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An Empirical Study of Savings Impetus on Gross Domestic Product of India

Dr. R. Venkataraman[1], Thilak Venkatesan[2]

[1]Dean, Presidency College, Bangalore
[2]Research Scholar, Bharathiar University, Coimbatore
[1]venkatramana.r@presidency.edu.in, [2]v.thilak@gmail.com

Abstract: India's growth story is increasingly becoming visible in the global context, with the various policy measures taken by the present government and the monetary authorities. The growth in the Indian context is diverse with higher imports, unswerving consumption, and being a developing economy a large government deficit. The policy makers must strike the right chord to steer the economy in such turbulent times. The measures of de-monetization, implementation of GST have their own repercussions. The increase in Foreign direct investment also aids in building the capital, required for growth. The capital formation, prima facie is a product of the savings function of the economy. Various economic theories have worked on the model of domestic savings leading to investment, which translates to higher growth. The study was intended to understand the Growth-Savings nexus in the Indian context. ARDL model was framed using secondary data. The model observed significant influence of FDI, FII and Domestic savings. FDI was observed pivotal in influencing the other dependent variables and the GDP growth.

Keywords: Savings, capital formation, economic growth, ARDL model, Causality JEL Classification: E21, F43, C41

1. INTRODUCTION

The trajectory of a growing economy is significantly influenced by capital flows. The India's growth story has also been influenced by the capital flows, similar to the other Asian peers & the emerging countries. The factors that influence the growth include consumption, government expenditure, exports to name a few. The Indian growth is predominantly led by consumption, and the growth needs large amount of capital. The various forms of capital include domestic savings, foreign investments and government spending. The policy makers have in the recent past strived to increase the foreign holdings in various sectors, so as to enable sufficient capital required for growth. On the other hand, various economic theories stress on domestic savings as a key factor to capital formation that can also aid in higher growth and the study was aimed at determining the key determinants of gross capital formation and at the same time observes the effect of growth in capital formation that translates to gross domestic product.

2. REVIEW OF LITERATURE

The prior studies stress upon the political aspects and legal aspects in aiding growth, and the degree of development varied between the developed and the developing countries (Petrakos, Arvanitidis, & Pavleas, 2007). Interaction among the various policy measures, technology, human capital, culture have been studied and the causality among them have been highlighted **(Kibritcioglu & Dibooglu, 2001)**. Some sector specific studies with agriculture in focus highlighted population in rural areas, FDI, life expectancy, inflation rate, Overall Exports and percentage of exports to imports with respect to agricultural products determined the agriculture sector contribution to GDP significant **(De Sormeaux & Pemberton, 2011)**. A Sub- Saharan study stressed capital formation, exports and formation of human capital contributed significantly to economic growth **(Ndambiri, Ritho, & Ng'ang'a, 2012)**. Private investments can be encouraged to advance the economic growth and at the same time external loans was observed to have a negative effect **(Amanja & Morrissey, 2005).** FDI and FII are key drivers of growth for Indian economy. Various studies proved to have a unidirectional influence from FII towards GDP (**Shikha Menani, 2013),** she suggested that FDI can be encouraged as it provides a long term framework, whereas in case of FII inflows are of short term in nature. The investments in the Indian market were attributed to institutional investors The stock markets were strongly influenced by FII flows (**Anubha Shrivastav, 2013)**. A bidirectional causality was noted between the FII flows and the money market returns, stock market returns and also with the returns of foreign exchange. The correlation between the FII investments and the Sensex returns & Nifty returns was observed positive. FDI inflow patterns were examined to evaluate the key factors that determine FDI flows **(Bhavya Malhotra, 2014),** The research observed FDI inflows had a positive impact on the economic growth. The FDI capital flows augments the shortfall of the domestic capital. The causality direction between savings and economic growth was studied to examine the causation effect

(**Sachin N. Mehta, 2014).** The study observed no causality during the year 1950 to 2011, between Real GDP and Real GDS in India. A co-integration among the factors was observed between savings, foreign aid on India's growth (**Murtala Abdu, 2015),** the study suggested utilization of aid for productive sectors through policy measures. India sector specific studies observed services sector to contribute significantly to the Economic growth **(Jain, Nair, & Jain, 2015)**. The role of increasing spending on research & development was also highlighted by the literature to increase GDP growth by means of technological advancement **(Svetlana et. al, 2016)** The economic theories stress the role of capital formation in the GDP estimates, and it was observed that large foreign investment inflows also aid in higher proportion of capital formation **(Nagaraj R & T N Srinivasan, 2016)** and the prior studies abstracted key variables as FDI, Domestic savings, Investment lead to a higher GDP, but lacks clarity on how the variables adds to the capital formation which intern lead to higher economic growth in the Indian context.

3. STATEMENT OF PROBLEM

Domestic consumption and foreign flows influence the growth of India's GDP. Among the foreign flows, foreign direct investments provides a larger benefit by creating employment, standard of living and also acts as a multiplier to growth, whereas foreign institutional investments by nature is are more volatile. The factors that are key to determine the GDP growth is the capital formation and the various investments that yields a higher capital formation needs to be figured to implement measures to attain a higher and stable growth.

3.1 Objectives

1. To list various investments and their effect on capital formation.
2. To model Gross capital formation and its influence on GDP.
3. To determine the causal relationship among the variables.

3.2 Data & Methodology

Secondary data was used for the study period of 26 years from 1990 to 2016. E-Views version 7.2 was used to analyze the data.

3.2.1 Test for Stationary Series:

A series with mean equal to zero and no auto-co-variances based on time is defined stationary. A combination of trend and drift in the series is checked using the Augmented Dickey Fuller test. The hypothesis is specified as below;

H_0: Time series is not stationary (the series has a unit root)

H_1: The Time series is stationary.

3.2.2 Vector Auto Regression

Vector Auto Regression (VAR) aids in analysis of multiple times series to capture their linear interdependencies. The model facilitates more than one evolving variable. VAR provides optimal lag length criteria for the Auto Regressive Distributive Lag model.

3.2.3 Assumption check & Diagnosis

The following checks were performed to ensure that the model satisfies all necessary conditions. Normality Test, Breush-Godfrey Serial Correlation, Heteroskedasticity test, Stability Test (CUSUM TEST) and VAR Granger causality test.

4. DATA ANALYSIS AND INTERPRETATION

The data was collected from the World Bank estimates and the data was differenced to obtain Stationarity. The Gross domestic product was considered as dependent variable,foreign institutional investments, foreign direct investment and gross domestic savings were independent variables.

TABLE 1: ADF test for Stationarity

ADF test for Stationarity	
Constant and trend	
	P-value
LGDP	0.6639
DLGDP	0.0120
FDI	0.0013
FII	0.0001
GCF	0.6437
DGCF	0.0082
GDS	0.5315
DGDS	0.0019

All variables were observed stationary at first difference excluding one variable (FII. All the variables were tested using Augmented Dickey Fuller test and a P-value of less than 5%, rejects the null hypothesis of non-Stationarity.

TABLE 2: Model 1: dlgdp c dfdi fii dgds

Dependent Variable: DLGDP				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.052314	0.010829	4.830952	1E-04
DFDI	9.30E-13	1.43E-12	0.648918	0.523
FII	-8.86E-13	1.22E-12	-0.72519	0.476
DGDS	1.63E-12	2.74E-13	5.927244	0
R-squared	0.765376	F-statistic	22.83502	
Adjusted R-squared	0.731859	Prob(F-statistic)	0.000001	
Durbin-Watson stat	1.998826			

The model is significant, with a prediction of 73% and among the independent variables; GDS is significant whereas FDI and FII are not.

TABLE 3: dlgdp c dfdi fii dgds dfdi(-1) fii(-1) dgds(-1) dfdi(-2) fii(-2) dgds(-2)

Dependent Variable: DLGDP				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.060849	0.012533	4.855081	0.0003
DFDI	9.78E-13	2.14E-12	0.456308	0.6557
FII	-4.48E-13	1.50E-12	-0.299146	0.7696
DGDS	1.56E-12	3.07E-13	5.098547	0.0002
DFDI(-1)	1.88E-13	2.46E-12	0.076603	0.9401
FII(-1)	-1.19E-12	1.98E-12	-0.601356	0.5579
DGDS(-1)	4.61E-13	2.98E-13	1.54921	0.1453
DFDI(-2)	-1.19E-12	1.73E-12	-0.686159	0.5047
FII(-2)	-2.22E-12	1.68E-12	-1.321967	0.209
DGDS(-2)	4.12E-13	3.18E-13	1.29555	0.2177
R-squared	0.869031	F-statistic	9.584473	
Adjusted R-squared	0.77836	Prob(F-statistic)	0.0002	
Durbin-Watson stat	1.330405			

The model for GDP as dependent variable is significant, with a prediction of 77% considering the lags and among the independent variables, GDS is significant whereas FDI, FII and their lags are not.

TABLE 4: dgcf c dfdi fii dgds dfdi(-1) fii(-1) dgds(-1) dfdi(-2) fii(-2) dgds(-2)

Dependent Variable: DGCF				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-3.88E+09	3.49E+09	-1.111446	0.2865
DFDI	-1.338802	0.596169	-2.245673	0.0427
FII	-1.462869	0.416795	-3.509806	0.0038
DGDS	1.36028	0.085384	15.93124	0
DFDI(-1)	1.022923	0.683483	1.496633	0.1584
FII(-1)	0.221463	0.549782	0.40282	0.6936
DGDS(-1)	0.260665	0.082806	3.147919	0.0077
DFDI(-2)	-1.183348	0.482767	-2.451177	0.0291

FII(-2)	-0.262056	0.466426	-0.561839	0.5838
DGDS(-2)	0.175212	0.088398	1.982075	0.069
R-squared	0.981308	F-statistic	75.83282	
Adjusted R-squared	0.968368	Prob(F-statistic)	0	
Durbin-Watson stat	0.585498			

The model with GDS is significant, with a prediction of 96% considering the lags and among the independent variables, FDI, FII and GDS is significant along with the lags. R-Squared can be compared for the model among the GDP and GDS, and in comparison the model for GDS proves highly significant. The model uses the variables at Ist difference and Level and hence the model of best fit is the ARDL model.

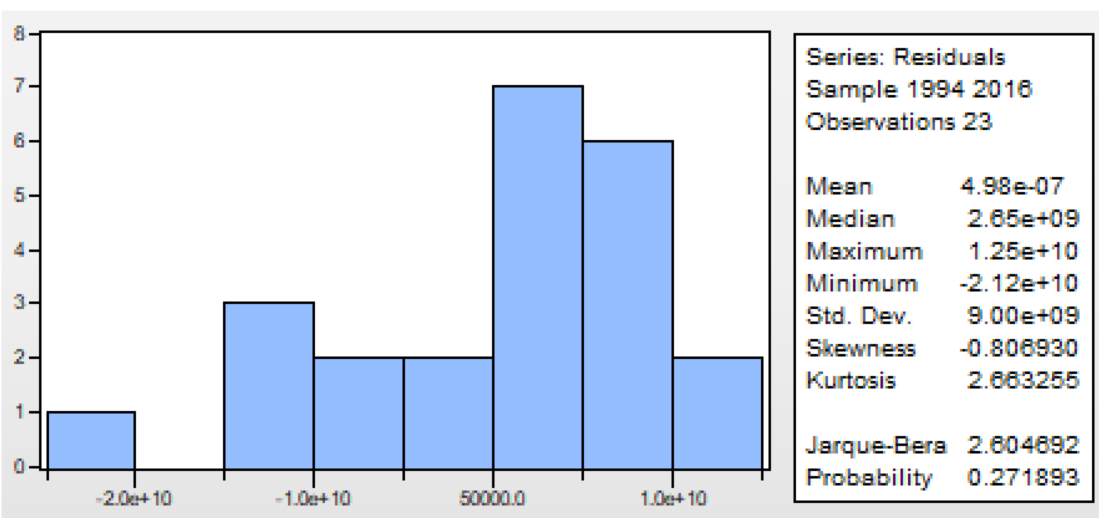
TABLE 5: ARDL Model: dgcf c dfdi dfdi(-2) fii dgds dgds(-1) dgds(-2)

Dependent Variable: DGCF				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-4.16E+09	3.27E+09	-1.269573	0.2224
DFDI	-1.127413	0.421604	-2.674102	0.0166
DFDI(-2)	-0.934357	0.332939	-2.80639	0.0127
FII	-1.528573	0.348331	-4.388277	0.0005
DGDS	1.403656	0.078253	17.93736	0
DGDS(-1)	0.243697	0.054836	4.44414	0.0004
DGDS(-2)	0.214493	0.051516	4.163608	0.0007
R-squared	0.97635	F-statistic	110.0886	
Adjusted R-squared	0.967481	Prob(F-statistic)	0	
Durbin-Watson stat	0.919135			

The model using the lags of dependent variables proves 96% predictability and significant. The model has auto-correlation problem depicted by the Durbin-Watson statistic. Including the lag of the dependent variable the model is corrected for the auto-correlation problem.

