antecedent of three financial years. Certain obligation under CSR activities which a company needs to undertake may include – eradication of hunger, poverty as well as under-nourishment, promotion of gender equality, proper health care facilities, providing education, providing livelihood facilities as setting up home/ providing shelter for senior citizens, women and orphans. Steps are being continuously taken for the reduction of disproportion faced by economically and socially backward troops which in turn ensures sustainability for the environment and ecological stability along with protection for animals, Conservation of Natural beauties and art & culture. Certain other steps are taken for taking care of Military troops, Widows of martyr's along with their dependents' contribution are being made to provide funds to prime ministers national relief funds. Certain training programmes are conducted to encourage rural as well as nationally renowned paraolympic and also Olympic sports conducted by central government for development of society leading towards socio economic development as well as upliftment of reserved quota's and minorities.

However, preferential treatment is given to the area surrounding in order to shape the CSR activities. Area surrounding which in turn shapes the CSR aboard constituting of CSR commity must be prepared to keep an eye on ongoing CSR activities. Accordingly, Section and monitor the company's CSR policies, a CSR Committee of the Board requires to be created. According to section 135 of the 2013 Companies Act, constituting of CSR Committee should comprise of at least three directors out of which one as an independent director. Organizations can too work together with one another jointly to undertake a CSR activity, providing each of the companies and update report of their projects. Board of directors annual reports on the CSR activities with along the company yearly financial statements detailing lastly financial years average net profits and CSR expenditure could also required to be included as per the format which is specified under the CSR rules outlined by the CSR policy.

CSR AS PER NEW COMPANIES ACT, 2013

CSR is no more a new phenomenon in the country as mentioned before. Corporations have been active in the service of the community since their foundation such as the Tata Group, the Aditya Birla Group, Indian Oil Company, etc., to address a few. Many other companies have also played a part in society through donations and charitable activities. CSR's fundamental mission today is to increase efficiently the cumulative effects on the businesses on the Indian society and its respective stakeholders. An upgrowing digits of businesses incorporate CSR strategies, procedures and services in their organizational pursuit and processes increasing number of businesses beliefs that CSR is not only a method of indirect expenditure, it is necessary to preserve goodwill and credibility, to protect attacks and increase market competitiveness. Companies are made up of CSR teams which create and allocate budgets to the procedure, policies and strategies and objectives of there CSR programs. The social ideology of these services is also straightforward and well developed and aligns them with conventional business. The programs, which are essential to this process, are enforced by the employees. CSR services include economic development, educational, environmental and health development, etc. Moreover, businesses are gradually joining forces with NGOs and using their resources to build projects to solve larger social issues. CSR activities within India have undergone various different phases.

The business has clearly shown the potential to have a positive difference in society and to enhance universal standard of life. Not one company but everyone should strive to make an alteration in the present socio condition in India, so that social issues are resolved effectively and permanently. Partnerships must be provided between businesses, NGOs and the government in order to allow India's socio-economic innovations to be rapidly implemented by combining skills, strategic thinking, staffing, and money for comprehensive social change.

CONCLUSION

As per law-Under the Companies Act, 2013, any of the company with a net worth of Rs. 500 crores or more or a turnover of Rs. 1,000 crores or more or a net profit of Rs. 5 crores or more has to spend 2% of their net profits per fiscal on CSR activities which is a mandate. The laws and rules came into existence from 1 April, 2014. According to the above new provisions of companies act 2013, the corporate socio activities are very essential for any business organization to make a good impression to all related stakeholders. The CSR playing the major role in goodwill creation of any business organization so cement industry also using the CSR activities for legal compliance of companies act. As per the company act 2013 the CSR is mandatory for certain type of companies. The cement industry also covered in these new provisions of company's act, so cement industry also make efforts for CSR in the provision of activities of education, health, infrastructure development, women empowerment etc. The role of CSR for any organization is very important for goodwill creation and also legal requirements of new provisions of this new act. According to our theoretical analysis of role of CSR, provisions of companies act 2013; all companies to work for the upliftment and betterment of the space where they work for the betterment of the society as per the provisions of companies' act 2013.

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An Analytical Study of Factors Affecting Investors' Decision Related to Investment In IPOs

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Abstract

The present study attempts to determine the factors that influence decision of an individual while investing in IPOs. The research aims to study the factors that influence the investor's behavior while investing in IPOs and the relationship between the factors. The study was undertaken in Greater Noida and Noida with a sample size of 72. The study applied an independent t-test, one way annova and correlation to examine the collected data. Many factors are required to consider while investing in IPOs, like facts of the company, news in the media, friends' investment suggestions, GMP, investors experience, and herd behavior. The paper tries to establish relationship between all the above factors and also establish correlation behind the behavior of male and female investors in their decisions. Investment in IPO is a risky activity and now a days there are large number of investors investing in IPO, due to which most of the IPOs are oversubscribed. This paper is an attempt to determine the factors behind investors' decision in the IPOs residing in Noida and Greater Noida region.

Keywords : Grey Market Price, Investment decision, Initial public offerings, financial performance, Investor behavior.

Introduction

IPO is stock of company that offered to public for the very first time and after that it is traded in the share market. Company generally issues its IPOs for funds for many reasons, such as expansion, diversification, global requirements, funding joint ventures, infrastructure requirements, working capital requirement etc. Investors apply for IPOs in India by filling online application through the stock brokers and banks. There are number of information floated in the newspaper, social sites, broker's portal which are used by the investors to investigate about the worth of an IPO. Investors go through these information to know the facts of the company, its issue size, purpose of issue etc for investment in IPO. Investing in IPOs is a high-risk endeavor, and with the growing number of investors participating in such investments, it has become commonplace for IPOs to be oversubscribed. This study aims to identify the factors that influence investors' decisions to invest in IPOs in Noida and Greater Noida.

Investment decisions are taken by investors in the light of fundamental and technical analysis and there are number of other factors which affects their decision for investment in IPOs.

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Research Objectives

- The aim is to examine the factors that impact the subscription of an IPO.
- The objective is to determine the correlation between different factors that affect the subscription of IPOs.
- To find out the difference in use of information by male and female investors while subscribing IPOs.

Literature review

The present chapter centers on the discoveries made by multiple researchers regarding the factors that impact an investor's decision to purchase an IPO.

Martin Cherkes (2015), “An alternative theory of IPO underpricing” suggests a theory for IPO underpricing. His model (Cherkes, 2015) shows the following results According to L. Srinivas (2017), the asymmetric design of a contract poses an impossible challenge for diversification of risk, resulting in underpricing being an inevitable consequence of the IPO process, even if the underwriting market is fully competitive. On average, IPOs with larger fees will experience less underpricing. Additionally, any negative news revealed during the road show will be fully reflected in the price adjustment, while only a small portion of positive news will be factored in. Finally, issuers providing side-payments to underwriters can simultaneously increase their own proceeds and the underwriters' profits.

D. Kandavel (2011) - The study titled "An Empirical Study on the Factors that Influence Retail Investors' Preference for Mutual Fund Investments in Puducherry" investigates the correlation between the degree of acceptance among retail investors with varying demographic profiles and the factors that influence their decision to invest in mutual funds. The researcher employed the Chi-square test to analyze these factors.

Singh Jeet, Yadav Preeti (2016) - The study titled "An Investigation into the Factors Affecting Investment Decisions in Equity Shares in Jaipur and Moradabad, with a Special Focus on Gender" aims to identify the primary factors that impact investment decisions in equity shares in Moradabad. The research indicates that investors, regardless of gender, should conduct fundamental, technical, and financial analyses before investing in shares. Investors are advised to explore all investment opportunities when allocating their funds to diverse assets.

L. Srinivas (2017) – The paper titled "Factors that Impact IPO Decisions Among Retail Individual Investors in Visakhapatnam: A Study" aims to investigate the element that affect the buying decisions of retail individual investors in IPOs. The research concludes that capital appreciation and safety are significant factors that influence the decisions of retail investors.

Research Methodology

Research Design: The present study in an experimental research design in which researcher has tried to investigate the interaction between dependent and independent variables.

Data Collection: Primary data has been collected for the study through a structured questionnaire with 23 questions. A five point Likert scale is used. Respondents are conveniently selected those who invest in IPOs in Noida and Greater Noida with a sample size of 72.

Data Analysis: Both descriptive and inferential statistics are utilized in the analysis of the data. Tools applied like Independent T test, One way Annova and correlation through SPSS.

Hypothesis:

- H1.1:** There exists a notable disparity between male and female investors regarding their inclination to rely on a friend's recommendation when making investment decisions.
- H1.2:** The years of experience of investors have a significant impact on their reliance on media news when making investment decisions.
- H1.3:** A notable distinction exists between male and female investors and their herd behavior in investment decision.
- H1.4:** A considerable dissimilarity can be observed between male and female investors and their use of grey market price in investment decision of IPO.

Hypothesis Testing

H1.1: There exists a notable disparity between male and female investors regarding their inclination to rely on a friend's recommendation when making investment decisions

Variables	Gender	N	Mean	Std. Deviation
Friend's Suggestion	Male	52	3.4744	1.23024
	Female	20	3.9667	1.03675

Independent Sample t-test

Variables		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig	T	df	Sig. 2-tailed	Mean Difference	Std. Error Difference	95% CI of the Difference	
									Lower	Upper
Friend's Suggestion	Equal variances assumed	5.044	0.028	-1.584	70	.118	-.49231	.31071	-1.11199	.12737
	Equal variances not assumed			-1.710	40.705	.095	-.49231	.28783	-1.07373	.08911

As per this table it is clear that on average male and female both have similar concern in considering friend's suggestion in investment decision while investing in IPOs. (M = 3.47 and F= 3.96). The p value is more than 0.05 (i.e. 0.118) As the null hypothesis is upheld and the alternative hypothesis is dismissed, it can be inferred that there is no notable distinction between male and female investors regarding their inclination to rely on a friend's recommendation when making investment decisions during IPO investments.

H1.2: The years of experience of investors have a significant impact on their reliance on media news when making investment decisions.

Descriptives

Media News

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0-2 years	40	3.9063	.76520	.12099	3.6615	4.1510	2.25	5.00
2-5 years	25	4.0700	.55678	.11136	3.8402	4.2998	3.00	5.00
5-10 years	4	3.9375	.31458	.15729	3.4369	4.4381	3.50	4.25
above 10 years	3	4.5833	.52042	.30046	3.2905	5.8761	4.00	5.00
Total	72	3.9931	.67783	.07988	3.8338	4.1523	2.25	5.00

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Media News	Based on Mean	2.042	3	68	.116
	Based on Median	1.983	3	68	.125
	Based on Median and with adjusted df	1.983	3	62.577	.126
	Based on trimmed mean	1.992	3	68	.123

ANOVA

Media News

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.507	3	.502	1.098	.356
Within Groups	31.114	68	.458		
Total	32.622	71			

Robust Tests of Equality of Means

Media News

	Statistic ^a	df1	df2	Sig.
Welch	1.373	3	7.302	.325

a. Asymptotically F distributed.

The table shows $F(3,68) = 1.098, p > 0.05$, According to the outcome, the null hypothesis is confirmed while the alternative hypothesis is negated. This suggests that there is no considerable difference between the years of experience of investors and their reliance on media news when making investment decisions in IPOs.

H1.3: A notable distinction exists between male and female investors and their herd behavior in investment decision

Group Statistics

Variables	Gender	N	Mean	Std. Deviation
Herding Behavior	Male	52	3.7115	.91473
	Female	20	3.8667	.93908

Independent sample t-test

Variables		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. 2-tailed	Mean Difference	Std. Error Difference	95% CI of the Difference	
									Lower	Upper
Herding Behavior	Equal variances assumed	.246	.621	-.640	70	.524	-.15513	.24244	-.63865	.32840
	Equal variances not assumed			-.632	33.724	.531	-.15513	.24533	-.65384	.34358

Based on the t-test results, there is no significant difference between male and female investors and their tendency to exhibit herd behavior when making investment decisions, leading to the rejection of the alternative

hypothesis. (M=3.71, F=3.86) $p > 0.05$.

H1.4: A considerable dissimilarity can be observed between male and female investors and their use of grey market price in investment decision of IPO

Group Statistics

Variables	Gender	N	Mean	Std. Deviation
Herding Behavior	Male	52	4.2356	.64628
	Female	20	4.1250	.63609

Independent sample t-test

Variables	Levene's Test for Equality of Variances	t-test for Equality of Means									
		F	Sig.	T	df	Sig. 2-tailed	Mean Difference	Std. Error Difference	95% CI of the Difference		
									Lower	Upper	
Herding Behavior	Equal variances assumed	.090	.765	.765	.653	.70	.516	.11058	.16932	-.22713	.44828
	Equal variances not assumed				.658	35.026	.515	.11058	.16811	-.23071	.45186

As the table shows (M=4.23, F=4.12) $p > 0.05$, male and female both have similar concern towards use of grey market price while investing in IPOs. The null hypothesis is supported and the alternative hypothesis is refuted, indicating that there is no dissimilarity between male and female investors in their consideration of grey market prices when making investment decisions in IPOs.