TABLE 6: Test for Normality

The results of the normality test are given below.



The value of Jarque-Bera statistics is 2.60. The P-value evidences that the data is normally distributed. The Null hypothesis being that the distribution of data is normal, which cannot be rejected according to the P-Value.

If the current variable value depends on it own past value, serial correlation is said to exist. And the below table suggests no serial correlation as inferred by the p-value of more than 5%.

Serial Correlation test:

TABLE 7: Serial Correlation test

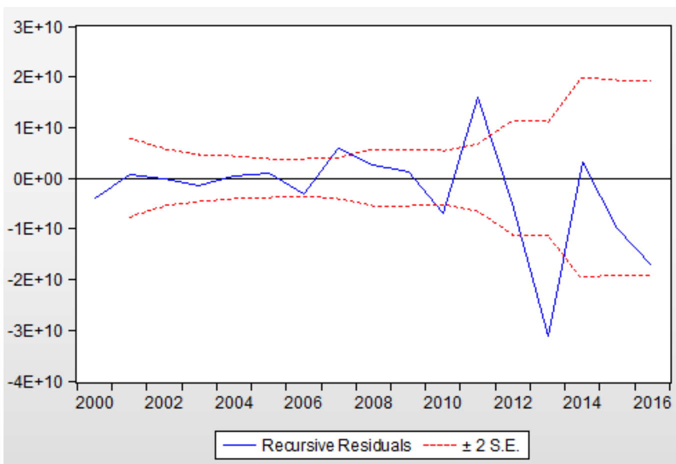
Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.578684	Prob. F(2,15)	0.2387
Obs*R-squared	3.999448	Prob. Chi-Square(2)	0.1354

Test for Heteroskedasticity:

The errors are homoscedastic, if the variance is constant. The p-value suggests (Chi-Square) that there is no Heteroskedasticity.

TABLE 8: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	2.865347	Prob. F(5,17)	0.0470
Obs*R-squared	10.51865	Prob. Chi-Square(5)	0.0618
Scaled explained SS	4.778935	Prob. Chi-Square(5)	0.4435



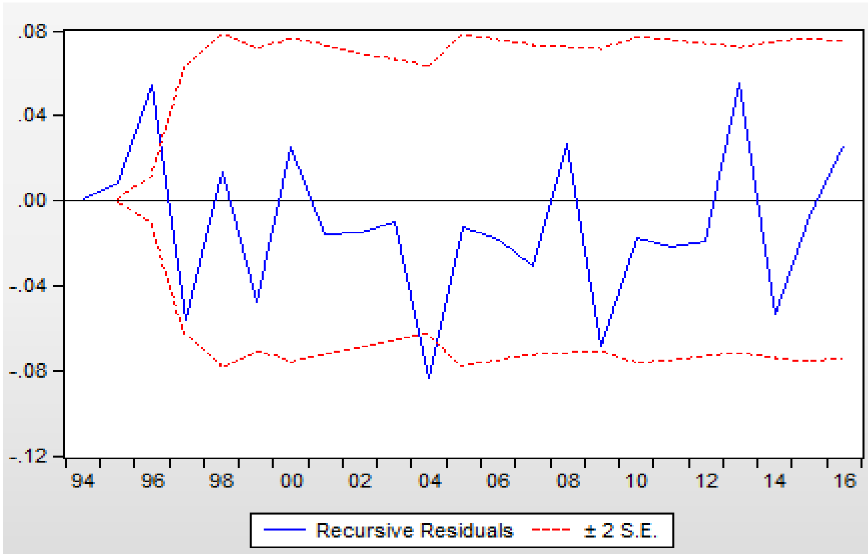
Graph 1: Stability test:

From the above graph, the blue line indicates the stability of the model with the 5% significance.

TABLE 9: Model DLGDP and DGCF

Dependent Variable: DLGDP				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.054659	0.008267	6.611703	0
DGCF	1.24E-12	1.48E-13	8.360541	0
R-squared	0.752418	F-statistic	69.89864	
Adjusted R-squared	0.741654	Prob(F-statistic)	0	
Durbin-Watson stat	2.325279			

The Dependent variable GCF proved highly significant with R-squared of 74% and the Residual diagnostics of the model was found free of autocorrelation, homoskedastic and normally distributed. The Stability of the model is as shown below.



Graph 2: Stability test:

TABLE 10: Lag order Selection

VAR Lag Order Selection Criteria						
Endogenous variables: DLGDP DGDS DFDI FII						
Lag	**LogL**	**LR**	**FPE**	**AIC**	**SC**	**HQ**
0	-1652.793	NA*	4.35e+57	144.0690	144.2665*	144.1186*
1	-1636.331	25.76710	4.30e+57*	144.0288*	145.0162	144.2771
2	-1627.146	11.18124	9.01e+57	144.6214	146.3987	145.0684

TABLE 11: Granger Causality

Pairwise Granger Causality Tests			
Null Hypothesis:	**Obs**	**F-Statistic**	**Prob.**
DGDS does not Granger Cause DLGDP	24	0.40270	0.5325
DLGDP does not Granger Cause DGDS		0.27628	0.6047
DFDI does not Granger Cause DLGDP	24	0.09440	0.7617
DLGDP does not Granger Cause DFDI		6.55779	0.0182
FII does not Granger Cause DLGDP	24	0.00801	0.9296
DLGDP does not Granger Cause FII		1.04043	0.3193
DFDI does not Granger Cause DGDS	24	0.14950	0.7029
DGDS does not Granger Cause DFDI		10.0841	0.0046
FII does not Granger Cause DGDS	24	0.07712	0.7840
DGDS does not Granger Cause FII		1.90148	0.1824
FII does not Granger Cause DFDI	24	18.3083	0.0003
DFDI does not Granger Cause FII		0.37978	0.5443

The cause and effect relation was checked using the Granger causality test and a unidirectional relationship was observed between FDI and FII, FDI and GDS and FDI and GDP. FDI proved to cause an effect on the other variables. The influence of FDI was significant and matched prior studies Anita R(2012) and Malla Reddy M(2014).

5. IMPLICATIONS & SUGGESTIONS

The econometric model of Gross capital formation was highly significant compared to the model GDP. The independent factors GDS, FDI and FDI showed highly significant in determining the Capital formation. The model using GDP as dependent on capital formation was superior than the independent factors directly taken upon GDP. The causality suggests that FDI as the key factor in aiding the GDP growth and the other factors. The policy makers are suggested to attract more FDI such that it stimulates the other factors to aid in capital growth and intern increase the GDP growth.

6. CONCLUSION

The study demonstrates that Gross capital formation is the key to India's GDP growth, and the key factors that determine the capital formation are the FDI, FII and the domestic savings. The significance of capital formation was noted by (**Qaiser Abbas et. al., 2011**) in a study of SAARC Countries. It is observed from the ARDL linear estimates (Table 5). The relationship using Granger causality was found unidirectional influenced predominantly by FDI. The various tests for normality, serial correlation & Heteroskedasticity proved residuals to be free from all the criteria's. The ARDL model fit estimates a 96% accuracy (R^2 value) with a significant model. The study suggests a higher growth of GDP can be achieved by increasing the capital formation through domestic savings, FDI and FII.

7. LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

The data collected was limited to 5 variables- GDP, GDS, GCF, FII & FDI. The other forms of investment such as portfolio investments can also be considered to give a clear picture. FII proved stationary al level leading to the ARDL model. The other theoretical models of savings can as well be tested to obtain reliable estimates. The model can be extended to a higher time period; the study was performed using 26 years data i.e. from 1990 to 2016. GDP data used for the analysis was at current prices, other substitutes can yield a different dimension to the model.

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Sustainable Investing in Emerging Asian Countries: Comparison of India and China

Sakshi Mittal

Assistant Professor, Bharati College, University of Delhi

Abstract: Sustainable investing is an investment approach making reference to environmental, social and governance (ESG) factors in the selection and management of investments. Green or socially responsible investing (SRI) refers to making investment decisions according to both financial and ethical criteria. Over the past decade, socially responsible investments (SRI), frequently also called ethical investments or sustainable investments have grown rapidly around the world. The objective of this paper is to analyze the extent and pattern of Socially Responsible Investing (SRI) funds in emerging Asian economies, to undertake inter-country comparison of ethical mutual funds of India and China with respect to their number, age, size, performance and to recommend the interested parties about sustainable investing performance and throwing light on the belief that the Social considerations are at the cost of returns generated by the portfolio. The sample of 5000 mutual funds of China and 2202 funds of India have been taken from Bloomberg database to draw a comparison of their age, size, sharpe ratio, treynor ratio and jensen's alpha. It was found that the ethical funds have not underperformed the conventional funds according to these performance indicators so the ESG criterion for investment is not at the cost of returns.

Keywords: Sustainable Finance, Socially Responsible Investment (SRI), Environmental Social Governance (ESG)

1. INTRODUCTION

''Invest with your brain and heart. Invest for our planet. The Funds give investors the ability to unite their financial goals with environmental progress''

from the prospectus of Sierra Club Funds.

According to the Forum for Sustainable and Responsible Investment, USSIF, Sustainable, responsible and impact investing (SRI) is an investment discipline that considers environmental, social and corporate governance (ESG) criteria to generate long-term competitive financial returns and positive societal impact.

ESG – the acronym for Environmental, Social and Governance – is a generic term for evaluating corporate behaviour and nowadays used interchangeably with sustainable, responsible, impact or ethical investment. It may be viewed as a successor to Socially Responsible Investment (SRI), which is gaining popularity worldwide. But unlike SRI, which relies on negative screening, ESG propounds an underlying philosophy of larger good without overlooking financial or economic viability. Corporate Social Responsibility (CSR) – an India economy/regulatory phenomenon that is often mistaken for ESG – is actually only a small part of ESG.

There are several options for ethical investment. First: community or cause-related investment reflecting savings accounts held at socially directed organisations. Second: purchasing units in socially responsible mutual funds. Third: direct investment in corporations in order to engage in dialogue with the purpose of changing the company ethics (Hiagh and Hazelton, 2004).

Ethical funds will be defined as funds that have a limitation on their investment universe by the application of social, environmental or ethical criteria. Socially Responsible Investing (SRI), also known as sustainable, socially conscious, or ethical investing, describes an investment strategy that seeks to maximize both financial return and social good for an investor. While SRI may be good from a moral perspective, it is less clear how well SRI portfolios perform against their non-SRI peers, both on a pure-return and risk-adjusted basis.

SRI mutual funds have demonstrated an important growth pattern since the beginning of the Seventies, when the first one was created. The ethical screening of corporate behaviour has become fashionable in the wake of recent reports of environmental and accounting scandals. However, it has also been argued that imposing ethical constraints on equity investment can adversely affect portfolio performance (Bauer et al., 2007). The SRI mutual funds industry refers to the practice of directing investment funds using techniques that combine investors' financial objectives with their commitments to social concerns; for example, social justice, economic development, peace or a healthy environment (Hiagh and Hazelton, 2004).

Styles of sustainable investment

The GSIA defines sustainable investing as an approach that relies on ESG screening in portfolio selection. This is now accepted as the global standard of classification in sustainable investing and is classified into:

1. negative/exclusionary screening: It involves steering clear of sectors, companies or practices based on certain ESG criteria, e.g. refraining from investments in tobacco and liquor companies.

2. Positive/best-in-class screening: It advocates investments in sectors, companies or projects with positive ESG performance, e.g. ones with track records of enhancing stakeholder value via periodic ESG disclosures.

3. norms-based screening: Screens investments based on minimal standards of business practices, much like negative screening, but strikes out ones that do not comply with norms such as the Koyoto Protocol.

4. esg integration: Systematic and explicit inclusion of environmental, social and governance factors into financial analysis by investment managers.

5. sustainability themed investing: Investment in specific themes or assets related to sustainability such as clean energy, green technology and sustainable agriculture.

6. Impact/community investing: Aimed at solving social or environmental problems by directing capital towards underserved individuals or communities, and is typically seen in private markets.

7. corporate engagement and shareholder action: This approach favours companies whose strategies are susceptible to investor activism via direct corporate engagement, proxy voting based on ESG guidelines, etc.

2. OBJECTIVES OF THE STUDY

The previous literature on this topic has to a large extent focused on investigating if fund performance can be improved by investing in socially responsible companies in developed nations. A common concern about socially responsible investing (SRI) is that there is a premium to be paid for being socially responsible that necessarily diminishes investment returns. Socially responsible investing (SRI) has been practiced for more than a century. Almost from the beginning, practitioners, academics and the investing public have asked if the inclusion of social and environmental considerations in the investment decision-making process hurts investment returns.

The broad objectives of the study will be as follows:

- To analyze the extent and pattern of Socially Responsible Investing (SRI) funds in emerging Asian economies.
- To undertake intercountry comparison of ethical mutual funds of India and China with respect to their number, age, size, performance.
- To recommend the interested parties about sustainable investing performance and throwing light on the belief that the Social considerations are at the cost of returns generated by the portfolio.

3. INDUSTRY BACKGROUND

Over time, ESG has risen from being a fuzzy concept to a business, investing and political priority – whether global or Indian – and it shall, eventually, command overriding importance in the world of business as well as investments. We see ESG increasingly driving: a) the quality of companies and the way they conduct business; b) higher economic returns that such businesses generate over the long term – in spite of short-term or upfront financial costs or trade-offs; c) investor orientation and investment mandates, and the flow of capital; d) higher financial returns – for businesses and investors; e) regulatory tightening or operating risks for businesses, particularly that are not compliant; and f) goodwill for businesses within the sociopolitical space they operate in. It's a wide ambit. In general, ESG norms are tightening and, therefore, profit preservation would nudge companies to meet the statutory ESG requirements. In this constantly evolving operating landscape, only companies that have built businesses on ESG foundations shall eventually thrive.

Sufficient evidence of superior returns at lower risk

Several empirical studies indicate that investors and markets reward companies that score highly on ESG parameters. For instance, MSCI ESG Indices for India and overseas have consistently outperformed their respective broader benchmarks delivering superior risk-adjusted returns. Similarly, we note that ESG-focused companies not only command valuation premiums, but portfolios comprising strong ESG companies have sustainably outperformed non-ESG portfolios, generating greater risk-adjusted returns and showing lower drawdown risks. In fact, most well-known global MSCI ESG indices have outperformed their respective broader country indices over periods of three–five-years.

4. REVIEW OF LITERATURE

Since the 1960s a relatively large amount of literature has been documented on the performance of SRI funds (Kreander et al., 2005). By comparing historical returns of SRI funds and regular funds and/or a market index, the empirical link between socially responsible practices and financial performance has been investigated. Previous literature has shown that SRI funds, on average, perform similarly to regular funds.

Previous research has primarily focused on the US and UK markets where there historically has been relatively more data available (Wagner, 2001). The studies employ a variety of benchmarks and methods. The question of the appropriate benchmark is often raised and is still a problem within the SRI fund performance field (Bauer et al., 2007). Most research applies some type of index benchmark in combination with a regular fund benchmark.

There are two different ways of comparing SRI funds with regular funds. First of all, the matched pair method matches the SRI fund with one or more regular funds to control for factors like fund size and start date. Another method of comparing SRI funds' to regular funds' performances is through a constructed fund benchmark. In this method, portfolios of funds are created and then compared on an aggregate level. One selects certain criteria for funds which are to be included in the sample to make sure that the only difference between the groups is the investigated variable, e.g. SRI screening. The proposed study may use the constructed fund benchmark as it gives a greater flexibility when selecting the sample of funds. In a small market like the Indian, it otherwise becomes difficult to get a large enough sample. For constructed fund benchmarks, selection criteria can for example be equity orientation, as in Bauer et al. (2007) where 8 SRI funds and 267 regular funds were selected.

Luther et al. (1992) investigated the returns of 15 ethical unit trusts. Their results provided some weak evidence that ethical funds tend to out-perform general market indices. In addition, a bias towards smaller companies for ethical funds was documented. Luther and Matatko (1994) confirmed this small cap bias and demonstrated that comparing ethical funds to a small cap benchmark, improved their relative performance substantially. Subsequently Mallin et al. (1995) attempted to overcome this benchmark problem by conducting a matched pairs test. After matching by fund size and formation date, they reported Jensen's alphas suggesting that ethical mutual funds outperformed their conventional counterparts.

Managi, Okimoto, and Matsuda (2012) concluded that conventional indices do not outperform SRI indexes, and that "investors can take ESG criteria into consideration without sacrificing risk or return." However, while Schroder (2005) also confirmed this, he found that 20 of the 29 international SRI indices he looked at had higher risk (volatility) than their benchmarks. This suggests that on a risk-adjusted basis, SRI indices may underperform conventional indices.

Cortez, Silva, and Areal (2009) found that SRI mutual funds have shown superior performance in Europe as opposed to the United States. This may be attributed, according to the authors, to differences in SRI investment style. The European SRI approach generally used positive criteria (security selections based on the most socially responsible companies), whereas the American approach was more oriented towards negative screening (security selection based on excluding the least socially responsible companies).

Evidence from mutual fund literature is predominantly focused on the US and UK retail markets. Hamilton et al. (1993) and Statman (2000) compared the returns of ethical and regular US funds to each other, and to both the S&P 500 and the Domini Social Index (DSI). Their Jensen's alpha estimates suggest that the risk-adjusted returns of ethical mutual funds are not different from those of conventional funds. Goldreyer et al. (1999) used an extended sample of ethical funds including equity, bond and balanced funds. Using Jensen's alpha, Sharpe and Treynor ratios, they found that social screening does not affect the investment performance of ethical mutual funds in any systematic way.

Sirri and Tufano (1998) and Huang, Wei and Yan (2007) state that investors are reluctant to change funds because it is costly for investors to research different funds - both financially and in terms of time. For SRI investors, search cost may be higher than those of conventional investors since SRI investors need to investigate both financial and non-financial factors when choosing a fund. SRI investors may therefore be less inclined to withdraw money from an SRI fund should the fund begin to deliver inferior performance.

5. SLOWER ESG INVESTING UPTAKE IN ASIA

Despite these global drivers, adoption of ESG Investing in Asia has been comparatively slow. Assets devoted to ESG Investing as a proportion of total managed assets are much lower for Asia as compared to Australia, Europe, and North America. As shown in Figure 1, Asia ex-Japan has the lowest ratio recorded (less than one percent), in contrast to Europe and Australia/New Zealand (both over 50 percent) in 2016.

REGION	2012	2014	2016
Europe	49.0%	58.8%	52.6%
United States	11.2%	17.9%	21.6%
Canada	20.2%	31.3%	37.8%
Australia/NZ	12.5%	16.6%	50.6%
Asia (ex-Japan)	0.6%	0.8%	0.8%
Japan			3.4%
Global	21.5%	30.2%	26.3%

Fig. 1. ESG Investing as percent of total managed assets by region 2012-2016, in percent

Source: Global Sustainable Investment Alliance

Figure1 illustrates the growth of ESG Investing assets (equivalent to ESG AUM) for different geographic regions from 2012 to 2016. Total ESG AUM in Asia ex-Japan pales in comparison to the size of total assets in other regions. Despite starting from a lower base, the ESG AUM growth rate in Asia ex-Japan is significantly slower than the growth seen in most other regions

REGION	2012	2014	2016	GROWTH (2012 - 2016)
Europe	8,758	10,775	12,040	37.0%
United States	3,740	6,572	8,723	133.0%
Canada	589	729	1,086	81.0%
Australia/NZ	134	148	516	285.0%
Asia (ex-Japan)	40	45	52	16.0%*
Japan		7	474	6,771%*
Total	13,261	18,276	22,890	73.0%

Fig. 2. Growth of ESG Investing assets by region 2012-2016, in $US BN and percent

Source: Global Sustainable Investment Alliance

Notably, Japan has made significant strides in expanding its ESG Investing efforts and is a frontrunner in Asia: ESG AUM grew almost seventy-fold by 2016, albeit from a low base and a sliver to the total global share in 2014. Japan's high CAGR (724 percent) was made possible by a combination of revised reporting standards, the emergence of a Japanese stewardship code and a growing focus on ESG among Japanese institutional investors, especially pension funds such as the Japanese Pension Investment Fund (GPIF).

CHINA

China's 13th Five-Year Plan, which will guide Chinese government policy from 2016 to 2020, outlines a series of reforms and targets to aid in greening China's economic development. It has been estimated that approximately US $274-468 billion of green investment each year from 2014 to 2020 will be required for China to transition into a green economy. To ensure the development of the requisite financing channels, the Plan includes commitments to encourage a green bond market, recommendations for the establishment of market-based green development funds, and expectations that the banking sector restrict lending to entities with industrial over-capacity (such as steel and coal mining).

In accordance with the general deployment of the *Guidelines for Establishing a Green Financial System*, China will make it mandatory for listed companies to disclose environmental information by 2020.

In September 2018, the China Securities Regulatory Commissions (CSRC) established an environmental, social and corporate governance (ESG) information disclosure framework for listed companies in the revised C*orporate Governance Code for Listed Companies*.

The UN supported Principles for Responsible Investment (PRI) has recruited several Chinese mutual funds as its new signatories in 2018. Joining the PRI will motivate mutual funds to develop ESG investment products. Therefore, it is anticipated that more Chinese funds will adopt ESG investment strategies in 2019, and the more aggressive ones will introduce ESG-themed mutual fund products. Companies like China Securities Index Co., Ltd. (CSI) and MSCI are expected to launch more ESG-themed indices.

In 2018, China's green bond market witnessed continued and stable growth, with the issuance of more than 120 labelled green bonds worth around RMB220bn. However, green bonds remain a small share of China's bond market. How to motivate issuers and investors and scale up the market remains a key challenge for China's green bond market in 2019.

The Green Bond Standard Committee was established in December 2018 under the guidance of the People's Bank of China (PBoC), the CSRC and other regulators, and has the National Association of Financial Market Institutional Investors (NAFMII) as the Chair. This Committee is China's first self-regulatory and coordination mechanism for green bonds, and is expected to play an important role in 2019, especially in the harmonisation of green bond standards and market access of green bond verifiers.

INDIA

It's still early days for ESG investing in India. There is one large, and only somewhat prominent, domestic ESG fund. We believe there is another on the anvil, but that is likely to be more focussed on global pools of capital. This would change in our view, albeit the start and getting the momentum going is typically the most challenging phase, and this is where domestic ESG assets are currently positioned. Nevertheless, ESG funds have not shied away from investing in India. According to the GSIA, as many as 41 Global E&S seeking funds (aggregating USD 15 billion) have invested on an average 25% of their funds in Indian equities. 95 global socially responsible funds have invested in India and allocated on an average 18.5% to Indian companies (their total fund corpus is USD 25 billion). This is sizeable, and reflects the hectic activity among these funds. And that assets mandated under the ESG umbrella are likely to spike in India seems to be a foregone conclusion.

The enabling environment for sustainable investment in Indian listed equities is currently weak. Despite some notable exceptions from companies such as HSBC, CLSA, Trucost, KLD and Innovest, ESG research coverage is still relatively limited. Numerous organisations, such as TERI, the Confederation of Indian Industry (CII), the UN Global Compact and IFC itself, are active in promoting corporate responsibility and sustainability reporting. ESG transparency and disclosure by Indian companies in the form of corporate sustainability reports and responses to the Carbon Disclosure Project are slowly improving, but from a very low starting point.