Correlation:

Descriptive Statistics

	Mean	Std. Deviation	N
Facts of the company	4.2604	.57445	72
Media News	3.9931	.67783	72
Friend's decision and suggestion	3.6111	1.19336	72
Grey Market Price	4.2049	.64093	72
Experience in Trading	4.1222	.59439	72
Broker Advice	3.8241	.90551	72
Herding Factor	3.7546	.91756	72
Investment decision	4.0556	.75267	72
Effects of Covid-19	3.8889	.83918	72

		Correlations								
		Facts of the company	Media News	Friend's decision and suggestion	Grey Market Price	Experience in Trading	Broker Advice	Herding Factor	Investment decision	Effects of Covid-19
Facts of the company	Pearson Correlation	1	.317**	.064	.537**	.413**	.319**	.375**	.379**	.258
	Sig. (2-tailed)		.007	.592	.000	.000	.006	.001	.001	.029
	N	72	72	72	72	72	72	72	72	72
Media News	Pearson Correlation	.317**	1	.660**	.571**	.415**	.619**	.737**	.608**	.574**
	Sig. (2-tailed)	.007		.000	.000	.000	.000	.000	.000	.000
	N	72	72	72	72	72	72	72	72	72
Friend's decision and suggestion	Pearson Correlation	.064	.660**	1	.390**	.240	.647**	.661**	.530**	.566**
	Sig. (2-tailed)	.592	.000		.001	.042	.000	.000	.000	.000
	N	72	72	72	72	72	72	72	72	72
Grey Market Price	Pearson Correlation	.537**	.571**	.390**	1	.516**	.498**	.530**	.655**	.667**
	Sig. (2-tailed)	.000	.000	.001		.000	.000	.000	.000	.000
	N	72	72	72	72	72	72	72	72	72
Experience in Trading	Pearson Correlation	.413**	.415**	.240	.516**	1	.461**	.431**	.499**	.510**
	Sig. (2-tailed)	.000	.000	.042	.000		.000	.000	.000	.000
	N	72	72	72	72	72	72	72	72	72
Broker Advice	Pearson Correlation	.319**	.619**	.647**	.498**	.461**	1	.814**	.591**	.666**
	Sig. (2-tailed)	.006	.000	.000	.000	.000		.000	.000	.000
	N	72	72	72	72	72	72	72	72	72
Herding Factor	Pearson Correlation	.375**	.737**	.661**	.530**	.431**	.814**	1	.666**	.671**
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.000		.000	.000
	N	72	72	72	72	72	72	72	72	72
Investment decision	Pearson Correlation	.379**	.608**	.530**	.655**	.499**	.591**	.666**	1	.657**
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.000	.000		.000
	N	72	72	72	72	72	72	72	72	72
Effects of Covid-19	Pearson Correlation	.258	.574**	.566**	.667**	.510**	.666**	.671**	.657**	1
	Sig. (2-tailed)	.029	.000	.000	.000	.000	.000	.000	.000	
	N	72	72	72	72	72	72	72	72	72

** . Correlation is significant at the 0.01 level (2-tailed).* . Correlation is significant at the 0.05 level (2-tailed).

As per the table, media news is positively correlated ($R=0.660, 0.619, 0.737, P < .05$) with friends decision, broker advice and herding factor, it depicts that people who go through media news for investment in IPOs, will also check their friend's decision and have herd behavior.

There is strong positive correlation between herding factor and broker advice ($R=0.814, P < .05$). It shows that the people with more herd behavior see more advices from brokers while investing in IPOs.

People who check facts of the company for investment in IPOs are less interested in friends suggestion, as per the table there is no relation between friend's advices and facts of the company. ($R=0.64, P > .05$).

The above table shows that people with experience in trading do not rely on friend's decision and advices for investment in IPOs. ($R=0.240, P = .042$). There exists a positive but weak correlation between trading experience and the weight given to a friend's advice and decision-making in investments.

Those who saved money, and investing more during covid period are giving more weight to grey market price, broker advice, and others decision. Strong correlation between Covid 19 effect and grey market price, broker advice and herding factor is $R=0.667, 0.666, 0.671$ and $P < 0.05$ respectively.

As per the table correlation coefficient between covid 19 effects and investment decision is 0.657 and the p value for 2 tailed test of significance is less than 0.05. So conclusion is, there is a positive correlation between covid -19 effects on investment and investment decision.

Conclusion

Factors which affects the investor's decision while investing in IPOs with a view to book maximum profit an investor uses these factors. It clearly shows that male and female both have same considerations for investment in IPOs. Facts of organization are an important factor which is used by most of the respondents to earn through investing in IPOs. Those who go through the facts of the organization are less interested in friend's suggestions. Investor's experience is least important in use of media news for the investment in IPOs. Correlation shows that the people who follow their friend's advice for investment in IPOs, will ensure this decision with the help of news in media and broker advice. As per the results, investors with experience in trading, can take their decision themselves and do not rely on their friends' investment decision.

Implications of the Study

The study examined the factors which affects the investment decisions of an investor investing in IPOs. These factors are investigated by previous studies and also introduced some additional factors derived through personal interviews and found that has some influence on investor's decisions.

The study recommends that investors must go through the factors that has influence on the decision to invest in IPO. The study will help the investors to find the relation between the factors and their impact on the decisions. There is a scope of the further research that can be done by analyzing the impact of these factors on earning of investors in primary market.

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Assessing the Feasibility of Project Appraisal Methods in the Oil and Natural Gas Industry: A Case Study of ONGC's ABC Project

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Abstract: Project appraisal plays a crucial role in the decision-making process of organizations, particularly in the oil and natural gas industry where resources are limited and have alternative uses. The aim of this study is to evaluate the project appraisal methods used in the industry, with a specific focus on ONGC's ABC project. Through an analysis of the technical and financial feasibility of the project, this study aims to determine whether the project is viable and to identify any potential areas for improvement in ONGC's project appraisal processes. The findings of this study have implications for the oil and natural gas industry as a whole, highlighting the importance of effective project appraisal in ensuring the optimal allocation of resources.

Keywords: project appraisal, feasibility analysis, oil and natural gas industry, ONGC, ABC project.

Introduction

About Oil and Gas

Oil and natural gas are significant pieces of the worldwide energy market and assume an important part of the worldwide economy. The cycles and frameworks engaged with the creation and appropriation of oil and gas are complicated, capital-escalated, and require best-in-class innovation. By and large, gaseous petrol has been related to oil, fundamentally in view of the creation cycle or procedure on the upstream side. For the majority of the historical backdrop of the business, flammable gas was viewed as an irritation, and even today it is roasted in enormous amounts in some areas of the planet, including the US. Natural Gas has taken on a more noticeable job in the worldwide energy supply because of the improvement of shale gas in the US, as referenced above, and its lower ozone-depleting substance discharges when copied contrasted with oil and coal.

About ONGC

ONGC, India's largest crude oil and natural gas producer, accounts for 71% of the country's domestic output. Its crude oil is utilised by downstream businesses like as IOC, BPCL, HPCL, and MRPL to manufacture petrol, diesel, kerosene, naphtha, and propane.

The capacity of ONGC to manage all aspects of oil and gas exploration, production, and related services in-house distinguishes it. The organisation performs in demanding conditions with a devoted workforce of over 27,000 qualified experts and has been recognised with the Best Boss award.

Review of Literature

The evaluation of oil and gas assets is a crucial step in the investment decision-making process. Typically, investment evaluation focuses on assessing both the risks and benefits associated with these assets, with occasional consideration given to factors such as corporate strategy and environmental preservation.

Existing academic literature on investment assessments in the oil and gas industry primarily focuses on risk variables associated with exploration and exploitation. These include exploration risk, geological risk, reserve

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risk, technical risk, project risk, and contract risk, among others, as identified by scholars such as Ghandi and Lawell (2017), Xie (2011), Yin (2011) and Zhan (2008). While some scholars adopt a broader perspective and consider macro-environmental issues such as economic and political variables, international oil price fluctuations and sovereign credit risk, they often miss the account for the long-term consequences of these risky factors. There is a lack of comprehensive analysis and summarization of all risks related to offshore oil and gas exploration and development investments in previous studies. Furthermore, many studies only evaluate the impact of a single risk factor on oil and gas production when quantifying risk factors. Some studies, such as Dong (2010) and Li (2017a), employ weighted risk factors to prioritize the development of oil and gas resources, but they do not thoroughly assess the intrinsic risk-benefit relationship.

The use of the discounted cash flow method for evaluating benefits through the net present value (NPV) calculation is widely accepted by both academia and industry. Some scholars have introduced the real choices approach, which utilizes NPVs to assess the importance of selecting the best investment and the ideal timing for investing (Abadie and Chamorro 2017; Huang et al. 2018; Zhou and Yan 2013). However, this approach does not represent a significant departure from the discounted cash flow methodology. Other researchers have utilized NPVs to invert economic limit parameters, such as well spacing, well density, recovery rate, also steam injection rate (Gurgel. 2017; Liu and He 2008a, b; Zekri and Jerbi 2002). Asset pricing models, including the APT Model, CAPM Model, and WACC, have been summarized by Grandits and Thonhauser (2011), Lin and Yao (2012), Reinschmidt (2002), and Rowse (2008), who also studied the risk discount rates of stocks and securities. Due to the lack of a well-developed trading market and regular trading behavior, a limited sample size of oil and gas resource trading cases is inadequate for evaluating the risk discount rate for overseas oil and gas block investments. Thus, the fundamental Factor Accumulation Technique is more applicable and advantageous. However, the comprehensive analysis and quantification of all accumulating factors have emerged as a new urgent concern.

Academics have proposed various approaches to investment decision-making that consider both risk assessment and reward evaluation. In the field of mathematics and operations research, decision-making problems are often solved through objective conversion or method enhancement, where multiple decision-making goals are combined into a single goal (Deng 2010; Zhu. 2013). For example, one algorithm performs weighting for both risk and reward to establish a comprehensive objective for decision-making.

Multi-objective ranking algorithms have also been used to improve decision-making processes (Fazlollahtabar and Saidi-Mehrabad 2015; Sorensen and Springael 2014; 2012). One such algorithm involves selecting the topmost 30 percent of plans graded by benefit, and then selecting the top 30% of those plans classified by risk, continuing the process until the best plan is identified. In the oil and gas sector, decision-makers are more likely to consider the process integration approach.

The main objective of this study is to test the following research hypothesis. Using Guo's resource-related risk compensation method as a basis, this paper comprehensively examines all economic technical, and core risks associated with overseas oil and gas investments. It identifies different risk impact modes and considers various static risks that are involved in oil and gas exploration and development costs. The study proposes a dynamic discount rate that factors in changes in dynamic risks by dividing the accumulation factors. This approach addresses the issue of dynamic changes in specific risk components and avoids subjectivity in decision-making and risk recalculations during benefit evaluations with dual objectives.

Objective

- To find the Beta of the ONGC Ltd. & the BPCL Ltd.

- To Study the Comparative Analysis of the Beta of ONGC Ltd. With the BPCL Ltd.

Research Methodology

Project Appraisal and assessment are frequently alluded to together as venture evaluation. Project evaluation is worried about surveying, ahead of time, whether a task is advantageous and hence on the off chance that it ought to be continued with. The course of task assessment is worried about surveying, from a review perspective, the exhibition of a venture after it has been carried out and finished. Such a course of strategy evaluation possesses a focal spot in open arrangement and the board.

What is Project?

A task is an exceptional, transient undertaking, embraced to accomplish arranged targets, which could be characterized with regard to results, results, or advantages. A task is normally considered to be a triumph in the event that it accomplishes the targets as per its acknowledgment rules, inside a concurred timescale and spending plan.

The Project Cycle

The examination and assessment of activities, projects, and approaches are assailing with regard to the task cycle. The project cycle at ONGC Ltd. involves:

1. Project Formulation
2. Appraisal and Evaluation
3. Approval of Feasibility Report.

The Venture definition, examination, and endorsement system followed by ONGC at various places of time might change, contingent on the mandates given occasionally by the Government of India (GOI) regarding different PSUs.

Project Formulation

The most vital phase in planning an undertaking is to characterize the expansive results that are supposed to be finished when the venture closes. These results ought to be optimistic yet additionally reasonable. It would be ideal for them to likewise be clear and succinct. The report ought to incorporate an unmistakable portrayal of how the task will be carried out, including the board game plans, expenses, procedure, and required inputs. The undertaking ought to make arrangements for yearly work designs that characterize the exercises that will take on a yearly premise to propel the accomplishment of the general results.

Factors affecting Project Formulation

Selection of appropriate technology: The primary issue looked by ONGC is the determination of proper innovation for a particular undertaking. Current innovation created i.e., in exceptionally industrialized nations may not be reasonable for reception in emerging nations like India as the circumstances predominant vary from one country to another.