India's sustainability goals India is in sync with the UNO's SDGs. The country's top planning body NITI Aayog has finetuned the 17 SDGs to Indian realities and inked a Sustainable Development Framework (SDF) for 2018–22 with the UNO. It is entrusted with implementing 'Transforming our world: the 2030 Agenda for Sustainable Development Framework' (called SDF). The SDF covers 17 goals and 169 related targets thrashed out at the UN Sustainable Development Summit over 25–27 September 2015 over the 15-year period. More than anything else, the SDF is a reflection of India's commitment to attaining SDGs. sizeable budget to promote sustainability goals The Government of India has earmarked a sizeable budget of INR 110 trillion for the programme. The focus areas: post are poverty and urbanisation; health, water, and sanitation; education; nutrition and food security; climate change, clean energy and disaster resilience; skilling, entrepreneurship and job creation; and gender equality and youth development. The task at hand for NITI Aayog is not merely to collate data on SDG, but to act proactively to fructify the goals and targets quantitatively while maintaining high ESG standards. The Ministry of Statistics and Programme Implementation (MoSPI) has already undertaken a parallel exercise—it interacted with various ministries to formulate measurable indicators for SDF.

The Social disclosure levels more than doubled from 2010 through 2017; in fact, India dramatically outscores USA on Social disclosures. The country's Environmental score too has improved over the years and is set to improve further amid rising awareness. While regulatory push and the government's pull (read 'incentives') are marshalling companies into compliance with ESG standards, corporate India's newfound willingness to adopt cleaner business processes too is an encouraging dynamic pushing up compliance.

The csr push in India

India promulgated a landmark CSR law in 2014. It changed the landscape and approach to social support that businesses provide. The law stipulates that companies of a particular scale and profitability must spend 2% of average profits for preceding three years towards a wider defined set of social activities and objectives. The law further specifies that CSR initiatives must be run under the direct supervision of a board committee. While the law seeks to sustainably funnel a sizeable corpus towards social funding, it has – importantly and most likely inadvertently – made such spends centre stage for corporate CEOs and brought in significant attention and focus to the task. Programmes pertaining to women empowerment, girl child, education, etc have thus spawned across corporate India and are run either independently or under the guidance of reputed non-governmental organisations. We understand funding for CSR initiatives is significant and should fundamentally grow ahead of India corporate sector profitability as businesses increasingly toe the statutory line and growing companies fall into the ambit of CSR framework. The actual CSR spend moved up progressively to almost INR 90 billion in 2018 and is rising. In addition, businesses are increasingly meeting their minimum requirements, up from 75% to 92% over the last three years. While there is still a gap, it's only moderate 8%, and is typically on account of glitches and execution issues rather than intent. The corporate sector always did have social initiatives and commitments, but CSR has boosted and widened these spends, and in many ways coalesced and quantified them.

To its credit, the Government of India has formulated many **regulations and offers great incentives** for promoting environmental, social and governance standards. To be precise, on the one hand, there are a myriad of incentives and subsidies in the form of business opportunities to embrace environment friendly businesses and practices. On the other hand, the government enforced stricter regulations and norms to drive home its intent on the matter. The number of such mandatory government regulations and incentives throw ample light on the broad scope of ESG in India. Ranging from the Bharat Stage VI Standards (pollution emissions) to the Namami Gange Project, the Government of India has been introducing schemes, regulations and incentives to preserve the environment. The two-pronged countervailing approach comprises regulatory norms for curbing hazardous business practices with severe penalties for noncompliance and incentives for promoting environment-friendly businesses.

Despite the implementation of these policies in pockets across Asia, many **challenges** remain in the widespread adoption of ESG Investing in Asia:

- The combination of limited knowledge and a skill resource gap has made ESG a daunting prospect for some Asian investors. Apart from their lack of awareness and misconceptions about ESG hampering financial performance, these investors do not have the requisite expertise and team to interpret the multitude of ESG standards.
- Moreover, there has been a slow adoption rate of ESG Investing among investors in Asia, a heterogeneous region comprising of numerous emerging markets that prioritize economic growth and traditionally focused on short-term returns.
- These issues are further exacerbated by the lack of consequences for inaction and the lack of collective efforts by Asian regulators and governments in enforcing ESG policies as opposed to their peers in Europe.

Barriers to SRI in Emerging Markets

In developed countries, social investors are not unlike other investors in that those who lack experience or technical expertise in emerging markets often have a homogeneous view of such markets, believing them to be highly risky and volatile, with unfavorable securities regulations, few investment worthy stocks, and poor liquidity.

In developed countries, social investors are not unlike other investors in that those who lack experience or technical expertise in emerging markets. Investors also express practical concerns about the "salability" and profitability of emerging market investments. Meanwhile, for emerging-market investors, barriers to SRI in their own markets include competing traditional investment in land or fixed-income instruments, as well as the relative novelty of securities investments in general and SRI products specifically.

Aside from direct financial obstacles, there are also analytical challenges impeding the assessment of the social and environmental performance of companies in emerging markets. Foremost is the dearth of credible, standardized data on business practices related to social and environmental concerns. A second challenge is more complex, pertaining to the very role of SRI in emerging markets as a tool for sustainable development: the sometimes uncertain question of what objectives are appropriate for SRI to attempt to achieve, given the varying priorities of sustainable development in differing countries.

Underlying all these challenges is the inadequate, fragmented and uncoordinated infrastructure for supporting knowledge development and information networking in emerging markets. A healthy infrastructure not only is vital for the generation, pooling and distribution of SRI-related information but also is needed to facilitate critical SRI-sector development activities such as conferences, training workshops and sector promotion and advocacy.

The Case for More SRI in Emerging Markets

From a sustainable development perspective, the positive impact that SRI can have in emerging markets is clear. Its past contributions to sustainable development around the world range from divestment in South Africa and sweatshop reform in Central America and Asia to human and labor rights in Myanmar (Burma), China and Mexico, to name a few examples. And modest investments can achieve significant results, as exemplified by Green Cay Asset Management's investment in Vestel, a Turkish electronics manufacturer and once chronic polluter: the SRI fund helped turn the company into a model environmental performer, recognized internationally.

Greater SRI in emerging markets can also bring the weight and credibility of private sector finance to an area of national development that is often left largely to government and NGOs. Social investors, as relatively large investors within the context of emerging markets, may also have a favorable impact on sustainable development in those countries that is orders of magnitude larger than it has been in developed countries.

Data and Methodology

Primarily, the data for the said purpose has been collected from the Bloomberg Database pertaining to the list of all mutual funds of Indian and Chinese markets. The total number of mutual funds in china came out to be 5000 and in India there are 2202 mutual funds. After that certain filters are used to extract the data for ESG funds of both the countries. The Bloomberg database categorises the mutual funds according to their attribute, so we chose ESG, religiously responsible, socially responsible, Islamic, environment friendly and clean energy attributes to become part of our sample.

Then the daily return data for these funds was mined in order to calculate the performance measures of these ESG funds and Conventional mutual funds. Then the t-test was run using the Microsoft excel in order to find the statistical significance of these ratios computed.

While it is fairly easy to obtain information with regard to the *current* holdings of active ethical funds, retrieving *historical* data on funds' portfolio holdings is more challenging. In particular, while SRI are well-established in developed markets, it is only a fairly recent phenomenon in some of the emerging markets we wish to consider. At the same time, we need sufficiently long track-records to be able to perform a meaningful analysis. This implies that we need to ensure that we incorporate ethical funds with sufficiently long track-records for which historical information on their holdings is available.

Methodology

In the present investigation the same performance measures are calculated for all funds and these are then compared with t-tests and the non-parametric Friedman test for the ethical and non-ethical groups. The traditional risk-adjusted Sharpe, Treynor and Jensen measures are employed. A first analysis of ESG funds performance is based on their Sharpe ratio. In particular, we test whether the difference in Sharpe ratio of the ESG funds and the all mutual funds is statistically significant. In particular, the Sharpe reward to risk measure which estimates the ratio of the average return to the standard deviation of the fund return was estimated according to equation [2]:

$$SHARPE = \frac{\bar{r}_j - \bar{r}_f}{\sigma_j} \quad (2)$$

where rj is the average fund daily return σ ***j*** is the standard deviation of the daily returns of fund j and ***rf*** is the return earned by a risk free asset which is proxied for by the government treasury bill rates.

Sharpe ratio = (average return of portfolio – risk-free rate of return)/standard deviation of portfolio returns

This ratio has been criticised because it focuses on total risk (standard deviation) rather than market risk (as measured by the fund beta); portfolio theory suggests that the unique risk of a security should be diversified away in a large fund and only the remaining undiversifiable risk should be priced by the market. Therefore the Treynor ratio is also estimated which calculates the ratio of the average return to the Beta of the fund (β j) according to equation [3]:

$$TREYNOR = \frac{\overline{r}_j - \overline{r}_f}{\beta_j} \quad (3)$$

where, β **j** is estimated by equation [4] below.

$$r_{jt} - r_{ft} = \alpha_j + \beta_j (r_{mt} - r_{ft}) + \mu_{jt} \quad (4)$$

Treynor ratio = (average return of portfolio – risk-free rate of return)/beta of portfolio

The Jensen measure assesses whether a fund has outperformed or underperformed a market portfolio by testing whether the constant (alpha) in equation [4] is significantly different from zero.

Where, μ ***jt*** is a random error term.

Jensen's alpha helps an investor determine how much extra return a fund has earned above the expected return while considering the non-diversifiable risk of the market. The expected return is calculated using the CAPM (capital asset pricing model). A positive Jensen's alpha indicates that the managers of the fund, through careful stock selection, have been able to extract higher returns than the market (which in our case is the underlying indexes). Jensen's alpha is calculated as follows:

Jensen's alpha = (portfolio return – expected return (CAPM))

Data Analysis

One of the objectives of the study is to analyse the extent of ethical investing in emerging Asian countries. We all have witnessed the rise of socially responsible investing in developed economies because the nature of developed economies provide the support for ethical investing. People are more aware consciously, institutions are grown and regulators are supportive. But this phenomenon of ethical investing is relatively new in emerging economies.

As shown in the table1, China and South Korea amongst the emerging Asian countries has the most number of mutual funds i.e. 5000 and 4918 respectively, but the ESG funds is not even 1% of all mutual funds in china at 0.78% and 1.03% in South Korea, that clearly tells us about the extent of popularity of ESG funds in these countries

TABLE 1: number of total mutual funds and ESG funds in the emerging Asian countries

COUNTRY	ESG Funds	conventional Funds	ALL Mutual Funds	%of ESG Funds
INDIA	15	2187	2202	0.681199
CHINA	39	4961	5000	0.78
INDONESIA	161	855	1016	15.84646
MALAYSIA	334	844	1178	28.35314
TAIWAN	5	987	992	0.504032
PHILIPPINES	3	354	357	0.840336
SOUTH KOREA	51	4867	4918	1.037007
THAILAND	27	1085	1112	2.428058
PAKISTAN	66	88	154	42.85714