Influence of External Economies: The second problem relates to the absence or non-availability of external economies. The project has to depend on other industries for the supply of raw materials, power, tools, spare

parts, etc., or on ancillary enterprises which can provide technical, finance social, and managerial service from the network work of communication.

Resource mobilization: The third problem is resource mobilization. In the context of present-day development of the magnitude and size of the project, it is important to provide the entire development capita that a project may need.

Knowledge about Government Regulations: Besides these problems the company has to comprehend several Government directives, import, and export policies, price controls, etc. It also has information regarding the present status of capacities and possibilities of future development in various industrial fields like metallurgical industries, electronics equipment industries, transportation industries, and the like.

Project Appraisal at ONGC

The designations of abilities to Navratnas are dependent upon the accompanying circumstances and rules: "Every one of the recommendations, where they relate to Capital use, speculation, or different issues including significant monetary or administrative responsibilities or where they affect the design and working of the PSE ought to be

- i. Prepared by or with the help of experts and specialists.
- ii. Should be evaluated, in reasonable cases, by Monetary Foundations or presumed proficient associations with aptitude in the areas.
- iii. The monetary examination ought to likewise ideally be upheld by the inclusion of the assessing establishments through advances and value interest.

Beta (Market Risk factor – Introduction)

CAPM Beta is a proportion of the unpredictability, or efficient gamble, of a security or a portfolio in contrast with the market in general.

It helps in assessing the dependence of the security concerning the changes in the market.

Understanding Beta

1. Betas are typically used to compare the return-to-risk ratios of stocks and mutual funds because the stock market and stock-based mutual funds have a wider range of volatility than other asset classes.
2. If a particular stock has greater volatility due to systematic risk than the market as a whole, it would be prudent for an investor to demand a higher return from that stock than the market return, which is the return of the market as a whole, such as the stock market, or a subclass of a market, such as the NASDAQ or the S&P 500 stock index.

Inference of Beta

If Beta = 1:

In the event that the Beta of the stock is one, it has a similar degree of hazard as the financial exchange. Subsequently, if the securities exchange (BSE, NSE, and so forth) ascends by 1%, the stock cost will likewise climb by 1%. Assuming the securities exchange drops somewhere near 1%, the stock cost will likewise drop somewhere near 1%.

Essentially, every stock is exposed to two types of risks: -

Non-Systematic Risks incorporate dangers that are well defined for an organization or industry. This sort of chance can be wiped out through enhancement across areas and organizations. The impact of expansion is that the diversifiable dangers of different values can balance one another.

Systematic Risks are those dangers that influence the general financial exchanges. Deliberate dangers can't be relieved through enhancement however can be surely known by means of a significant gamble measure called “**BETA**”.

If Beta > 1 :

In the event that the Beta of the stock is more prominent than one, it suggests a more significant level of hazard and unpredictability when contrasted with the financial exchange. However, the course of the stock value change will be something similar, notwithstanding, the stock value developments will be somewhat limits. For instance, expect the Beta of the ABC stock is two, and afterward assuming that the financial exchange climbs by 1%, the stock cost of ABC will climb by two percent (better yields in the rising business sector). Notwithstanding, assuming that the securities exchange drops somewhere near 1%, the stock cost of ABC will drop somewhere near two percent (accordingly meaning higher disadvantage and chance)

If Beta > 0 and Beta < 1:

On the off chance that the Beta of the stock is short of what one and more prominent than nothing, it infers the stock costs will move with the general market, notwithstanding, the stock costs will stay safer and unpredictable. For instance, in the event that the beta of the stock XYZ is 0.5, it implies assuming the general market goes up or somewhere around 1%, XYZ stock cost will show an increment or reduction of just 0.5% (less unpredictable)

Key Determinants of Beta

Nature of Business: The beta incentive for a firm relies upon the sort of items and administrations offered and its relationship with the generally speaking macroeconomic climate. Note that Recurrent organizations have higher betas than non-repeating firms. Likewise, optional item firms will have higher betas than firms that sell less optional items.

Operating leverage: The more noteworthy the extent of fixed costs in the expense design of the business, the higher the beta

Financial leverage: The more obligation a firm takes on, the higher the beta will be of the value in that business. Obligation makes a decent expense, premium costs, that builds openness to showcase chances.

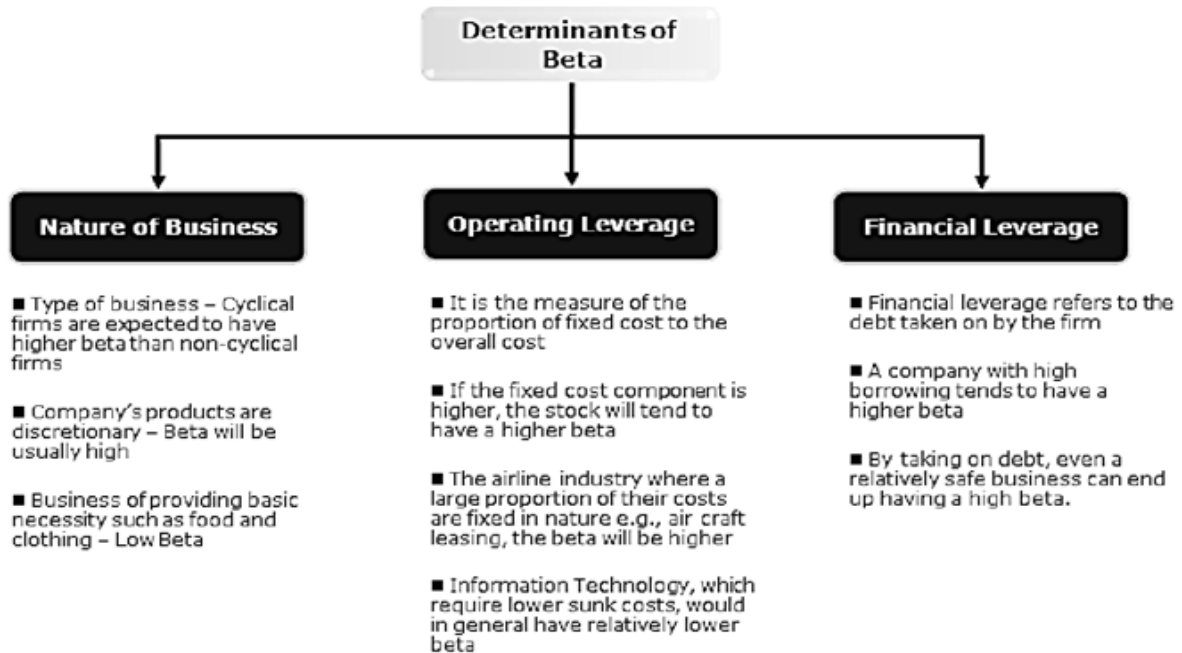


Figure 1: Determinant of Beta

Data Analysis

Beta Calculation:

Beta can be calculated by three methods,

- i) Regression
- ii) Slope
- iii) Covariance

ONGC – BPCL (Beta Analysis)

ONGC beta with Market for 1 year (Fiscal Year)

Regression Analysis: (done on Excel)

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.261391015							
R Square	0.068325263							
Adjusted R Square	0.064506924							
Standard Error	0.021328711							
Observations	246							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	0.008140218	0.008140218	17.89397464	3.30624E-05			
Residual	244	0.110998993	0.000454914					
Total	245	0.119139211						
<i>Coefficients</i>								
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	0.001660333	0.001362848	1.218281838	0.224293561	-0.001024115	0.004344781	-0.001024115	0.004344781
X Variable 1	0.575206031	0.13597843	4.230127024	3.30624E-05	0.307364695	0.843047367	0.307364695	0.843047367

Using Data Analysis tool and selecting regression there and putting the (y) range w.r.t (x) range.

2) Slope: (done on Excel)

Using Formula- =slope (y range, x range)

Slope: 0.575206031

3) Covariance: (done on Excel)

Using Formula- =covariance.p (y range, x range)/variance.p(x range)

Covariance: 0.575206031

BPCL beta with Market for 1 year (Fiscal Year)

Regression Analysis: (done on Excel)

Using Data Analysis tool and selecting regression there and putting the (y) range w.r.t (x) range.

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.54643261							
R Square	0.298588597							
Adjusted R Square	0.29571396							
Standard Error	0.013581954							
Observations	246							
<i>ANOVA</i>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	0.01916085	0.01916085	103.8700217	1.49587E-20			
Residual	244	0.045010555	0.000184469					
Total	245	0.064171405						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.000972415	0.000867851	-1.120486644	0.263608078	-0.002681851	0.00073702	-0.002681851	0.00073702
X Variable 1	0.882496104	0.086589989	10.19166432	1.49587E-20	0.711936859	1.053055349	0.711936859	1.053055349

Slope: (done on Excel)

Using Formula- =slope (y range, x range)

Slope: 0.882496104

Covariance: (done on Excel)

Using Formula- =covariance.p (y range, x range)/variance.p(x range)

Covariance: 0.882496104

Findings

Beta of the **ONGC Ltd.** is **0.575206031** & **BPCL Ltd** is **0.882496104**

The Risk associated with both the organization is low and less unstable with the market and both are steady, Yet the venture embraced by the BPCL Ltd will be steadier with less Gamble while ONGC Ltd. will be giving less Return with less Risk

Conclusion

The merger with ONGC will lead to a timely control of the situation. The mutual pool of resources and assets of both the companies will definitely result in an oil superpower within and country and around the world.

Thus, from this beta investigation we can comprehend that it infers what is happening were,

Beta $>$ 0 and Beta $<$ 1,

From this we can say that the stock costs will move with the general market, notwithstanding, the stock costs will stay safer and unpredictable

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Gender Effects on Assertiveness and Different Personality Traits

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Abstract

The determination of this study is to scrutinise the influence of gender on a variety of personality dimensions, including “decisiveness, responsibility, emotional stability, masculinity, sociability, heterosexuality, ego-strength, curiosity, dominance, and assertiveness”. On the numerous personality dimensions, it was hypothesized that male and female student scores would not differ significantly. The sample included 150 male and 100 female students randomly selected from Patna, Bihar, colleges. The Differential Personality Scale (Sinha & Singh, 1979) and the Assertiveness Scale (Lakshmi, 1993) were employed for this purpose. According to the findings, male and female students scored substantially differently on the decisiveness, sociability, heterosexuality, and assertiveness personality dimensions. However, there were no significant differences in the personality dimensions of responsibility, emotional stability, masculinity, ego-strength, curiosity, and dominance.

Key words: Gender differences, Assertiveness, Personality, Traits, Characteristics

Introduction

As a technique for behavior modification, clinical psychologists have already acknowledged the significance of assertive behavior. It has been used as both a desensitization technique and a means of developing more effective coping behaviors. (Coleman & Broen, 1972). It is especially beneficial for those with interpersonal difficulties due to conditioned anxiety responses that prevent them from "speaking up" for what they perceive to be appropriate and correct. There are numerous definitions and descriptions of assertive behavior. The majority of authors, however, tend to agree with the following characteristics of assertive behavior that Rimm and Masters have articulated so effectively: (1979).

Interpersonal behavior characterized by the open and relatively direct expression of thoughts and emotions is assertive behavior.

- Assertive behaviour is socially appropriate.
- When person is behaving assertively, the feelings and welfare of others are taken into account.”

According to Smith, for an individual to be assertive, he or she must not only be aware of his or her rights but also be able to assert them in a variety of situations. Not only were assertive rights essential for the individual (as a means to actualize his or her potential), but also for society as a whole, as they would promote social and labor harmony. (Smith, 2006). Assertiveness is interpersonal behavior that permits the direct expression of one's emotions without cognitive distortions or anxiety, combining verbal and nonverbal components, and the defense of one's rights while maintaining respect for others. It entails asserting one's rights and communicating one's thoughts, feelings, and beliefs in a straightforward, honest, and appropriate manner that does not violate the rights of another. Alberti and Emmons wrote, "Assertive behavior promotes equality in human relationships, allowing us to act in our own best interests, stand up for ourselves without undue anxiety,

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express honest feelings without denying the rights of others, and exercise personal rights without denying the rights of others". (1990). In some situations, a person may be adequately assertive, while in others, they may be ineffective or even inhibited. The trait of assertiveness is unstable and inconsistent. Presently, there is no doubt that students with assertive competence will develop more rapidly in the school environment, as this setting will allow them to manage interpersonal social situations effectively. Assertiveness is a positive trait that is advantageous for everyone. The discussion makes it abundantly apparent that assertiveness results in a healthy, complex, and regret-free personality. A non-assertive person is never content with his life, making it challenging for himself and others.

Decisiveness

The 'decisiveness' dimension measured such aspects as the ability to make quick decisions in contentious matters; to decide the order of importance in which activities could be undertaken on a priority basis; to make quick decisions for undertaking any journey; to take clear-cut stands on any given issues; to remain firm over one's own decision; to be able to resolve conflicts quickly and to make political, social, religious, and other independent decisions (Sinha & Singh, 1976).

Responsibility

Responsibility has a broad scope. It may be social, economic, or familial. This dimension primarily covered the following: to complete a task on time; to keep a close eye on what is right or wrong when interacting with others; to meet people at the appointed time; to be punctual in following a schedule; to dress appropriately before entering a public place; to act effectively as a leader or to hold a key position in an organization; to accept the responsibility of providing meals, lodging, etc. for a large group of people; and to adhere to one's commitments (Sinha & Singh, 1976).

Emotional Stability

The components of 'emotional stability' dimension items have generally included the following: the ability to control one's emotions; the ability to respond comfortably to questions posed in a group or in an interview; the ability to put illnesses in their proper perspective and to interact confidently with others; freedom from common phobic reactions; the ability to face personal comments and criticisms realistically; freedom from doubts over one's actions or reactions; and the ability to have an objective evaluation of oneself.

Masculinity

'Masculinity' The test included items such as the ability to travel on foot, on a horse, on an elephant, or on a motorcycle; to perform arduous and risky labor; to accept a job in the police or the military; to accept and prefer a risky and arduous role in a play or a drama; to play outdoor games; to not be easily moved to tears; to follow or chase someone until they are caught; to take an interest in mountaineering (Sinha and Singh, 1976).

Friendliness

The 'friendliness' dimension included items such as developing deeper acquaintances with people, assisting others in times of need and displaying appropriate love and affection to juniors and strangers, and maintaining cordial relationships with those only superficially known, etc (Sinha & Singh, 1976).

Heterosexuality

The 'heterosexuality' dimension included items such as having a normal sex relationship with members of the opposite sex, not feeling shy in the presence of members of the opposite sex, and actively participating in a discussion over sex-related matters, telling decent jokes involving sex, and actively taking part in a cultural program alongside members of the opposite sex (Sinha & Singh, 1976).

Ego–Strength

The 'dimension of 'ego-strength' appeared to be significant because it covered such items as the ability to concentrate and attend to multiple activities at once; to face and meet life's challenges realistically; to bear frustrations and handle them effectively; to have feelings of personal adequacy and vitality; to be relatively free from nightmares; to have adequate control over impulses; to be tolerant of individual differences in ways of doing things; and to be tolerant of individual differences in ways of thinking (Sinha & Singh, 1976).

Curiosity

The 'curiosity' dimension of personality included items such as a tendency to explore the details of relatively new objects or things; to inquire about strangers and policemen upon their sudden arrival; to arrive at the place or destination ahead of schedule; to delve into the details of the construction of a complex machine or work of art; to try to learn the contents of others' conversations and their reactions to oneself; to inquire about people's opinions of oneself; and to inquire people regarding one's appearance (Sinha & Singh, 1976).

Dominance

The 'dominance' dimension of personality covered in its item such ideas as a tendency to dictate to others what they are required to do; to strongly oppose an opponent; to present arguments in favor of one's own point of view; to undertake the supervision of a difficult and complex task; to act well as the head of a committee or commission; to settle disputes between rivals; to impose one's will on others; and to act as the leader of one's group, etc (Sinha & Singh, 1976).

Hypothesis

Ho: Male and female students' scores on personality dimensions such as decisiveness, responsibility, emotional stability, masculinity, sociability, heterosexuality, ego-strength, curiosity, dominance, and assertiveness were hypothesized not to differ significantly.

Method of Study Sample

150 male and 100 female undergraduate students were randomly selected from Patna for the sample. (Bihar). All present males and females in the classroom were included in the sample. The assumption was made that psychometric characteristics of students in a classroom are typically distributed. The age range was 14 to 17, with males having a mean age of $M=15.24$, $SD=2.54$, and females having a mean age of $M=14.28$, $SD=2.68$.

Tests & Instruments

The following assessments and instruments were used to measure personality dimensions.(i) The

Differential Personality Scale (DPS, Sinha & Singh, 1976) was used to measure the respondents' various personality dimensions. (ii) A measurement instrument for assertiveness (Lakshmi, 1993) Personal Data Blank was designed to elicit biographical and other data.

(i) Differential Personality Scale (DPS)

In the present study, Sinha and Singh's (1976) scale was employed to measure various personality traits, including decisiveness, responsibility, emotional stability, masculinity, sociability, heterosexuality, ego-strength, curiosity, and dominance. Each trait's reliability on the scale was calculated separately. The test-retest reliability ranged from 0.73 to 0.86 for various characteristics, which was statistically significant at the 0.01 level of confidence. Both procedures, i.e., the odd-even and the first- versus second- half of the test, were used to calculate the split- half reliability of the traits. The split-half reliabilities ranged between 0.82 and 0.90, all of which were significant at the .001 level of confidence. The intercorrelations between the various dimensions were also computed. The low and statistically insignificant correlation values provide evidence for the characteristics' independence. Hussain adapted Bell's Adjustment Inventory for the purpose of calculating the validity of the scale. (1968). There was a significant correlation between a number of scale dimensions and various areas of the adjustment inventory.

Assertiveness Scale (A-S)

This scale was created and applied to a cohort that ranged in age from 13 to 18 years. 53 objects were initially constructed. Several components were taken from existing assertiveness inventories, specifically the Gambrill-Richey Assertion Inventory. (Rimm & Masters, 1979, p.67). Those modifications were made to accommodate Indian conditions without impairing or distorting the content or their meaning. These items were presented to three clinical psychologists who either taught or practiced clinical psychology. Keeping in mind the objective of the examination, they served as assessors in evaluating the utility and validity of the items. When necessary, items were modified to make them more comprehensible and understandable. Each item's response was acquired using a forced "No/Yes" format. This action was taken to eliminate the prospect of a response set. In addition, the extreme left response 'Yes' or 'No' disclosed assertive behavior, which facilitated the examination's examination. The higher the score, the more assertive the behavior. The gauge used in this study consisted of 41 items as opposed to 53. Temporal stability and internal consistency of the test ranged between 0.71 and 0.77 for both the test-retest method (the retest was administered after a 21-day interval) and split-half techniques.

Personal Data Blank

A personal data blank was developed for seeking the information regarding the background factors, such as, age, gender, economic status of the respondent.

Procedure

In a classroom setting, data were collected in groups of 8 to 10 individuals. The subjects were separated by a considerable distance and were not permitted to communicate. The Assertiveness Scale (A-S) was administered first, followed by the Dynamic Personality Scale (DPS) 15 minutes later. No time limit was imposed, and the subjects completed both exams in between one and one-half hours.

Results& Discussion

T-ratios were computed in order to test the hypothesis that male and female pupils' scores on personality dimensions would not differ significantly. Table 1 provides a summary of the statistical results.

Table 1 Comparison of Males and Females Scores on Personality Dimensions

Personality Dimensions	Groups	N	M	SD	t- ratio (df=248)
Decisiveness	Male	150	11.25	2.34	2.53*
	Female	100	10.54	2.12	
Responsibility	Male	150	10.77	1.92	1.17
	Female	100	10.49	1.66	
Emotional Stability	Male	150	11.82	2.51	0.31
	Female	100	11.93	2.43	
Masculinity	Male	150	9.93	2.05	1.40
	Female	100	10.35	2.54	
Friendliness	Male	150	13.94	2.40	4.86*
	Female	100	12.48	2.28	
Heterosexuality	Male	150	07.49	3.69	2.28*
	Female	100	08.45	2.86	
Ego-Strength	Male	150	11.13	4.86	0.22
	Female	100	11.44	3.03	
Curiosity	Male	150	11.33	2.81	1.05
	Female	100	10.96	2.73	

- $p < .05$, ** $p < .01$

An inspection of Table 1 shows that the mean scores of males and females in respect of such personality variables as *responsibility* ($t= 1.17, df= 248$); *emotional-stability* ($t= 0.31, df= 248$); *masculinity* ($t= 1.40, df= 248$); *ego- strength* ($t=0.22, df= 248$); *curiosity* ($t= 1.05, df= 248$) and *dominance* ($t= 1.46, df= 248$) were not significant even at .05 level of confidence. However, males and females differed significantly in respect of such

variables as *decisiveness* ($t=2.53, df=248$), *friendliness* ($t=4.86, df=248$) *heterosexuality* ($t=2.28, df=248$) and *assertiveness* ($t=9.14, df=248$). Thus, majority of the personality variables, males and females did not differ significantly.

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To Study the Impact of Strategic Human Resource Management on firm Performance in Emerging Market

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ABSTRACT

The goal of this article is to review the SHRM studies in order to define the traits, identify the contributing components, and apply the concept and methodology from the literature to the author's empirical research. The materials employed in this study a few papers on strategic human resource management. This paper concentrates on a systematic assessment of the literature on SHRM theories in an effort to continue the review on SHRM and provide some clarification on the field of SHRM studies. identifying distinctive qualities, examining the causes and effects of the idea, explains establishing a link between the variables and establishing the empirical references for the concept. the future, focusing in particular on the variables used in HR outcomes, HRM systems, and company strategy are all covered in the SHRM research and organizational effectiveness. Quantitative and qualitative approaches are both used can be used to carry out research and analysis.

Keywords: Strategic Human Resource Management, Firm Performance, Emerging Market

INTRODUCTION

Human resource profession is rapidly changing and expanding. Human resources is a function which is driven by business. As the world of work evolves new areas of expertise are required to drive business results within an organization. There is an oversupply of labor and under supply of right talent in the global market. Because social, technical, economic, and demographic dynamics will continue to change. Employers need a workforce that is adaptable and nimble. Effectiveness depends on having a thorough awareness of the company's strategic direction and having the power to change it and in order to succeed, you must recognize problems with human resource management and resolve them (Arthur, 1992) To be successful, organizations must closely align their HR Strategies and programs with environmental opportunities, business strategies and the organization's unique characteristics. Organizations with poorly defined strategies or a business strategy that is not explicitly in corporate human resources is likely to lose ground to its competitors. Similarly, an organization may have a well articulated HR Strategy yet fail if it's HR practice, policies do not help to implement HR strategy effectively. From this specific strategy for each functional area that is marketing, finance, production, operations and human resources need to be drawn in alignment with strategic business plans carry out the organizational plan.

The formulation of organizational strategy is integrated with the formulation of functional strategies. Over the years, the size of the HR department is increasing significantly, this increase may reflect the growth and complexity of Government Regulations as well as a greater awareness that HR issues are important to achieving business goals and objectives. With increase in global competition and companies moving beyond geographic boundaries the inclusion of global employees has led to business competition shifts from efficiency

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to innovation and from enlargement of scale to creation of value. In light of global competition, It is important to integrate the use of personalized practices into the strategic planning process. This will help organizations better achieve their goals and objectives. Companies must use the SHRM method to develop business leaders and innovators in order to manage future operations efficiently. It is critical to determine the effects SHRM has on corporate performance. To put it another way, HRM is concerned with how the company's policies on people may affect the organization's future and its ability to carry out its goal (Barney, 1991). There are numerous changes taking place quickly that have an impact on HR in a wide variety of challenges due to the fluctuating economy as well as local and worldwide improvements.

LITERATURE REVIEW

(Snell, 1997)They had the goal to present the literature review of SHRM research by delineating definitions, locating variables, and establishing their connections to SHRM. The review's conclusion demonstrates that the company strategy, human resource management system, and financial factors employed in diverse research are the conceptualization and definition of SHRM qualities, as well as the antecedents, outcomes, linkages, and empirical references are among the findings of the concept analysis organizational performance and the results of human resources. (Snook, 1989)Carried out Practices in human resource management (HRM) have been related to business value, survivability, financial returns, and turnover. This article serves two purposes. The fit of HRM practices into a cohesive system is the primary emphasis of his initial survey of the significant theoretical and empirical work done to date in SHRM. He then presents a number of problems that are crucial to empirical SHRM research and on which scholars need to pay more attention. There is mounting evidence that performance and productivity depend on effective management of human resources. However, the rising interest in using human resources as a strategic lever that may significantly affect a company's bottom line economically seeks to shift the emphasis more toward value creation. This new viewpoint, which is covered through special issues and forums in this journal and others, contends that HR (both the function and the system) directly aids in the accomplishment of the company's operational and strategic goals. Since there is limited agreement on how to realise this potential, current research reveals that HR systems have significant economic potential.