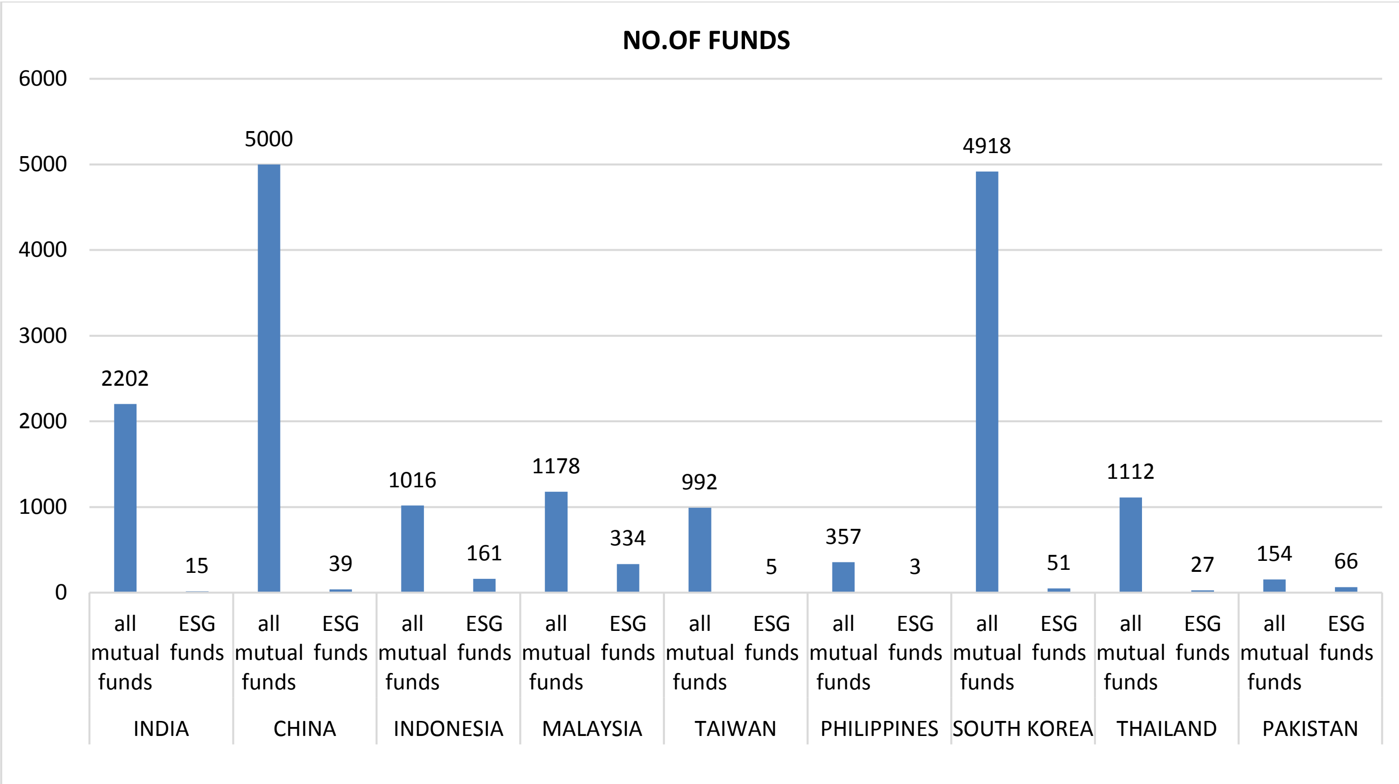

Fig. 3. showing the total number of mutual funds and ESG funds in the 9 emerging Asian countries

One thing is clear from the figure3 that the phenomenon of Ethical funds is still new in the emerging Asian countries. The percentage of ethical fund is more in Indonesia, Malaysia and Pakistan because of presence of Islamic funds in these countries. So this piece of research is really helpful in throwing light on the importance of Ethical funds as an investment avenue in Emerging Asian countries.

TABLE 2: Table showing average assets under management in US$ (million) for all mutual funds and for ESG funds in INDIA and CHINA

Country	Type of fund	No.of funds	Average assets under management	Standard Error	Median	Standard Deviation	Kurtosis	Skewness	Range	Minimum	Maximum
INDIA	all mutual funds	2156	178.4991735	13.4968469	18.9975	626.6956782	126.4864	9.517134	12076.24	0	12076.24
	ESG funds	14	61.93742857	25.57749933	16.314	95.70223931	3.883744	2.032509	324.254	0.06	324.314
CHINA	all mutual funds	4449	413.6073574	40.42348481	52.044	2696.279769	1951.386	37.94319	146371.3	0.016	146371.3
	ESG funds	39	124.9491282	31.57463524	32.56	197.1835339	6.718374	2.495225	904.173	1.639	905.812

Asset under Management (AUM) is one of the indicator for investors in choosing a mutual fund. The more capital is deposited by the investor into a mutual fund, the greater the managed fund. Assets under management are the overall market value of assets/capital that a mutual fund holds. The fund manager manages these assets and takes investment decisions on behalf of investors. AUM is an indicator of the size and success of a fund house.

One can easily compare its assets under management in various timelines and market phases performed as opposed to its peers. The AUM-value also includes the returns that a mutual fund earns. The asset manager can invest this in securities, distribute to investors as dividends or hold as per the investment mandate.

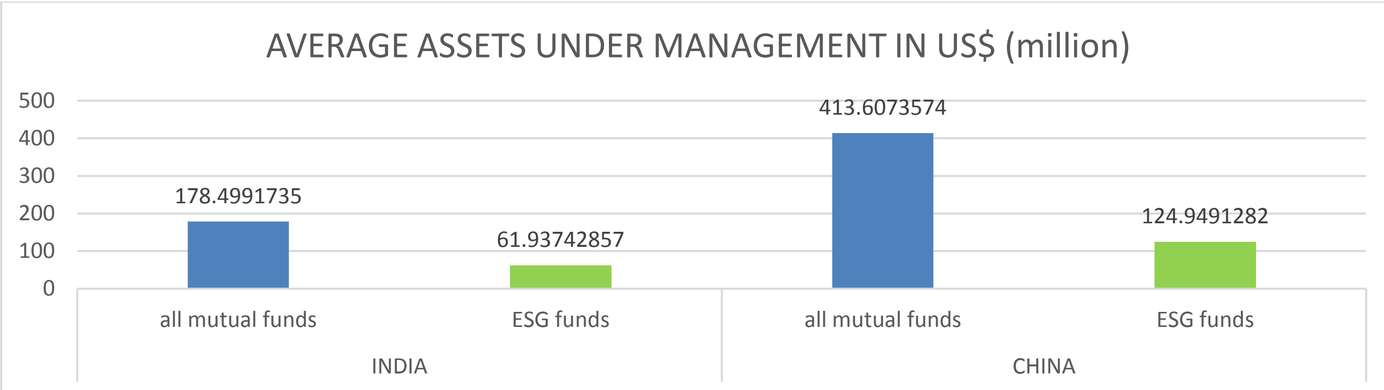

Fig. 4. showing average assets under management in US$ (million) for all mutual funds and for ESG funds in INDIA and CHINA

Sometimes, an equity fund's bloating AUM can affect its performance negatively. Nevertheless, there is practically no evidence to indicate that a higher AUM affects the fund performance negatively or aids it. It is the fund manager who should grasp the market opportunities – enter or exit a stock at the 'right' time. In many cases, a larger asset-under-management has hindered the manager in taking quick investment calls.

It can be seen from the figure 4 that the Average assets under management is more in China for both conventional funds and ESG funds. In the mutual fund industry, a fund's size must be looked at in relation to the context of its investment style. Some funds suffer when the fund outgrows its investment style.

TABLE 3: table showing average history length (in number of days) for all mutual funds and for ESG funds in INDIA and CHINA

COUNTRY	TYPE OF FUND	no. of funds	Average History length (in no. of days)	Standard Error	Median	Standard Deviation	Kurtosis	Skewness	Range
INDIA	all mutual funds	2192	3379.477646	44.60255	3497	2088.238	-0.28608	0.388723	10427
	ESG funds	15	3528.8	757.2037	3595	2932.637	1.087789	1.013194	10389
CHINA	all mutual funds	5000	1680.5782	18.07814	1279.5	1278.318	1.609215	1.420548	6975
	ESG funds	39	1876.923077	136.819	1537	854.4346	-0.11538	0.878912	3462

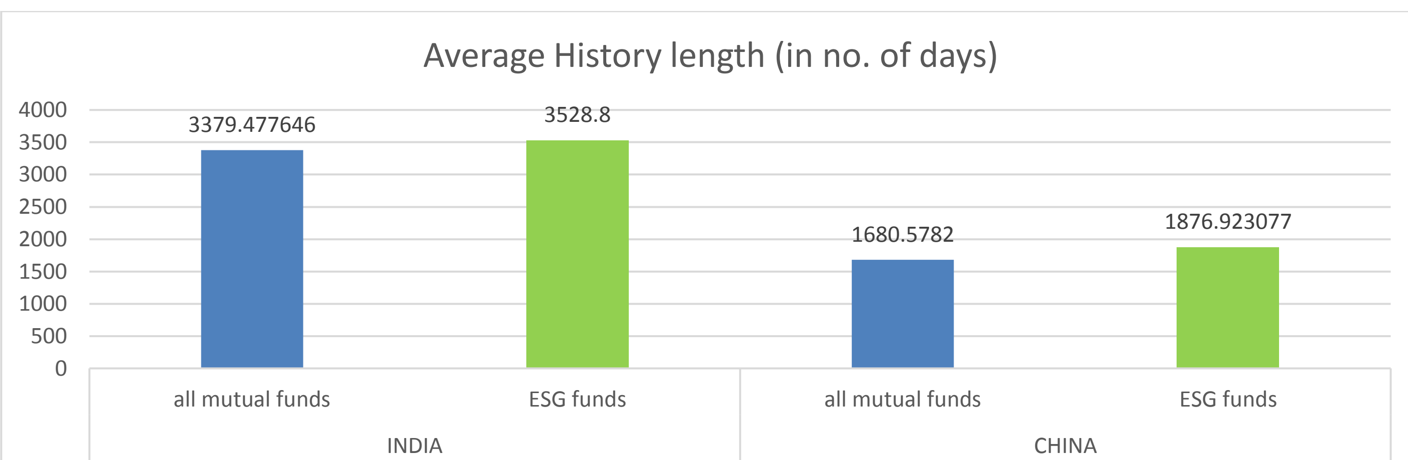

Fig. 5. Showing average History length (in no. of days) for all mutual funds and for ESG funds in INDIA and CHINA

Sharpe Ratio

Measures like standard deviation and beta are used as a proxy for risk in calculating risk-adjusted measures of return. One of the most common measures is the Sharpe Ratio, which is a portfolio's return in excess of the risk-free rate divided by the standard deviation of the portfolio. This measure tells us the ratio of reward per unit of risk: the higher the number the better.

It can be witnessed from the table4 that China is an outperformer by having the highest Sharpe ratio and if we consider the Indian scenario then the Sharpe ratio is better for the ESG funds which shows that the risk adjusted returns are higher for the ethical funds.

TABLE4: Table showing average Sharpe Ratio (1 month) for all mutual funds and for ESG funds in INDIA and CHINA

COUNTRY	TYPE OF FUND	Mean sharpe ratio 1M	Standard Error	Median	Mode	Standard Deviation	Sample Variance	Kurtosis	Skewness	Range	Minimum	Maximum	Sum	Count
INDIA	all mutual funds	-3.23304	0.611928	-2.6845	-2.886	26.39106	696.488	698.6812	-25.729	820.306	-771.236	49.07	-6013.45	1860
	ESG funds	-1.86331	0.310207	-2.008	-2.008	1.118467	1.250968	2.408983	-0.2233	4.516	-4.445	0.071	-24.223	13
CHINA	all mutual funds	4.259266	0.095744	3.8615	1.778	6.767446	45.79833	30.85772	-1.7167	132.94	-100.396	32.544	21279.3	4996
	ESG funds	3.328949	0.764008	2.351	#N/A	4.771227	22.76461	3.192916	0.21937	29.428	-11.632	17.796	129.829	39

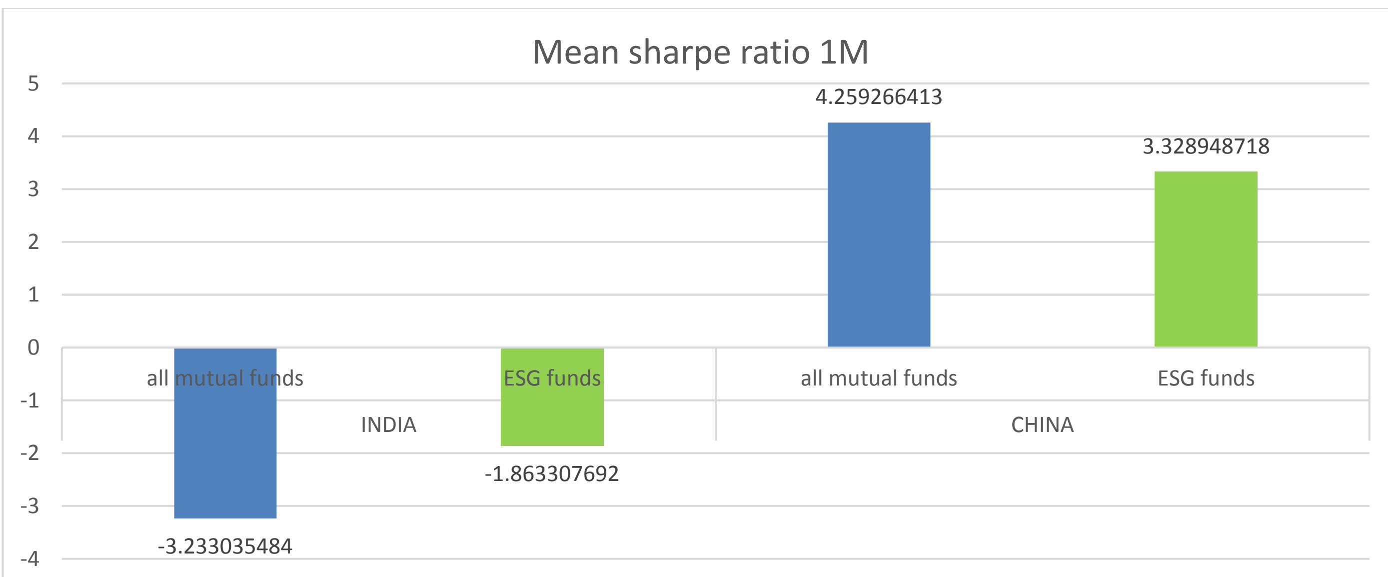

Fig. 6. showing average Sharpe Ratio for all mutual funds and for ESG funds in INDIA and CHINA