(Becker, 1996)This article provides a comprehensive overview of the field of strategic human resource management (SHRM) by telling its history, describing its present state, and speculating on its potential future developments. We discuss some of the earlier stages in the evolution of the field, including the eras of conceptual models, empirical studies, and empirical criticisms. Next, the discussion moves to the current state of theory, the relationship between the HR system and performance, multilevel analyses, fit and flexibility, and international HR research. Finally, we recommend that future research be more thorough, multilevel, global, human capital-focused, integrated with strategy, and integrated with practice. We expect and hope that these tendencies will continue over the next 40 years. The management of people as both strategic resources and human beings deserving of respect and dignity becomes increasingly crucial as people's contributions to organizational success grow more and more vital. (Sparrow, 2013)This literature review, the initial product of the study, charts the development of the idea, its significance, and its practical implementation over that span of time using academic and "grey" research and sources. A significant amount of research has been done to show that effective SHRM may be connected to improved organizational performance. From the beginning, there has been a strong focus in the literature on organization performance and the links between HR strategy and performance outcomes. The most significant finding from this assessment of the John Storey, Patrick M. Wright, and Dave Ulrich (2019) In most cases, an HR strategy needs to demonstrate how it advances the larger organisational objective. This does not necessarily mean blindly following the lead of other directors in operations and marketing; it is possible that a resource-based approach necessitates a unique HR strategy. Both

an emergent and a planned approach can be used. In either case, it can be reviewed and evaluated in terms of its effectiveness and suitability for the circumstances of the labour and product markets. (Phanwattana, 2017) This essay seeks to assess the extent to which strategic thinking is used in Jordan's banking industry. Additionally, the extent of strategic HRM application in the Jordanian banking industry will be determined. Additionally, the effects of strategic thinking will be investigated in relation to growth and training, remuneration, and performance evaluation. Additionally, this study will look into how demographic factors affect strategic HRM and thinking. (Wright, 2012)

The goals of this study are to examine the influence of human capital as a moderator and the effects of strategic thinking and human capital on strategic HRM. literature may be the requirement for a more action- and evidence-focused, multi-stakeholder perspective on Strategic HRM. The evidence does not support the claim that the strategic HRM concept is a "unattainable ideal" that is irrelevant and hard to apply effectively in modern settings, which is another key finding.

OBJECTIVES

- To demonstrate the logical and strategic approaches that have applied for the firm's management,
- To Study about the issues and challenges of SHRM which affects the firm's performance.
- To determine the solutions to overcome the issues and challenges for the firm's growth.

Strategic Human Resource Management

The term Human Resource Management (HRM) is now frequently used to refer to the theories and procedures pertaining to how individuals are handled at work. According to this strategy, the foundation of SHRM is essentially the idea that an organization's human resource management (HRM) practices must advance corporate objectives. the factors that influence decisions regarding human resource practices, the make-up of the human capital resource pool (skills and abilities), the definition of necessary human resource behaviours, and the success of these decisions in light of various business strategies and/or competitive situations. Although some observers would argue that HRM itself is inherently strategic in nature, the term "Strategic Human Resource Management" (SHRM) is used to emphasise the strategic character of a particular approach to talent and organization management. As a result, the phrases HRM and SHRM are frequently used synonymously. An approach that scans and considers pertinent information about the environment and about changes within it; the development of policies that seek to align HR practises to the needs of the business, often expressed as mission, vision, strategy, or goals; and the development of HR policies that concern big issues that go beyond operational detail are typical components of a strategic approach to human resources. As a result, judgments on the top priorities for goal-setting, performance management, reward, training and development, promotion, and exit should be consistent with the top priorities for these areas as well.

Firm's Performance

The effectiveness of a firm is measured at several levels of hierarchy and can be evaluated for an individual, a group, or the entire firm. When compared to the expected outputs, a firm's actual output or results are considered to be performing well (or goals and objectives). The accomplishment of a firm's goals at the conclusion of a programme or project is also considered a firm's performance. The effectiveness of an organised collection of people working toward a specific goal is known as a firm's performance.

- **Financial results**

Measuring a company's activities and policies in terms of money is known as financial performance. To put it another way, in terms of the money's value in dollars, pounds, euros, etc. By examining the return on assets and return on investment of a company, we may determine how well it is performing financially. By calculating value added, we may also evaluate its financial performance.

- **Market activity**

Market performance gauges a company's or a product's success in the market. To put it another way, whether a product's market share has increased, whether product improvements have increased sales, etc. When discussing a specific product rather than the entire corporation, we use the phrase "product market performance."

- **Value to shareholders**

The performance of a company's shareholder value is measured by how much its shareholders are rewarded. In fact, many claim that it is the best way to gauge organizational success. The terms shareholder value and shareholder value maximization are synonymous. The market capitalization of a business may also be referred to as shareholder value.

Impact of Strategic Human Resource Management on Firm Performance

It is evident that the majority of research in the field of human resource management has concentrated on the relationship between HRM practices (also known as high-performance work systems, high-commitment work systems, performance oriented work systems, etc.) and organisational performance. Although the nature of the beneficial association appears to be generally uncontroversial, some questions have not yet been resolved by current research.

First, as was already mentioned, a lot of discussion has centred on figuring out the mediating mechanisms by which HRM practices affect company performance. Since these methods have an effect on employees, it stands to reason that they must alter those people in some way that will ultimately lead to improved business performance. First, the procedures may have an effect on workers' knowledge, abilities, and skills (also referred to as human capital).

The specific mediating mechanisms that exist between HRM practices and business performance have undoubtedly been the subject of a great deal of recent research. Second, despite the fact that the link between HRM practices and performance is clearly established, there is little to no agreement on the specific HRM practices that should be included in the performance-related HRM practices. There was not a single practice that appeared in all of the research in the papers in their special issue on HR and performance.

Researchers disagree on not only the specific procedures, but also the scale (Likert, %, yes/no, etc.), scope (all employees or a specific group of employees), and source (HR managers, employees, etc.) of these HR practise measures, according to Langevin-Heavey et al. (2013). The problem of conceptualising a high-performance work system broadly is related to the difficulty of finding the agreed-upon set of HRM practises that comprise a "high-performance work system." HR systems were initially conceptualised by Arthur (1994) as either control- or commitment-oriented. Employee skills, organisational structures, and employee motivation were two aspects that were empirically demonstrated in Huselid's initial 1995 study. However, as time went on, more scholars started to view HRM practices systems as being made up of three subsystems, with practices concentrating on opportunity, skill, and motivation enhancement (Appelbaum et al. 2001).

Recent study, however, has gone back to the roots of SHRM research and looks at HRM practices in terms of commitment and control.

Instead of viewing the HR system as a continuum from control to commitment, this updated conceptualization believes that these two components may exist independently. Su and Wright (2011) included control-oriented factors to their assessment of HRM practices, such as a focus on work norms, sanctions for breaking them, and close supervision. They discovered that, in a Chinese setting, these items provided an explanation for the performance variance that went beyond conventional "commitment" type behaviours.

In addition to certain methodological criticisms of research on the relationship between HR practices and performance, some conceptual criticisms have surfaced in recent years.

Additionally, as was already said, several scholars have argued that organisations would gain more from implementing more HRM practices rather than less on the basis of that consistent conclusion.

Finally, several scholars have claimed that as a result of this, corporations are forced to compete by improving the management of their staff through efficient HRM techniques. For instance, if HRM practices have such a significant impact on performance, why aren't they utilised to their fullest potential by all businesses? Furthermore, wouldn't the benefits of using them be lost if all businesses utilize them to their full potential?

He then demonstrates, using a marginalist economic perspective, how organisations probably face an ideal level of HRM practices that optimises the benefit from putting them into place.

In conclusion, even if the link between HRM practices and performance is undeniable, there is still disagreement on the definition of HRM practices and how to conceptualise them.

logical and strategic approaches in firm's management

In order to implement and change strategies, David Brodvin and L.J. Bourgeois has identified five different fundamental strategies:

The commander approach: The strategic leader put all of his effort into developing the plan while using exact logic and analysis. The CEO either created the strategy themselves or oversaw a group of planners who were tasked with selecting the best course of action for the company. The disadvantage of this strategy was that it would lower employee motivation if the leader instilled the notion that only top-down strategies were legitimate

The organizational change approach: "I have a strategy; how do I get my organisation to implement it?" was the question that the organisational change approach sought to answer.

If the strategy was to be implemented successfully, the strategic leader again decided on substantial adjustments and took into account the appropriate in structure, personnel, information, and reward system.

The fundamental methods for bringing about change in an organisation include: Communicating the desired new behaviours through demonstrations rather than words; concentrating early efforts on the needs that are already viewed as significant by the majority of the organisation; and having solutions presented by individuals with a high level of credibility within the organisation.

This method's disadvantage was that it wasn't appropriate for quick adjustments.

The collaborative approach : This strategy answered the question, "How can I get my top management team to help, develop, and commit to excellent set of goals and strategies?" by extending strategic decision-making to the team at the top of the firm.

In this strategy, the leader uses "brainstorming" approaches and group dynamics to engage managers with divergent viewpoints in the process of strategic planning.

The main criticism of the collaborative approach is that, from an organizational perspective, it doesn't genuinely involve collective decision-making because upper level managers frequently maintain centralized authority. This strategy fails to utilise the whole human potential across the entire firm and effectively maintains the fictitious division between intellectuals and doers.

The cultural approach: As a response to the strategic management challenge, "How can I get my entire organisation committed to our goals and strategies?" this strategy extended the collaborative approach to lower levels in the organisation.

The organisational objective and purpose were clearly defined and communicated, and employees were given freedom to create their own work activities in line with this goal by the strategic leader.

This technique entailed using the idea of "third-order control" to implement a plan. Steer supervision is first-order control; second-order control entails employing organisational structure, rules, and procedures to direct behaviour. Third-order control is more advantageous and might be more potent. It involved changing behaviour by reshaping the standards, ideals, symbols, and beliefs that managers and staff employed in their day-to-day operations.

The creative approach: The topic "How can I encourage my managers to design, champion, and implement excellent strategies?" was addressed by this approach. The strategic leader has no interest in doing long-term planning processes by themselves or even with others. He urged subordinates to come up with, support, and carry out sound plans on their own.

Issues and challenges of SHRM which affects the firm's performance

Management of human resources is essential to a company's long-term success. While this has always been the case, the relative importance of HR has further increased in the fast-changing, highly complicated, and uncertain corporate environment of today. Currently, firms are facing the various issues and challenges which are affecting the firm's performance ,are following:

- a. Leadership development
- b. Recruitment, retention and motivation
- c. Management culture
- d. Workforce diversity and demographic changes
- e. Globalization and it's implications
- f. Technology
- g. Changing skill requirements
- h. Technical talent
- i. HR effectiveness measurement
- j. Relationship with employees
- k. Continuous improvement programs

- l. Re-engineering work processes for improved productivity
- m. Employee involvement
- n. Data driven HR practises
- o. Contract employee
- p. Mass customization
- q. Decentralized work sites
- r. Health
- s. Family work life balance
- t. Budgeting
- u. Corporate downsizing
- v. Compliance with laws
- w. Accessibility

It can be challenging to fully integrate business and HR initiatives. That is partially due to the fact that the company's HR manager was not previously regarded as a member of the general management team. Additionally, the personnel guidance did not fall under strategic planning. However, HR is essential in today's modern business.

Solutions To Overcome the Issues And Challenges For The Firm's Growth

The way we conduct business is changing as well because the globe is undergoing considerable change on a daily basis. For a business to succeed over the long term, it is essential to be able to adapt to those changes, no matter how unsettling or challenging they may be. Above all, identifying and comprehending the business landscape of the future is the primary problem HR practitioners confront. Human Resources will strengthen an organization's most important asset: its people, as industries and technologies advance, new generations enter the workforce, competition intensifies due to globalization, and the nature of work changes in response to environmental factors.

Flexible working: According to one of the Sykee studies, "82 percent of employees today prefer to work from home." Therefore, the challenge for HR is actually that flexible working comes along with the duty to make an inclusive and engaging workspace for the staff, which necessitates ongoing efforts. As such, as HR, we must ensure that we make ongoing efforts to find new and different ways to engage our staff so that they do not feel alienated from the rest of the company. We can try of these ways to engage our staff:

Increase employee recognition so they feel appreciated and remain with the company.

Encourage our managers to have even more personal conversations with their team members; it shouldn't be the situation that they are only talking about work with them and have no other personal connections.

Our employees should be given opportunities for skill development and progress so they may see their futures with the company and remain involved with it.

Talent attraction and retention : 88 percent of companies declared their plan to hire new talent in the current quarter of January to March 2022, according to an Employment output report and teamly services.

One of the difficulties that many companies have is keeping their workers loyal to the company, so as HR professionals, it is our responsibility to develop innovative retention techniques. We can try a few of these strategies to draw talent to our business:

Increase the size of our talent pool by using all available hiring channels, such as campus hiring, employee referrals, job portals, consultants, and employee referrals. This will increase the likelihood that talented individuals will choose to work for our company.

Active hiring requires constant outreach to prospects, which takes a lot of time. However, if we work to position our company as an Employer of Choice, candidates will come to us on their own.

Employees wellbeing: The office environment was now more welcoming and stress-relieving; those coffee shop and water cooler talks were undoubtedly a way to let stress out that is not possible when working from home. Therefore, working alone is causing mental stress in the employees, which is affecting their daily performance. As human resources professionals, we must ensure that we bring this issue to the management's attention and ask for funding to work toward a solution. We can find these ways to improve employee well-being in our organisation:

Every employee wants their companies to provide health insurance so they may feel secure, and if at all possible, firms should cover the family members of employees as well.

One of the effects of working from home is mental stress, therefore as human resources professionals, we must assist our employees in minimizing that stress by planning motivating speeches and mental wellness sessions that will strengthen their commitment to the company.

Upskilling : The Learning and Development Function course should be combined with the Business Course, thus we should undertake a Training Need Identification Process to identify the employees who require various types of training. Additionally, we must design clear, shrewd, and simple training and learning programmes for our staff. One of the main objectives of HR is to basically discover new ways to upskill and upsell our people so that they can match the requirements of business.

New employees onboarding: It is the HR department's duty to ensure that new hires adjust to the workplace quickly and effectively so that they can start contributing to the business as soon as possible. However, given the work-from-home culture and the dispersed locations of the team members, it can be challenging to convey a sense of warmth and welcome to each new hire. As a result, we must make sure that our virtual onboarding process is set up so that every new hire experiences this warm welcome.

The pre-boarding procedure
Welcome new employees!
Role-specific instruction
Assist new hires in adjusting to their new roles

CONCLUSION AND DISCUSSION:

The field's theoretical and empirical development has increased the level of academic rigour and the calibre of findings that can be made but a lot is still uncertain. This evaluation is intended to aid researchers to comprehend the fundamental conceptual underpinnings, empirical findings, methodological issues, and contemporary developments in strategic HRM analysis. We also anticipate that this essay will be enlightening recommendations for next strategic HRM research. In the twenty-first century, strategic management of human capital is expected to be a distinguishing characteristic of success, necessitating a greater emphasis on the ideologies, regulations, and procedures used to maximise HRs. Given that the field continues to pose and

address research problems of value and strategic significance, strategic HRM is in a good position to contribute to this dialogue. SHRM is a theoretical and aspirational mindset that only materialises into actions and reactions that can be characterised as strategic, such as broad or focused HR strategies or strategic behaviour on the part of HR professionals collaborating with line managers. The modern justification for SHRM is that it serves as the foundation for creating and implementing people management strategies that allow the organisation to satisfy the needs of all of its stakeholders and take into account the evolving environment in which the business operates; and as a result, HR practises drive strategy, which in turn promotes workplace performance

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CAPACITY DEVELOPMENT

"If I have the belief that I can do it, I shall surely acquire the capacity to do it even if I may not have it in the beginning" **By Mahatma Gandhi**

Maj Vivek

Abstract

The Vision of 'Make in India' is to achieve self-reliance through building indigenous capabilities for manufacturing and maintenance of defence equipment in a cost effective manner. Industries are partners of the Armed Forces, stakeholders in meeting India's security threats. The industry, being a vital stakeholder as well as a key enabler in this national security paradigm needs to play a greater role in capacity building for meeting the challenges to our security. Hence, there is a need for indigenously developed and reliably produced weapons, ammunition and equipment 'Cost effective, innovative solutions'.

Whereas there is a need for regular evaluation of the effectiveness of policies and procedures at the level of the Ministry of Defence and the government, there is so much more that can be done at the level of the Services. The Army, being the largest service and fielding the largest array of equipment, needs to improve its own processes by carrying out an internal analysis and taking effective steps to speed up the procurement processes.

The growing domestic market offers opportunities both to foreign and Indian players with a shift from Buyer-Seller relationship to one of partnership to jointly develop a product. The impact of the new initiatives, prioritization of acquisition categories and the production policy will enable Indian industries to acquire technology, foster joint venture and collaboration with foreign OEMs and manufacture the product in India. Such an initiatives can indeed create economic value, by adoption of a proper approach and selecting partners with right capabilities.

Key words: Capacity Development, Defence, Retention

INTERNAL CHALLENGES IN CAPABILITY BUILDING AND RETENTION

It is no secret that the million plus strong Army, facing two known adversaries who pose serious security challenges individually and potentially in tandem, has been facing numerous hindrances, in its capability building to meet the prevailing security threats. The common force management challenges facing the three services involves following:

- (a) Glaring deficiencies in infrastructure, especially along the Northern border regions,
- (b) Reorientation of training to achieve realism and seamless tri-service synergy.
- (c) The shortfall in planned force structure due to delays in the induction of required weapon systems and equipment,
- (d) Shortage of officers, efficient use of available human resource.
- (e) Slow pace of modernisation through upgradation of existing equipment.

Some of these challenges can only be met through all-of-government initiatives but others can be addressed at the level of the Services. Being comparatively smaller in number and with smaller ranges of major equipment, the Air Force and Navy today are better structured and better geared to achieve the targets of force development in the medium to long term. The Army, on the other hand, has been facing major challenges even in capability retention due to chronic shortage of very basic requirement such as ammunition and fuses. Military capability, particularly the army's capability, is seriously affected by delays in procurement, inadequate attention to the serviceability state of the equipment and organizational constraints.

Understanding Military Capability. Perhaps there is inadequate understanding among our planners about a viable force structure. Various elements have been highlighted to better understand military capability:

(a) **Equipment Serviceability.** The first element of a viable force is that whether the weapon systems and equipment currently held is adequate in terms of quantity, is fully serviceable, and is backed by the adequate supply of expendables and essentials to sustain capability. Whereas delay in induction of new frontline equipment is often highlighted, the serviceability of existing equipment is not being paid adequate attention. A near 100 per cent equipment serviceability will provide confidence to the users; therefore greater attention needs to be paid to this aspect. Prudent short term planning and timely action by stakeholders can easily take care of this most important aspect.

(b) **Periodic Upgradation.** The second element involves periodical upgradation of existing equipment to handle the current challenges and wholesomely meeting the requirement of any planned accretion of forces. This will ensure that what we hold is current and matches what our adversaries possess. This element can effectively be taken care of through prudent medium term planning.

(c) **Futuristic Outlook.** The third but equally important element is the continuous modernization of the force by gradual induction of latest equipment for giving a futuristic outlook to the forces. At least 25 per cent of our major weapon systems and equipment needs to be the best in the class available anywhere. This is a function of long term planning and drawing up a clear road map for implementation. In actual sense, none of the three processes is isolated and should run concurrently.

Challenges. As India aspires for great power status and a major role in global affairs, military capability needs greater focus than what it has been receiving in the years since independence. Procurement challenges affecting defence preparedness can be discussed under two broad categories; intrinsic and organisational.

(a) **Intrinsic challenges.** Intrinsic challenges comprise the foundational issues which are beyond the Government and organizational control and have become deep rooted due to half-hearted approach and years of indifference in addressing the fundamental aspects having a bearing on self-sufficiency.

(b) **Organizational challenges.** Organizational challenges are mostly those which are well known but there is little or inadequate attempt to address them entirely due to unrelated considerations. There are a large number of issues, if handled imaginatively, can significantly bring down the procurement delays and enhance self-reliance, thereby ensuring improved capacity building and retention. Organisational challenges in turn fall under two categories, viz, higher level decision making and the improvement of processes in procurement Higher Level Decision Making. A few interesting questions come to mind while analysing the higher level decision making on issues affecting India's defence.

(i) To begin with, Is the nation and the government fully aware of the state of defence preparedness and the shortcomings thereof? The answer is "Yes" and a number of studies ordered by the government from time to time like the Kargil Committee Report, the Kelkar and Rama Rao Committee Reports as well as the recent Naresh Chandra Task Force and the Government Task Force Report on Modernisation and Self Reliance had a purpose; to provide an insight into the issues affecting National Security and recommend measures for overcoming the challenges in concerned areas.

(ii) The second question that follows is, whether the findings and recommendations contained in these reports have been implemented? It can be said with certainty that a large number of the recommendations remain un-implemented or only partly implemented.

Adequacy and Training of Human Resource. Another area which needs clear emphasis is the adequacy and training of the human resource involved in procurement. Most of the officers involved in the process, civilian or military, have no prior experience or formal training to undertake or discharge the major responsibility entrusted to them. On-the-job training is inadequate to understand the complexities of defence trade and the internal policies. Lack of basic tools such as a well-equipped reference library denies officers the knowledge essential for conducting their business. Possibly, as an immediate measure, the government could look into organizing short capsules (10 to 30 days) and medium term courses (2 to 3 months duration) to facilitate understanding of the acquisition processes. The training can be appropriately reoriented through creation of a full-fledged Defence Acquisition Wing as part of some training institute. This wing will cater for training, research and evolving best practices for acquisition of defence equipment.

Involvement of a Large Number of Agencies. The involvement of a large number of agencies including the Cabinet Committee on Security, Defence Acquisition Council, Defence Procurement Board, Department of Defence Production, Ministry of Defence (MoD) Officials in Finance and Acquisition Wings, Headquarters Integrated Defence Staff and the three services, Ordnance Factory Board, DPSUs, DRDO, Directorate General Quality Assurance (DGQA) and many others makes coordination a very challenging task. This may be unavoidable but, as reported in the press from time to time, the questioning of the necessity of an acquisition by the Ministry of Finance after it has been approved by the Raksha Mantri is beyond comprehension. This needs to be streamlined with minimum involvement of large number of agencies and thus make it less time consuming.

The Blame Game and Responsibility Issues. While the MoD is often blamed for the state of affairs including marathon delays in projects, it should not be forgotten that the Army too has as much a role in the process. Without apportioning blame, it may be sufficient to state that if there was fair scrutiny then the Army would find enough reasons to streamline its own process and undertake organisational changes. A large number of procurements do not fructify due to procedural or technical flaws in the project processes directly handled by the Army. Even the surrender of funds, a recurring phenomenon, occurs when the Army is not able to spend the allotted funds in time. Last minute allotment/release of additional funds further aggravates the issue. Deep introspection would help in understanding the shortcomings better. The MoD on the other hand needs to expedite decision making and do away with its overcautious approach in handling procurement cases.

PRESENT STATE OF CAPACITY DEVELOPMENT FOR DEFENCE FORCES

Present state of capacity development of all Tri-services has been enumerated in succeeding paragraphs.

Indian Army. Various attributes towards capacity building by army has been mentioned below:

- (a) The capacity & capability development plans of Indian Army remain dynamic/ flexible and are based upon the appreciated immediate & emerging national security challenges and in support of our operational response strategies. Accordingly, Indian Army is ensuring preparation & implementation of prioritized acquisition plans to maximize capacity & capability development, in consonance with the evolving threat perception.
- (b) **Defence Planning Committee (DPC).** The DPC under the chairmanship of National Security Advisor has been constituted in 2018 for facilitating Integrated Planning at the apex level and its focused execution to promote Strategic Planning, Capability Development, Defense Diplomacy and Indigenization in Defense Sector.

(c) **Appointment of CDS.** The appointment of the Chief of Defense Staff (CDS) and the creation of Department of Military Affairs (DMA), has resulted in far greater synergy with Ministry of Defense as also given the twin objectives of 'Integration/Jointness' and 'Resource Optimization' within the Services a much needed flip.

(d) **Long Term Modernization Planning.** Factoring the emerging/ futuristic security challenges, and in consonance with the 'CCS Mandate to CDS' for implementing the Integrated Capability Development Plan (ICDP), an Integrated Capability Development System (ICADS) has been initiated vide DAP 2020. The ICADS process will maximize resource optimization and infuse much needed jointness/integration in tri-services planning/ procurement process.

(e) **Army Design Bureau (ADB).** The ADB, since its raising in 2017, has made major forays in supporting R&D/ harnessing technology with an extensive outreach to industry, academia and ushering a collaborative engagement with the technology providers, manufacturers and users.

(f) **Reorganization of IHQ of MoD (Army).** The recent Reorganization of the Army HQ, creating a Deputy Chief for looking after both the Capability Development & Sustenance needs of the Indian Army, further empowers Indian Army to pursue a focused approach towards achieving the mandate of 'Atmanirbhar Bharat'.

(g) **Raising of Niche Capability Structures.** To address critical capability voids in the domains of space, Cyber and Special Forces Capabilities, Niche Capability Structures in terms of Defense Space Agency, Defense Cyber Agency & Armed Forces Special Operations Division have been raised in 2018-19.

(h) **Emergency Procurement Powers.** Emergency procurement Powers have been delegated to the Service Headquarters by the Government to address the emergent operational needs for effectively responding to the operational situation in Eastern Ladakh/ Northern Borders.

(j) **Defence Acquisition Procedure (DAP) 2020.** The new DAP 2020 has been promulgated in October 2020 as an enabling document that lays emphasis on indigenous production and self-reliance under the 'Atmanirbhar Bharat' initiative and further streamlines capital procurements for the Army.

(k) **Committee for Technical Modernization of Armed Forces.** To address long term technological capability needs of the Armed Forces, the Government has constituted a high level Committee, in October 2021, for recommending a Roadmap to achieve self-reliance and Technical Modernization of the Armed Forces. The Roadmap prepared by the committee is likely to facilitate the Armed Forces in retaining continued focus on acquiring niche/emerging/disruptive capabilities & technologies for addressing the evolving threats & challenges that may manifest in the foreseeable future.

Indian Navy. The modernization of Indian Navy is an ongoing process and aims to strengthen India's maritime security. The capability development/ modernization of the Indian Navy is being undertaken in accordance with the Long Term Integrated Perspective Plan (LTIPP). The ongoing modernization aims to create capabilities for accomplishing a range of missions across the entire spectrum of threats and challenges addressing rapidly shifting global and regional balances of power. Over 100 contracts have been concluded since 1st April, 2018 towards modernization of the Indian Navy. Most recent being induction of indigenously made Aircraft carrier INS Vikrant and nuclear powered submarines thus shifting from diesel/electric powered submarines.