Jensen's alpha helps an investor determine how much extra return a fund has earned above the expected return while considering the non-diversifiable risk of the market. The expected return is calculated using the CAPM (capital asset pricing model). A positive Jensen's alpha indicates that the managers of the fund, through careful stock selection, have been able to extract higher returns than the market (which in our case is the underlying indexes). Jensen's alpha is calculated as follows:

Jensen's alpha = (portfolio return – expected return (CAPM))

The Chinese ESG funds has an alpha of 9.60, the highest alpha in the group. This means that fund manager has been able to pull out a return 9.60% higher than the benchmark index. So, it can be seen that the Chinese fund managers have outperformed the Indian fund managers

TABLE 5: Table showing average Jensen Alpha (3 month) for all mutual funds and for ESG funds in INDIA and CHINA

COUNTRY	TYPE OF FUND	Count	Mean Jensen Alpha	Standard Error	Median	Standard Deviation	Sample Variance	Kurtosis	Skewness	Range	Minimum	Maximum	Sum
INDIA	all mutual funds	1217	-2.90508	0.572033	-3.375	19.95567	398.2289	159.7673	9.824321	483.893	-131.305	352.588	-3535.48
	ESG funds	11	-5.47927	1.2352	-6.436	4.096694	16.7829	0.818521	1.025862	13.783	-10.61	3.173	-60.272
CHINA	all mutual funds	738	9.551537	1.247447	2.8645	33.88835	1148.42	328.3956	15.41703	811.64	-52.976	758.664	7049.034
	ESG funds	13	9.617231	2.983068	7.025	10.7556	115.683	0.398811	-0.03221	40.777	-12.324	28.453	125.024

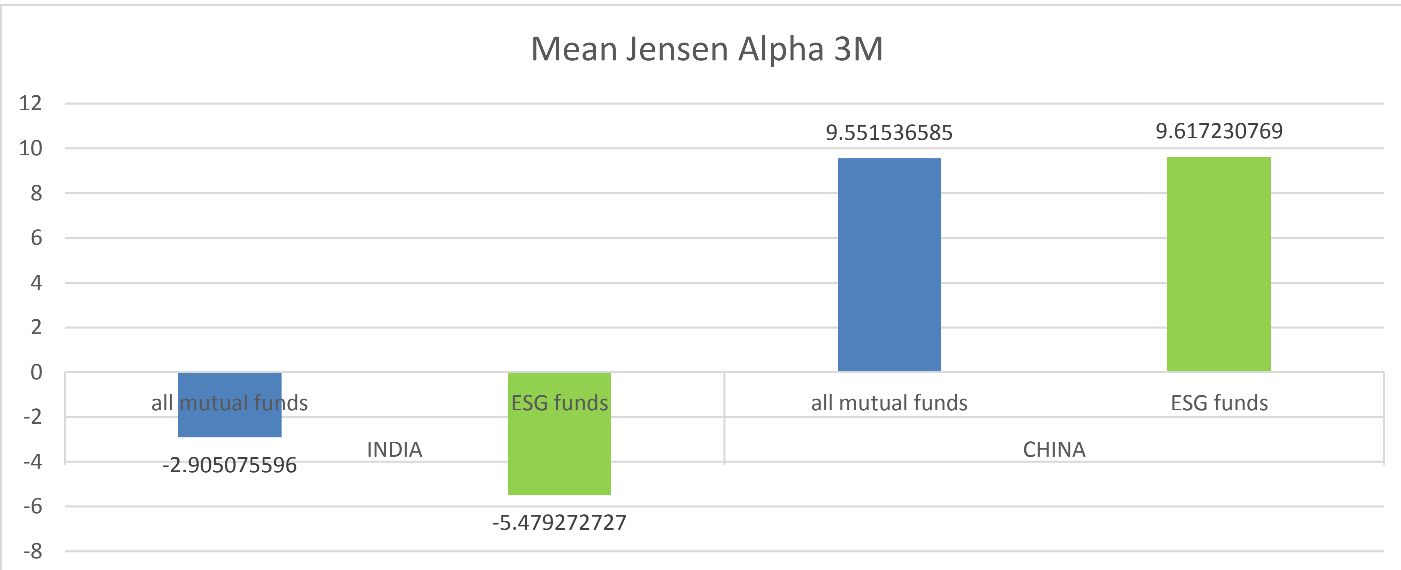

Fig. 7. showing average Jensen Alpha (3 month) for all mutual funds and for ESG funds in INDIA and CHINA

The Treynor ratio calculates how much an investment has earned above the risk-free market rate for every unit of risk assumed. Although it is similar to the Sharpe ratio, its measure of risk is different. Whereas the Sharpe ratio considers the total risk of the investment, the Treynor ratio only considers the systematic risk, assuming that the non-systematic risk is fully diversified in developing the portfolio. Risk in the Treynor ratio, represented by beta, is the systematic risk or non-diversifiable risk.

TABLE 6: Shows that the mean treynor ratio is slightly better for all funds in both the countries but the difference is statistically insignificant.

COUNTRY	TYPE OF FUND	Mean treynor ratio	Standard Error	Median	Standard Deviation	Sample Variance	Kurtosis	Skewness	Range	Count
INDIA	all mutual funds	-0.48656	0.208664	-0.296	6.508834	42.36492	878.6917	-28.8338	226.762	973
	ESG funds	-0.6699	0.445359	-0.2735	1.408347	1.983442	9.876536	-3.13475	4.68	10
CHINA	all mutual funds	0.510947	0.069246	0.1575	1.878587	3.529089	183.8163	11.07098	41.712	736
	ESG funds	0.313538	0.11053	0.19	0.398521	0.158819	2.699375	1.525821	1.473	13

TABLE 6: Table showing average Treynor Ratio (1 month) for all mutual funds and for ESG funds in INDIA and CHINA

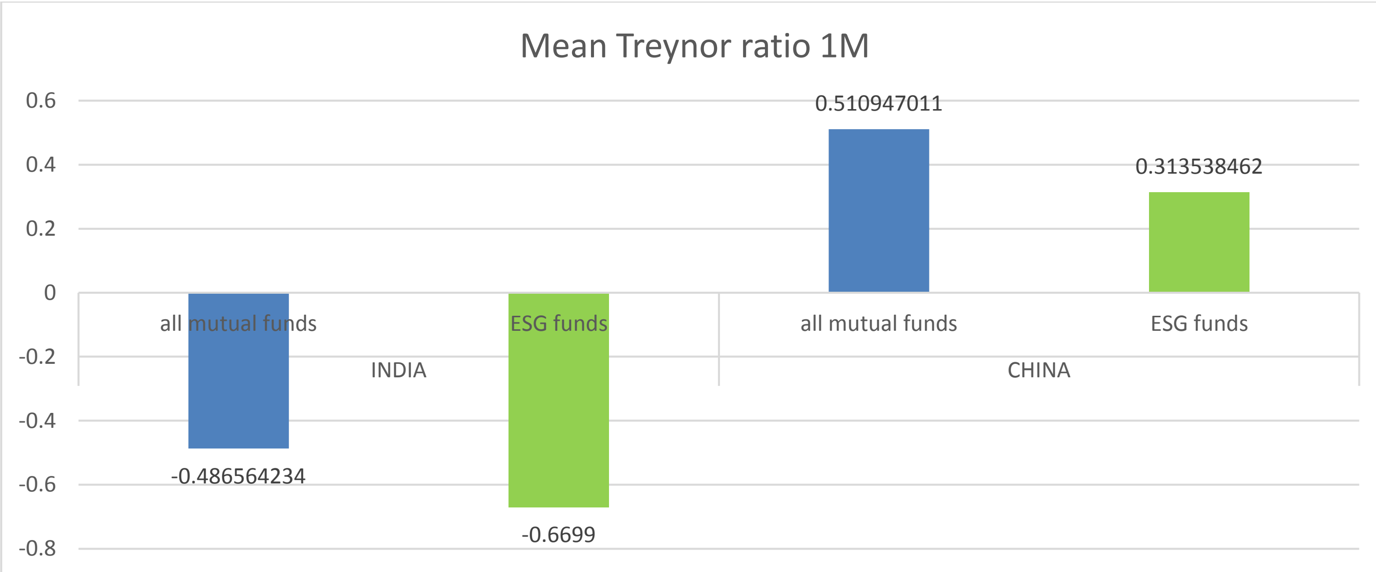

Fig. 8: Showing average Treynor ratio (1 month) for all mutual funds and for ESG funds in INDIA and CHINA

6. POLICY RECOMMENDATIONS

- To support a stronger knowledge and networking infrastructure: the people, organizations and companies that will drive emerging-market SRI in the future.
- To support the creation of corporate social and environmental performance data services focused on emerging markets.
- To motivate more institutional and retail SRI, including engaging institutional investors on the subject and supporting the launch of high-profile emerging-markets funds.

To encourage people to invest in ESG funds as they have more risk adjusted returns as shown by the mean Sharpe ratio of ESG funds

Regulators should support the ESG funds by giving incentives to people who invest in ESG funds by way of Income tax exemptions etc.

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Study of Demographic Variables on Financial Goal of Urban Individuals

Sameer Aziz Lakhani[1], Dr. Rajalakshmy Nanda Gopal[2]

[1](PGDBM, CFA, CIPM, FRM, CFP, M.COM, NET)
PhD Student (Research Scholar): K.P.B Hinduja College of Commerce, 315, New Charni Road. Mumbai 400 004
[2]M.A, M.Phil, PhD, Nirmala College of Commerce, Rani Sati Marg Malad (E) Mumbai - 400097
[1]lakhani.1981@gmail.com, [2]nrajalakshmy@gmail.com

Abstract: The objective is to study the relationship between various demographic variables and personal financial goal of urban individuals. The data was collected through structured questionnaire distributed to 405 samples from urban areas of Mumbai, Navi Mumbai, Thane and adjoining suburban and having household income of more than 10 lakhs per annum. Factor analysis is done using Principal Component and Varimax Rotation. It was found from the analysis that Long Term Financial Goal (LTFG) have statistical significant relationship with age, gender, work experience, marital status where as Short Term Financial Goal (STFG) have statistical significant relationship with age, work experience, marital status and nature of employment.

Keywords: Demographic, Long Term Financial Goal, Short Term Financial Goal.

1. INTRODUCTION

Today we are living in a global economy, which is becoming increasingly dynamic everyday with rapidly changing social, economic, political and technological environments. In such a complex and changing world we are confronted with multiple investment decisions. The present financial markets have become very complex, flooded with many new and innovative financial products every day.

The decisions which an individual makes have a significant impact on the actual outcome and the effects of making incorrect decisions are potentially financially devastating especially when it comes to retirement planning and buying insurance products. Individuals have personal financial goals and their goals are influenced by a variety of factors such as earnings, expenditure and savings. A well defined financial goal provides the road map or direction that leads to the destination where an individual wants to reach financially. Action plans and prudent financial strategies help an individual in reaching financial goals.

Individuals invest keeping the personal financial goals in focus. The common life goals of individuals are education and marriage of children, buying a house and a comfortable retirement. Other short term goals may include funding vacations, purchasing a car and fulfill debt obligation (personal loan, car loan), etc. For achieving short term or long term goals, proper management of personal finance is essential.

Financial planning is all about managing finances of an individual or a family. It means proper management of income, expenses, assets, liabilities, insurance, taxation and estate, so that one can successfully achieve all their desired goals. Urban individuals thrive to achieve both short term and long term personal financial goals. Therefore, it is imperative to understand the role of various demographic variables on personal financial goal.

2. OBJECTIVES OF THE STUDY

1. To evaluate long term and short term personal financial goals of urban individuals.
2. To study the relationship among various demographic variables and personal financial goal of urban individuals.

3. REVIEW OF LITERATURE

Mittal, M., & Vyas, R. K. (2007) this paper investigates how investment choice gets affected by the demographics of the investor. The study provides evidence that the investment choice depends on and is affected by the demographic variables. The result shows that the mutual funds, followed by equity are the most preferred choices for investment among the investors. Males and females do vary significantly regarding equities and post office deposits. Investors with less education prefer high risk investments, such as, equity and derivatives. The propensity to take risk decreases with increase in education level.

Stawski (2007) the study suggests goals are an important precursor to behavior. Savings contributions are well predicted by planning activities and income, planning is adequately predicted on the basis of goal clarity, and goal clarity is reasonably accounted for by age. The model suggests that goal clarity exerts an indirect influence on savings through planning activities. Findings from the present study suggest that goal clarity mediates the age savings relationship. The study shows that although a fair number of working individuals are saving for retirement, relatively few engage in basic financial planning activities.

Petkoska J & Earl J. (2009) had tried to understand demographic and psychological variables influencing retirement planning. Study was conducted in Australia. A sample of 377 respondents with age 50 years or more were selected to participate in online survey. Study revealed that out of all demographic factors like age, gender, education level, only age is the predictor of the financial planning. Goals, positive attitude towards retirement are major predictor for the financial planning.

Dash, M. K. (2010) This study find out factors which affects individual investment decision and differences in the perception of investors in the decision of investing on basis of age and on the basis of gender. The study states that investor's age and gender predominantly decides the risk taking capacity of investors. The study concluded that the modern investor is a mature and adequately groomed person.

Soman & Zhao, M. (2011) this paper examines the effect of the number of goals on consumer's savings behavior. Study demonstrates the effect of providing a single goal over multiple goals in improving people's actual savings rate over six months in a rural area in India. Study also showed that a single goal indeed led to higher implementation intentions, which in turn resulted in stronger intentions to save.

Pant G. (2013) study was undertaken to assess the level of awareness and attitude of female faculties towards retirement planning. For the study, 50 female faculties of Bansathali University were selected. Study revealed that marital status of the samples was major determinant towards awareness and preparedness of retirement. Married females were more aware and prepared for retirement than unmarried females.

Sunita, P. & Tanvi, P. (2014) The test results reveal that the males and females do vary significantly in their motives regarding return protection, liquidity and other factors and were not significant for safety, meet contingencies, tax benefit, capital gain and income generation. Investors from lower age group had capital gain and return protection as their primary motive. Middle age group investors have responsibility of child's education, marriage etc. and therefore their main aim for doing investment is planning for other factors which is prime need in their age. And those of higher age group like to have income from their investments and maintain liquidity because they are at very uncertain age of their life where they are not strong enough to work and at the same time needs are also not much higher.

Pratibha Chaurasia (2017) this study demonstrates the relationship of demographic factors of age and gender on the investment objectives of the investors. It is deduced that preference to investment objective of safety of principal, capital growth and regular income has significant relationship with gender but has no significant relationship with age. However, investment objective of quick returns and liquidity has significant relationship with both age and gender. Investment objective of tax benefit has found to have significant relationship with age but not gender. The study identifies safety of principal as the most preferred investment objective and liquidity as the least preferred investment objective.

4. RESEARCH METHODOLOGY

Research Design	Respondents
	Lawyers, Doctors, Medical Professor, Management Professors, Entrepreneurs, Corporate Executives, International School Teacher, Financial Advisors, House wife, Executive Management Students, Freelancer, Sales Executive, Bankers, Chartered Accountant, Equity Research Analyst, Fixed Income Analyst. Business Analyst, Trader.
Data Collection Process	Survey
	In person (Face to Face approach)
Sampling Method	Stratified Random Sampling
Population	Individuals having household income of more than 10 lakhs per annum in urban area
Sampling Frame	Business School, Hospitals, Medical Colleges, Corporate, Individuals engaged in Financial Planning, Residential Societies, Practicing Lawyers, Practicing Doctors, PhD Faculties, Practicing Chartered Accountant, Chartered Financial Analyst, Certified Financial Planner, Financial Risk Manager,
Sample Size	405

5. SAMPLE SIZE

The sample size for this study is 405. For the purpose of study, samples were selected from urban areas of Mumbai, Navi Mumbai, Thane and adjoining suburban and having household income of more than 10 lakhs per annum. Criterion of urban areas is as per census of India 2011 definition.

6. SOURCES OF DATA COLLECTION

PRIMARY DATA

For this study, primary data has been collected through questionnaire. The questionnaires were filled by respondents through face to face approach. For the purpose of primary data collection, survey technique has been adopted; in which close ended questions are asked with the help of structured questionnaire. In this study, data were collected from 405 individual's residing in urban areas of Mumbai, Navi Mumbai, Thane and adjoining suburban and having household income of 10 lakhs per annum from all sources by using survey method.

SECONDARY DATA

The secondary data in the form of archival information necessary for this investigation was collected mainly from the various libraries (academic), archives and government published sources as well as the internet.

7. DEMOGRAPHIC PROFILE OF THE RESPONDENTS (DESCRIPTIVE STATISTICS)

Age: The respondents are broadly categorized into three groups based on their earning life cycle. First group is between the range of 21-30 years (N= 164), second group is between the range of 31-60 (N= 235) and the third group above 60 years of age (N=6). Table 1 reveals that 58% of respondents belong to age group of 31-60 years followed by 40.5% of respondents in the age group of 21-30 years.

TABLE 1: Age Group

		Frequency	Percentage
Valid	21-30	164	40.5
	31- 60	235	58.0
	Above 60	6	1.5
	Total	405	100.0

Source: Primary Data

Nature of Employment: The respondents were divided into four groups based on their nature of employment viz. full time, part-time, contractual and others. Others category typically include hourly basis, self-employed and employer. Below table 2 shows that 87.7% of the respondents are engage in full time employment followed by 5.7% of respondents engage in others category (hourly basis, self-employed and employer).

TABLE 2: Nature of Employment

		Frequency	Percentage
Valid	Full Time	355	87.7
	Part Time	17	4.2
	Contractual	10	2.5
	Others	23	5.7
	Total	405	100.0

Source: Primary Data

Gender: Male is coded as 1 where as Female is coded as 2, the group statistics shows that there are 229 Males (Mean =3.32) in data and 176 are Females (Mean = 3.12). It is evident from table 3 that 56.5% respondents are male respondents and 43.5% are female respondents.

TABLE 3: Gender

		Frequency	Percentage
Valid	Male	229	56.5
	Female	176	43.5
	Total	405	100.0

Source: Primary Data

Household Income The household income of respondents is considered as the total income earned by all the members of the family from all sources in a year. For the analysis purpose, the household income has been categorized as Low, Average, and High. Low Income is considered as below 10 lakhs per annum, Average Income is between 10 lakhs to 20 lakhs per annum and High Income is above 20 lakhs per annum. From the table 4 one can observe that 47.9% of the respondents have household income below 10 lakhs per annum, 36.5% of the respondents have household income between 10 lakhs to 20 lakhs per annum and 15.6% of the respondents have household income above 20 lakhs per annum.

TABLE 4: Household Income

		Frequency	Percentage
Valid	Low	194	47.9
	Average	148	36.5
	High	63	15.6
	Total	405	100.0

Source: Primary Data

Work Experience In the present data, respondents work experience ranges from minimum 1 year to maximum 45 years with mean value of 10.2 years of work experience.

TABLE 5: Work Experience

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Work Experience	405	1	45	10.27	7.940
Valid N	405				

Source: Primary Data

Marital Status Among respondents, those who were Married are coded as 1 (Yes) and those who were Unmarried, Divorced, Single parent are coded as 2 (No). The data contains 236 respondents Married and 169 other than Married; their group statistics shows mean value of 3.32 and 3.11 respectively. Table 5A reveals that 58.3% of the respondents are Married while 41.7% are Other than married (Unmarried, Divorced, Single parent).

TABLE 5A: Marital Status

		Frequency	Percentage
Valid	YES	236	58.3
	NO	169	41.7
	Total	405	100.0

Personal Financial Goals The various personal financial goals for this study is child education, retirement planning, marriage funding of children, to purchase house / down payment for house, tax planning, international vacation, to purchase car, corpus for charity or philanthropy, and contingency / medical emergency.

From the table 6 it is been observed that financial goals is measured through nine items. Among all the items retirement planning has got highest mean score of 3.77 by the respondents. Contingency planning and tax planning got the next best mean score of 3.52 and 3.49 respectively. Corpus for charity got the least mean score of 2.12 by respondents.

TABLE 6: Personal Financial Goals

Descriptive Statistics			
	N	**Mean**	**Standard Deviation**
Child Education	405	3.16	1.566
Retirement Planning	405	3.77	1.340
Marriage Funding of Children	405	2.61	1.425
Purchase House / Down payment for House	405	3.20	1.486
Tax Planning	405	3.49	1.287
International Vacation	405	2.66	1.450
To Purchase Car	405	2.38	1.387
Corpus for Charity / Philanthropy	405	2.12	1.203
Contingency / Medical Emergency / Planned Surgeries	405	3.52	1.314
Valid N	405		

Source: Primary Data

8. ANALYSIS AND DISCUSSION

Based on the factor analysis and the reliability analysis, the construct 'Financial Goals' measured through two variables namely 'Long term goals' and 'Short term goals'.

Factor Analysis of Financial Goals (FG)

The scale shown in Table 7 has total six items, all items measures two different variables and a single construct. The initial factor analysis is done using Principal Component and Varimax Rotation. The total variance explained by the construct is more than 60 percent in both the cases.

Three items tax planning, corpus for charity or philanthropy, contingency or medical emergency are dropped after factor analysis due to their very low loadings. It largely appears that urban individuals are not considering tax planning as a financial goal. Since majority of the respondent belong to service class, where salary is the major source of income, tax planning would be a given yearly phenomena and might not require consideration from medium to long term perspective.

The contingency planning or emergency planning is protection against the possibility of loss or reduction in income. An individual should have sufficient funds to meet the household expenses for six months, in the event regular income is not available (e.g. loss of job). The urban individual is not considering contingency as a part of financial goal. The reason can be they might have monthly surplus to fund any unforeseen circumstances or they might not consider it as a future goal which requires financial planning or they are considering future goals from 3 to 15 years perspective and ignoring to plan for 3 to 6 months perspective.

The factor analysis also reveals that urban individuals do not foresee charity or philanthropy as a financial goal.

TABLE 7: Factor Analysis and Reliability Analysis of Financial Goals (FG)

Sr.No/ Items	Long Term Financial Goal (LTFG)	Loadings	Mean	KMO / Sig.	Cronbach's Alpha	% of Variance
1	Child education	0.867	3.16	0.670 0.000	0.759	67.593
2	Retirement planning	0.722	3.77			
3	Marriage funding of children	0.844	2.61			
S.No/ Items	**Short Term Financial Goal (STFG)**	**Loadings**	**Mean**	**KMO / Sig.**	**Cronbach's Alpha**	**% of Variance**
4	Down payment for house	0. .605	3.20	0.576 0.00 0	0.667	60.805
5	International vacation	0. .814	2.66			
6	To purchase car	0. .874	2.38			

Source: Primary Data

Interpretation

The data adequacy is tested with KMO test. The value of KMO is greater than 0.05, it implies that the data are adequate to undertake analysis and interpretation. The reliability of the data is measured with Croanbach's alpha, which comes out to be more than 0.6 in each case, demonstrating the good internal consistency. The loading of financial goal (FG) are also adequate for analysis. Hence, the given scale has adequate validity and reliability to proceed for further analysis.