Indian Air Force. To meet emerging challenges, the Indian Air Force (IAF) is progressing well on a capability driven modernization plan in consonance with the roadmap laid down in the LTIPP. This is being achieved by the induction of the new platforms and weapon systems along with the continuous upgradation of the existing equipment.

- (a) **Fighter Jets.** In the fighter fleet, Rafale induction is under progress. LCA Mk1A has been contracted. Deliveries will commence from Jan 2024. The MiG-29, Jaguar, Mirage-2000 and Mi-17 helicopters are being upgraded in a phased manner. Lastly and more importantly, the IAF is swiftly progressing towards complete Network Centric Operations and aims to improve ISR capability, Command and Control structures to meet the future challenges.
- (b) **Helicopters.** The major induction in the transport feet will be the C-295 aircraft. Chinook and Apache helicopters have also been inducted.
- (c) **Air Defense Capability.** There is significant progress in the Air Defense capabilities with the induction of new Radars and SAGW systems. The induction of S-400, MRSAM, VSHORADS, and CIWS will enable a layered Air Defense capability. Work has also commenced on the development of AEW&CMk II by CABS, DRDO.
- (d) Consequent to shifting regional and global balance of power, IAF is continuously working towards enhancing its capacity to meet the emerging challenges in all the war fighting domains. A substantial offensive and defensive capability and ability to swiftly deploy/swing the forces to desired area of operation demonstrates its capability to deter any adversary.
- (e) **Indigenization.** IAF is sharpening its offensive edge through indigenization of aircraft, weapons and sensors (Light Combat Aircraft, Light Combat Helicopter, Brahmos, Long Range Surface to Air Missile), procurement of next generation assets such as Rafale and integration of weapons on existing and new platforms. IAF is also enhancing interactions in the form of exercises and joint training with friendly foreign countries to enhance cooperation and share best practices.
- (e) **Drone Technology.** IAF is aware of changing character of warfare and emerging technological trends like drone technologies including anti drone and swarm drones, Manned-Unmanned Teaming (MUM-T) concepts utilizing UCAV and niche technologies. The role of Artificial Intelligence (AI) in planning and mission execution, quantum technology and advanced weapons including hypersonic weapon are key areas of further exploration and inclusion into IAF operational planning.

CAPABILITY BASED FORCE STRUCTURES FOR INDIA

Revolution in Military Affairs. Force Structuring can be done in two ways: Threat based or Capability based. Traditionally, Indian Force structures have generally been premised upon a threat-based analysis in the post-independence period. Indian Military history, however, can be studied in terms of the local Revolutions in Military Affairs (RMAs) that ushered in very major changes in the socio-political realm. India needs a further enhancement of RMA. A nation must empower itself economically if it wishes to generate and sustain an RMA. A huge Army needs the resources of a massive state. Post independence, India has unconsciously followed this Kautilyan Paradigm. Steps that can be taken for upgradation of RMA are as below:

- (a) By major accretions in Air Power and transparency.
- (b) By developing "Over the Hump" Air Assault capabilities that can be used across the Himalayas, in J&K and also for regional power projection.
- (c) By using its Navy to project power along the Pakistani coastline to support Air-land offensives. This calls for the development of an operational manoeuvre capability from the Sea. This translates into a viable Marine Capability of one to two divisions that is based on Amphibious Tanks/ICVs that can rapidly project power ashore in concert with major land offensives in the Desert Sector. To affect an RMA India needs to generate Over the Horizon (OTH) Beach assault capabilities using helicopters and Hover crafts (Air Cushion Vehicles). India must exploit the Sea Flank in any future conflict with Pakistan. A Turning manoeuvre from the Sea could unhinge Pakistan's defences and lead to victory. Further details of steps for various has been covered in subsequent paragraphs.

Airforce.

- (a) **Fourth Generation Fighter Jets.** India has inducted sophisticated fourth generation fighters like the Mirage-2000, MIG-29 and the SU-30. Moreover 4.5th generation fighter jet Rafaele is already under induction. It has just introduced the Israeli AWACs (mounted on a high endurance IL-76 platform). India has a definite transparency edge but not of a "revolution" standard. The prime focus area therefore has to be on an accretion of Airpower. India needs a 60 Squadron Air Force with a good mix of 4 and 5. Generation fighters that can deliver 60-70 percent PGM type ordinance instead of gravity bombs from the mid and high altitudes. The IAF will have to go in for two classes of aircraft .4th/5th Generation (SU- 30, Mirage 2000/Rafaele or US/European equivalents, the Mig-29/35 and Fifth Generation fighters being jointly developed with Russia) will be needed for the Air superiority and MRCA role.
- (b) **Ground Attack Aircraft.** There is requirement of A-10 equivalent dedicated Ground attack aircraft. Trainer Aircraft like the Hawk can double for this role immediately and India could try and produce its own variants in large numbers to affect the surface battles in a meaningful way. The attack will have to be from beyond the shoulder fired SAM envelope. There is a need for a custom built Ground- Attack aircraft that is slower and relies more on stealth and Titanium armour protection and suppression of enemy air defences to carry out attacks (if needed from the low level also). In the operations in Chechnya, the Russians had also felt the need for such a Titanium hulled aircraft for close air support. Future LCA versions should also aim to address this requirement. Once a favourable air situation has been gained, the simpler dedicated ground attack aircraft must be used to exploit it with GPS guidance based ordinance.
- (c) **Surveillance.** The Satellites, AWACs, Aerostats and UAVs would generate the transparency revolution. The Fourth/Fifth Generation fleet of MRCAs/ Air Superiority fighters would exploit it and the dedicated Ground Attack Aircraft would convert it to victory in surface combat by massing effects.
- (d) **Private Sector.** India has to think beyond Pakistan. The main air threat now is from China. China purchased Russian Mig-29s and SU-27s. It reverse engineered them and is now mass producing the JF-10 and J-11 and working feverishly to develop its own Fifth Generation fighter. The quality of this indigenous fighter fleet is yet to be tested in combat. China is encountering problems in ingesting Russian technology. The break in Sino-Soviet cooperation after the Korean War had added to

this problem. To that extent India has absorbed Soviet/Russian military technology in a much better way. While China after Tiananmen had to suffer military technology sanctions, India has been better placed to, buy Israeli, French, British and American systems in addition to the bulk purchases of Russian military hardware. Indians have been able to innovate and mate Western software with Russian hardware/platforms. India, however, has failed so far to make a breakthrough in indigenous design and development of its own aircraft. The HF-24 project was aborted for lack of a suitable engine. The LCA is encountering similar problems and time and cost overruns. The GE-404 engines are now being purchased to power the LCA even as we struggle with the Kaveri engines. However there is a strong need to persist. India will have to indigenise its capital arms manufacture. The only answer is to tap the vibrant and innovative Private Sector. Only then will India be able to nurture talent and attract it to these projects with suitable remunerations. The Soviets had many competing design Bureaus. India must similarly encourage competition between its various Public Sector Defense Enterprises as also with and amongst the Private sector to ensure the value engineering of the product. To get our Private Sector seriously involved in creating a worthwhile Military

(e) **Industrial Base.** In defence, the FDI cap has been raised from 26% to upto 75% or beyond through government route. With the USA, the purchase process has revealed a lot of hurdles in the transfer of technology. India was never required to submit itself to so many stifling agreements while purchasing Russian, French or Israeli weaponry. It may be better to seek US assistance to build up a military

Indian Army.

(a) **Night Fighting Capability.** Indian Army needs to invest heavily in night fighting capabilities to increase the tempo and pace of its operations. The entire Tank fleet and Infantry Formations must overcome their night blindness (Active Systems) at a pace which can usher in a revolution in surface combat in South Asia. The investments will be limited but provide the highest payoffs.

(b) **Holding Ground.** Holding ground by firepower instead of manpower In 1956 the Pak Army had transited to holding ground by firepower instead of manpower. As a result they hold the same length of ground with half the troops that India deploys. The American gifted Recce and Support Battalions enabled Pakistan to hold ground with firepower and release matching force levels for offensive operations. It is an amazing fact that the Indian Army has still not redressed this ground holding differential that enables an Army half its size to release a matching number of formations for offensive tasks. India's Pivot Corps must now hold Ground with mobile Fire power based upon Fast Attack/Light Strike Vehicles and thereby release much more force levels for offensive tasks.

(c) **Artillery.** The Artillery Calibre must be standardized on the 155mm caliber at the earliest so that effects can be massed. After the Bofors crisis, the process of procurement/induction of any new Medium caliber Artillery systems got delayed substantially. It had purchased 400 Bofor howitzers. Sweden was thereafter supposed to transfer the technology to build another 1000 such guns in India. This never happened as the Bofors scandal broke out. It had to improvise by converting Russian 130 Medium guns to 155 cal. It also went in for further purchases of the World War II vintage Russian 130mm guns and 122mm guns. Only lately has it been able to add the Russian Smerch Multi-Barrel-Rocket Launcher System and the indigenous Pinaka system. It is yet to get its 1000 medium guns and its tracked/self-propelled artillery for supporting its armoured formations. Pace of development/induction of K9 Vajra and M-777 needs to be increased.

(d) **Force Structure.** One of the key lessons from Indian Military History is the need for large armies. A demographical study of India indicates that by 2026, India will have the highest Recrutable Male Population (RMP) in the world. Hence, the Gen V P Malik era idea of downsizing may not be apt for such a situation. Downsizing the Army can be a particularly bad decision in such circumstances. It could only add to the army of the unemployed which can pose a serious risk to India's Internal Security. In fact, Internal Security requirements have always necessitated the need for maintaining huge standing Armies in India and China. China today has a standing Armed Forces of 1.4 million men and an Internal Security Force (People's Armed Police) also of 1.4 million (demobilized PLA formations). India had provided a peak level of 2.5 million men in World War II (all volunteers). Today at 1.1 million men, it is still the second largest Army in the world. All talk of downsizing it is down right dangerous and completely out of sync with our realities. Internal Security tasks (CI/CT/Extremists) are hugely manpower intensive. They are our primary threats. Manpower is India's key resource.

(e) **Islands of Excellence in a Large Army.** India will require a large standing Army. This also means that it will divert funds towards manpower instead of the Capital Budget for acquiring new technology. But we should not aim for across the board modernization of the entire mass but a three tier approach of high tech and cutting edge capabilities being fielded in some key formations and units that form Islands of Excellence. The balance may have technology that is fairly current. The Panzer Divisions in the World War II were such Islands of excellence in a mass Army many of whose formations that invaded Russia were using Horse drawn carts for logistics support. The Special Forces, Paras, the Armoured Corps and Mechanised Infantry, motorised Infantry Battalions and technology intensive Arms must form such Islands of excellence in our case.

Indian Navy. The India Navy must acquire the capability to Project Power in the Littoral and contribute meaningfully to any Air-Land conflict against Pakistan. It will have to project power ashore and must rapidly acquire the land attack capabilities in terms of three Carrier Battle Groups, enhanced Naval Aviation and a viable Marine Corps based not on straight legged Infantry but Amphibious tanks, ICV and Hover craft-based Mechanised Infantry that can rapidly break out from Beach heads and execute decisive tasks in a manner that speeds up the overall tempo of operations. It must also build up a sizeable inventory of Land Attack Cruise Missiles and contribute to surface operations by deploying more Special Forces (MARCOS) units. These capabilities will also help it in any Out of the Area Contingencies. In the event of a conflict with China, it will help it to safeguard the Andamans and respond to any Chinese aggression by retaliatory interdiction of Chinese Sea Lines of Communication (SLOCs).

INDIA'S DEFENCE: FROM POLICIES TO CAPABILITIES

Recent Policy Decisions for Capability Development in the Defence Sector. Some of the policy decisions contained in the recently released Ministry of Defence (MoD) document are: appointment of the Chief of Defence Staff (CDS) and creation of the Department of Military Affairs (DMA), a new department in the MoD; promulgation (in August 2020) of a 'negative list', banning imports of 101 defence related weapons and equipment, over the period 2020-2025; enhancement of the FDI limit in defence sector, in the automatic route, from 49% to 74%; promulgation of a revised (updated over 2016) Defence Acquisition Procedure (DAPAP-2020), with enhanced emphasis on indigenisation; refining of the offset policy for global acquisitions; setting aside nearly 58% (approximately Rs. 52,000 Crores, or USD 7 billion) of the allotted capital- modernisation budget for acquisitions from domestic sources; 87% of the capital acquisitions approved during the Year 2020 being sourced from domestic industry; greater emphasis on technology development and innovation; emphasis on digitisation of internal processes; incentives to boost MSMEs and start-ups; and substantial emphasis on

enhancing defence exports (which increased from Rs 1941 Crores, or USD 262 million in 2014-15 to Rs 5711 Crores, or USD 772 million in 2020-21), ranking India 24 amongst arms exporters (although the India's share of arms exports for the period 2016-2020 is only 0.2%).

Export Target. An ambitious export target of Rs 35,000 Crores, or USD 5 billion in Aerospace and Defence goods and services have been set for the year 2025, in the draft Defence Production and Export Promotion Policy 2020. It was with this intention that the government had, in the budget for the year 2020, announced the establishment of two defence industrial corridors, one each in Tamil Nadu and Uttar Pradesh.

Earmarking of Funds for Indigenous Acquisitions. Continuing the process of defence reforms, another slew of measures has been announced in the first few months of the year 2021. In keeping with the precedent set the previous year, the share of the capital modernisation budget earmarked for procurement from domestic industry has been enhanced from 58% to 63% (Rs 70,221 Crores). Going a step further, from the funds earmarked for indigenous acquisitions, nearly 25% of the budget (Rs 17,500 Crores) has been sub-allocated for acquisition from the domestic private sector defence industry. In addition, Rs. 1000 Crores have been reserved for procurement from "Innovation for Defence Excellence (iDEX)" start-ups to give a major boost to defence technology. Budgetary support of Rs. 499 Crores has also been promised to support nearly 300 start ups/MSMEs/ individual innovators and 20 partner incubators under the Defence Innovation Organisation (DIO) framework, over the next five years.

Dissolving of Ordnance Factories. Yet another bold step was taken on June 16, 2021 to reform the functioning of Ordnance Factories. The 246 year old Ordnance Factories Board (OFB), set up in 1775, which hitherto controlled the existing 41 Ordnance factories, has been dissolved.

Analysing the Policy Pronouncements. One of the primary reasons for India's inability to become self-reliant in the defence sector, despite being the third-largest spender on defence and largest/second-largest importer of global arms, has been the dichotomy between the need to remain operationally ready against potential threats from across the borders and the time required for indigenous design, development and induction of weapons and equipment through the process of spiral development, i.e., a choice between Atmanirbharta (self-reliance) and operational preparedness. The recent promulgation of the negative import lists needs to be viewed in this context.

Negative Lists. Commencing August 2020, a total of 209 weapons and items of military equipment have been banned for imports in the two 'Negative lists' issued by MoD. This ban is staggered for implementation over the period December 2020 to December 2025, and includes items in which India has developed indigenous capability as well as some weapon systems which are still under development. It is the latter category that is of particular concern. A range of helicopters, transport aircraft, trainer and maritime reconnaissance aircraft, airborne early warning and control systems, close-in weapon systems, medium artillery guns etc. have been included in the negative list. Many of these are still at early development stage. It would clearly be counterproductive if the negative lists are used as a tool to 'keep the slot reserved', along with continuing capability voids, till such time the indigenous development is completed and production actually commences.

Capital Acquisition. The Defence Procurement Procedure (DPP) 2016 and the Defence Acquisition Procedure (DAP) 2020 have five well-defined categories for Capital acquisition listed in 'decreasing order of priority' with the most preferred category being 'Buy Indian-Indian Designed Developed and Manufactured (IDDM)' and the least being 'Buy (Global)'. It has always been an imperative to procure the equipment indigenously under the 'Indian' categories if available (operational) at that point in time. Each progressive step

towards the global purchase or partnership category has to be justified in detail to the Defence Acquisition Council. The intent of the 'negative list' was thus already inherent in the procedure and was achieved, without sacrificing operational readiness or unduly constraining either the services or the Defence Acquisition Council (DAC). That this was occasionally 'negotiated', in the interests of operational expediency, led to the formal promulgation of the 'negative list'. While the intent may be laudable, it remains to be seen whether this will work for the good or become a self-created impediment.

Industry Orientation to Future Battlefield. While efforts are in hand to create a defence industrial base in India, the process merits consideration of a framework and a road map, taking into account various interlinked factors. The first is to define the contours of future wars likely to be fought in the Indian subcontinent. The classic infantry, armour, artillery dominated battles on land; predominantly a surface ships equipped Navy, complemented by submarines and its integral air arm for tasks at sea; and the Air Force, primarily utilising manned aircraft, to augment the land and maritime operations; are all set to change in the near future. Besides the traditional domains, capability also needs to be created in the cyber, electronic warfare, space, Intelligence Surveillance and Reconnaissance (ISR) domains. Furthermore, even kinetic war-fighting is progressively shifting to the use of long-range vectors, unmanned platforms, Artificial intelligence (AI) based decision support systems and much more. A glimpse of recent battles between Armenia and Azerbaijan and Israel Defence Force operations against Hamas clearly indicates the changing pattern of war-fighting. Israel claims that its operations marked the world's first use of artificial intelligence (AI) and supercomputing in a war. This calls for the services and industry to jointly evolve a future concept of operations, based on emerging technologies, calibrated for the period beyond 2030.

The introduction of these reforms suggests a positive intent and a resolve to enhance self-reliance in defence. An objective review, however, needs to be carried out to identify the challenges in implementation and to assess the results achieved.

RECOMMENDATIONS

Periodic Review. A periodic review of the policies for defence reforms, carried out between the MoD, Services and Industry (public and private sector including industry bodies), to monitor the impact on operational preparedness and the percolation of the desired benefits to the industry. Judicious implementation of the 'negative list', particularly for the weapons and equipment still under development. This must ensure that a balance is maintained between operational preparedness and indigenisation, with priority being accorded to the former. Short term leasing of equipment, though a sub-optimal option, may be resorted to in order to bridge the induction gap.

Budget Allocation And Sub-Allocation. A pragmatic review of budget allocation and sub-allocation for the public and private sector, and mapping this against the actual acquisition requirements of the armed forces. It must be ensured that this apportioning does not become an impediment to capability development, or a mirage for the domestic defence industry.

Multi-Domain Operational Capability. A clear understanding that with the modest defence capital budget allotted, building multi-domain operational capability is a greater priority. Achieving 'Atmanirbharta', though important, is a supplementary objective. To promote the defence industry, MSMEs, start-ups and innovators alongside, additional budgetary allocations need to be built in to support this national vision. The Modernisation Fund for Defence and Internal Security (MFDIS), recommended by the 15th Finance Commission, needs to be created at the earliest. There is a need to regulate the overall size and structure of the

defence industry. Neither should it consolidate around a handful of arms majors, with the ability to orchestrate prices and competition, nor must it be split among numerous small entities with wasteful overlaps. An optimum size ensures healthy pricing and encourages innovation. The process of corporatisation and restructuring of the Ordnance Factories that has been started needs to be followed through with vision.

Production Capacities. The production capacities of the defence industry should be aligned to the expected demand from the armed forces, with an inbuilt stretch capacity for potential exports. This in turn should be linked to the likely budget allocations. Over capacities are as undesirable and wasteful as under capacities.

Incentivise Indigenous Manufacturing Base. The aim of achieving "substantive self-reliance in the design, development and production of (equipment) by creating "an ecosystem that is conducive for the private industry to take an active role, particularly for small and medium enterprises (SMEs). From SME perspective, the single biggest impediment has been absence of an empowered interface to deal with host of administrative, technical and policy issues whether with the Ministry of Defence or DRDO or any other relevant defence department. Evident from other developed countries, facilitating SMEs for Market access or access to high-end technology and technological spinoffs through defence research has been the single biggest source of path breaking innovations and technological spinoffs.

Role of Private Sector. There is urgent need "to build up a robust indigenous defence industrial base by proactively encouraging larger involvement of the Indian private sector, and innovative startups. There is a need for Indian Defence Industrial base to gear up and meet the vision and plan of Indian defence forces. There is also a need to incentivize the growth of a domestic defence industry. Some of the areas which could be start point:

- (a) Creation of technology fund to assist Private sector in Defence R&D.
- (b) Create a talent pool for skilled manpower. Ex service personnel who have first-hand experience of product operations and maintenance would be assets.
- (c) Mandatory ToT in select areas as offsets
- (d) Exports for business viability
- (e) Encourage adaption of Dual Use Technologies
- (f) Facilitate Indigenous Product Development
- (g) Provide Test Environment/ Trial Ranges / Ammunition
- (h) Single Vendor Procurements from Indian Industry be permitted with due checks and balances.
- (j) Implement Gol /notification No. 18-0712010 dated 5th October, 2012 issued by Department of Telecommunication which stipulates, electronic products that have security implications for the country, indigenously produced equipment must be preferred, for Defence. Tax incentives be provided as for Electronic sector. Finally, the services and industry must jointly evolve a clear idea of the likely shape of the future battlefield, based on emerging technologies and the ground realities in the Indian context. This should, thereafter, guide building capacities and capabilities in emerging domains, rather than stagnating in the field of legacy weapon systems, whose place on the battlefield and space in the market is shrinking domestically and globally.

CONCLUSION

The Indian Army's vision to "ensure capability enhancement and operational effectiveness of the Army to meet all contemporary and emerging challenges" can be realized only through comprehensive support from the Indian defense industry. The Indian Army has prioritized its capability development requirements - it is now up to the industry to take up the challenge. Army is committed to make in India, industry must more than match the effort with increased involvement and investment in the Indian defense industry with the government's current thrust on 'Make in India'.

India with own huge domestic requirements, availability of skilled work force, opportunities to export, the confidence that is evident in the Indian industry and an environment where the industry leaders appear eager to collaborate. The challenge is to create an eco-system conducive to strengthening the indigenous capabilities in design and development, manufacture and the subsequent maintenance of the equipment. While the report and government acceptance of on renewal of policy framework to facilitate Make in India in defence sector is eagerly awaited. The expectations from the Industry segment are to simplify/rationalise the procurement procedures and remove the bottlenecks for long term association. The foregoing analysis is aimed at critically examining the recent policy announcements of the government in the defence sector to achieve Atmanirbharta, which is undeniably a laudable objective. There is, however, the need to pragmatically temper this goal to maintain the armed forces in a state of readiness to meet looming external security threats. A successful policy lies somewhere in between. Ultimately, it is only well designed policies, applied pragmatically, that will help us achieve both combat readiness and self-reliance in defence.

The procurement process is undoubtedly full of challenges but these are not insurmountable. Whereas, there is a need for regular evaluation of the effectiveness of policies and procedures at the level of the Ministry of Defence and the government, there is so much more that can be done at the level of the services. The Army being the largest service and fielding the largest array of equipment needs to improve its own processes by carrying out an internal analysis and taking effective steps to speed up the procurement process. There is also a necessity to improve the equipment availability state with the field force. The financial powers delegated to commanders at various levels should be utilised gainfully for this purpose. Accepting the shortcomings in its processes and taking steps to overcome them, particularly where internal measures can improve the processes, is the most important step towards capacity building. The fact that procurement delays continue in the Army, more than in the other two services, calls for serious introspection and immediate action by the Army.

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Pushing the envelope: All the way to the top

Harvey Mackay

Prof. Shalini Sharma

Asst. Prof.

AIMT, G.NOIDA

A few years ago, I read this book and was overwhelmed by the simplicity of the author to guide us towards success in life by following very simple steps. Harvey Mackay is the author of two bestsellers, “Swim with the sharks without being eaten Alive” and “Beware the naked man who offers you his shirt” He is the founder and CEO of Mackay Envelope Corporation. In addition, he is a nationally syndicated columnist and was named by the Toastmaster International as one of the top five speakers in the world.

In this book, Mackay shares his wit, his common and not-so common sense, with everyone who wants to succeed.....at anything. Humor, honesty, fairness, the ability to get others to see your vision, Judgment and guts, the subjects are very interesting and his writing style is easy to follow without talking down to the reader. In it, Harvey tackles the mantras of success – how to obtain it and what contributes to extraordinary lifelong success.

Harvey Mackay '*Pushing the envelope*' means pushing the boundaries and yourself to gain an.....edge. The world is competitive - to be better, faster, smarter and to get the results you want in business and in life, you have to stick your neck out like a turtle.

Well said..

You'll never turn try into triumph.....without adding the umph!

The book in general reveals the secret to winning....**Hardwork**. It also suggests ways to become a differentiator by showing, enthusiasm, creativity and imagination. In one such chapter, Harvey says, '*All things come to those who go after them*'. The idea is Never, never to give up and keep on moving with perseverance towards your goal. He writes, "*Big shots are only little shots who keep shooting*".

Harvey Mackay shared all the tricks of the trade out of his own experiences. He advises on appearance, creativity, motivation, ways to move up the corporate ladder, customer service, the art and importance of detailing, knowing your friends and avoiding your enemies, negotiating tactics and shows you how to make every day count.

The quote, "*Don't wait for the funeral before you pay a compliment. You may not make it in time*" touched my heart. Not even about management and leadership skills he also talked about spirituality, life lessons and building relationships.

I loved everything about this book, reading it with both pleasure and amazement. The format of the book is delightfully engaging. Harvey has told his life experiences with such freshness, humour, intensity and power. The book is totally captivating and fun to read with lively, crisp and concise descriptions of how to succeed in life.

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