Relationship between Financial Goals (FG) and Demographic variables

Relationship between Financial Goals (FG) and Age

TABLE 8: Relationship between Financial Goals (FG) and Age

ANOVA						
Relationship between Long term Financial Goal (LTFG) and Age						
	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	37.787	2	18.893	14.245	.000	
Within Groups	533.183	402	1.326			
Total	570.970	404				
Post Hoc Tests : Multiple Comparisons						
Dependent Variable: Long term Financial Goal (LTFG)						
LSD						
					95% Confidence Interval	
(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
21-30	31-60	-.60558*	.11718	.000	-.8359	-.3752
	Above 60	.27575	.47869	.565	-.6653	1.2168
ANOVA						
Relationship between Short term Financial Goal (STFG) and Age						
	Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	20.215	2	10.108	8.397	.000	
Within Groups	483.874	402	1.204			
Total	504.089	404				
Post Hoc Tests : Multiple Comparisons						

Dependent Variable: Short term Financial Goal (STFG) and Age						
LSD						
(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
21-30	31-60	.42860*	.11163	.000	.2091	.6481
	Above 60	.89905*	.45602	.049	.0026	1.7955

Source: Primary Data

Interpretation

From the ANOVA Table 8, a significant difference ($p < 0.05$) has been found between financial goals and age groups; therefore, Post-Hoc analysis has been done for this variable and a significance difference has been found with the age group of 21- 30 and 30 - 60 years for long term goal, but no significance for age above 60 years. For short term goal, significance has been found across all age categories. It implies that urban individuals who are not senior citizen are concerned about both their short term and long term goal.

Relationship between Financial Goals (FG) and Gender

TABLE 9: Relationship between Financial Goals (FG) and Gender

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Long term Financial Goal (LTFG)	Male	229	3.2955	1.17459	.07762
	Female	176	3.0265	1.19334	.08995
Short term Financial Goal (STFG)	Male	229	2.8079	1.12215	.07415
	Female	176	2.6705	1.10869	.08357

Independent Samples Test						
			Long term Financial Goal (LTFG)		**Short term Financial Goal (STFG)**	
			Equal variances assumed	**Equal variances not assumed**	**Equal variances assumed**	**Equal variances not assumed**
Levene's Test for Equality of Variances	F		.472		.150	
	Sig.		.492		.699	
t-test for Equality of Means	t		2.269	2.264	1.228	1.230
	df		403	373.635	403	378.811
	Sig. (2-tailed)		.024	.024	.220	.220
	Mean Difference		.26897	.26897	.13741	.13741
	Std. Error Difference		.11856	.11881	.11190	.11173
	95% Confidence Interval of the Difference	Lower	.03589	.03535	-.08258	-.08228
		Upper	.50205	.50259	.35739	.35709

Source: Primary Data

Interpretation

Table 9 shows that there is a significant difference between the Long term Financial Goal (LTFG) for male and female ($t=2.269$, $p=0.24$). From the statistical analysis, it is found that there is a gender bias with respect to long term financial goal. There are variations in financial priorities from long term perspective with respect to males and female.

From the analysis, there is no statistical significance difference between the Short term Financial Goal (STFG) of male and female. It seems there are no gender differences with respect to investment objective from short term perspective (3 to 5 years). The urban male and female plan their short term financial goal in a similar way.

Relationship between Financial Goals (FG) and Household Income

TABLE 10: Relationship between Financial Goals (FG) and Household Income

ANOVA	F	Sig.
Short term Financial Goal (STFG)	.722	.487
Long term Financial Goal (LTFG)	2.170	.116

Source: Primary Data

Interpretation

Above table 10 of ANOVA shows that there is no significant difference between Financial Goals (FG) both long term and short term and household income. Though the urban individuals, across different income levels do consider short term and long term goal there is no variation with respect to household income.

Relationship between Financial Goals (FG) and Work Experience

TABLE 11: Relationship between Financial Goals (FG) and Work Experience

Correlations				
		Long term Financial Goal (LTFG)	**Short term Financial Goal (STFG)**	**Work experience**
Long term Financial Goal (LTFG)	Pearson Correlation	1	.222**	.166**
	Sig. (2-tailed)		.000	.001
	N	405	405	405
Short term Financial Goal (STFG)	Pearson Correlation	.222**	1	-.230**
	Sig. (2-tailed)	.000		.000
	N	405	405	405
Work experience	Pearson Correlation	.166**	-.230**	1
	Sig. (2-tailed)	.001	.000	
	N	405	405	405
**. Correlation is significant at the 0.01 level (2-tailed).				

Source: Primary Data

Interpretation

Table 11 correlation statistics shows that there is a statistical difference between Financial Goals (FG) and work experience of respondents. It has been found that Long term Financial Goal (LTFG) is positively related to work experience whereas short term Financial Goal (STFG) is negatively related.

For the positive relationship the reason could be that as and when individual work experience increases his investible resources increases and he can plan from a longer term perspective. As Individuals earning life cycle shifts from 21 to 30 years to above 30 years funding long term goals become more affordable. The reason for negative relationship could be that over the years as the experience increases priority for the long term plan takes precedence over short term plan e.g. individuals allocate more funds to retirement corpus as retirement approaches.

Relationship between Financial Goals (FG) and Marital Status

TABLE 12: Relationship between Financial Goals (FG) and Marital Status

Group Statistics					
	Married	N	Mean	Std. Deviation	Std. Error Mean
Long term Financial Goal (LTFG)	YES	236	3.5042	1.02797	.06692
	NO	169	2.7239	1.25040	.09618
Short term Financial Goal (STFG)	YES	236	2.5240	1.02953	.06702
	NO	169	3.0611	1.16136	.08934

Independent Samples Test						
			Long term Financial Goal (LTFG)		Short term Financial Goal (STFG)	
			Equal variances assumed	Equal variances not assumed	Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F		10.140		4.683	
	Sig.		.002		.031	
t-test for Equality of Means	t		6.877	6.660	-4.906	-4.810
	df		403	316.904	403	334.549
	Sig. (2-tailed)		.000	.000	.000	.000
	Mean Difference		.78037	.78037	-.53713	-.53713
	Std. Error Difference		.11347	.11717	.10948	.11168
	95% Confidence Interval of the Difference	.55730	.54984	-.75235	-.75681	-.08228
		1.00344	1.01090	-.32191	-.31745	.35709

Source: Primary Data

Interpretation

From Table 12 significant difference has been found between Long term Financial Goal (LTFG) of married and other than married (p=0.000). Also there is a significant difference between Short term Financial Goal (STFG) of married and other than married (p=0.000).

It seems marital status of an individual do have implication form short term as well as long term perspective. As the individual's marital status changes, aspirations do change such as owning a bigger residential house, planning international vacation, upgrading car, making provision for children education etc.

Relationship between Financial Goals (FG) and Nature of Employment

TABLE 13: Relationship between Financial Goals (FG) and Nature of Employment

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Long term Financial Goal (LTFG)	Between Groups	1.568	3	.523	.368	.776
	Within Groups	569.402	401	1.420		
	Total	570.970	404			
Short term Financial Goal (STFG)	Between Groups	17.451	3	5.817	4.793	.003
	Within Groups	486.638	401	1.214		
	Total	504.089	404			
Post-Hoc Multiple Comparisons						

LSD							
Dependent Variable	(I) Nature of Employment	(J) Nature of Employment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Short term Financial Goal (STFG)	Full Time	Part Time	.39293	.27350	.152	-.1448	.9306
		Contractual	-.26197	.35323	.459	-.9564	.4325
		Other	.81919*	.23703	.001	.3532	1.2852
	Part Time	Full Time	-.39293	.27350	.152	-.9306	.1448
		Contractual	-.65490	.43902	.137	-1.5180	.2082
		Other	.42626	.35235	.227	-.2664	1.1189
	Contractual	Full Time	.26197	.35323	.459	-.4325	.9564
		Part Time	.65490	.43902	.137	-.2082	1.5180
		Other	1.08116*	.41728	.010	.2608	1.9015
	Other	Full Time	-.81919*	.23703	.001	-1.2852	-.3532
		Part Time	-.42626	.35235	.227	-1.1189	.2664
		Contractual	-1.08116*	.41728	.010	-1.9015	-.2608
*. The mean difference is significant at the 0.05 level.							

Source: Primary Data

Interpretation

Form the table 13 a significant difference has been found among Short term Financial Goal (STFG) of full time, part-time, contractual employees and other (p=0.003). It implies that nature of employment does affect financial goals (FG) of urban individuals. Post-hoc analysis suggests that the difference lies between full time and other, and contractual and other.

The possible reason could be that individuals who have stability of income are in a better position to plan. Stability of income will generally leads to better financial planning. There will be variations in income depending upon nature of employment for part time and contractual income earners. This could be the reasons for statistical differences.

9. CONCLUSION

Financial goals are divided as long term and short term goal based on time horizon. In Exploratory Factor Analysis (EFA), we found six items were reliable and valid to conduct further analysis. The relationship between Financial Goals (FG) both long term and short term with age, gender, household income, work experience, marital status, nature of employment, are explored.

It was found that Long Term Financial Goal (LTFG) have statistical significant relationship with age, gender, work experience, marital status. However no significance was found with household income and nature of employment, Short Term Financial Goal (STFG) have statistical significant relationship with age, work experience, marital status, full time and others category of nature of employment. However no significance was found with gender and household income.

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Transaction Costs and Strategic Alliances of Air Transport. Case of Aeroméxico in Skyteam in the Face of the Boeing Crisis

Costos de transacción y las alianzas estratégicas del transporte aéreo. Caso de Aeroméxico en Skyteam frente a la crisis de Boeing

José G. Vargas-Hernández[1], María Guadalupe Hernández Martínez[2]

[1]M.B.A.; PhD., Research Professor, Department of Administration
University Center for Economic and Managerial sciences, University of Guadalajara
Periférico Norte 799 Edif. G201-7, Núcleo Universitario Los Belenes, Zapopan, Jalisco, 45100,
jvargas2006@gmail.com, jgvh0811@yahoo.com, josevargas@cucea.udg.mx
[2]Maestría en Negocios y Estudios Económicos
Centro Universitario de Ciencias Económico-Administrativas
Universidad de Guadalajara
Av. Periférico Norte N° 799. Núcleo Universitario Los Belenes, C.P.45100
Zapopan, Jalisco, México
gpehernandeznin@hotmail.com

***Abstract:* The aviation industry plays an important role in global economic development by offering efficient global connectivity, through a safe and fast service, which facilitates trade and tourism. However, it also faces high operating costs that have bankrupted many airlines throughout history. This situation led the industry to generate strategic alliances that have contributed to the permanence of airlines in the face of market threats. Such is the case of Aeroméxico, who faces the suspension of 6 aircraft of the Boeing 737 MAX 8 model, product of recent plane crashes where 2 of them crashed. The negotiation power granted by the decrease in transaction costs derived from being part of the Skyteam strategic alliance benefits Aeroméxico in the face of this adversity.**

Keywords:* AeroMexico, aviation industry, Boeing, strategic alliance, transaction costs,** *JEL.* ***M210, L140

Resumen

La industria de la aviación cumple un papel importante en el desarrollo económico global, al ofrecer una conectividad mundial eficiente, a través de un servicio seguro y veloz, que facilita el comercio y el turismo. No obstante, también enfrenta altos costos operativos que han llevado a la quiebra a muchas aerolíneas a lo largo de la historia. Esta situación llevo a la industria a la generación de alianzas estratégicas que han contribuido a la permanencia de las aerolíneas frente a las amenazas del mercado. Tal es el caso de Aeroméxico, quien enfrenta la suspensión de 6 aeronaves del modelo Boeing 737 MAX 8, producto de los recientes accidentes aéreos donde 2 de ellos se estrellaron. El poder de negociación que le otorga la disminución de costos de transacción derivada de formar parte de la alianza estratégica Skyteam beneficia a Aeroméxico frente a esta adversidad.

Palabras clave: Aeroméxico, alianzas estratégicas, industria de la aviación, Boeing, costos de transacción.

1. INTRODUCTION

The aviation or air transport system, which can be defined as the transfer of people, animals or things from a point origin to a destination through airspace aircraft, has made available to man the dream of flying and crossing borders. It fulfills a fundamental role in global economic development by allowing greater connectivity, which lowers the costs of passenger transport and favors commerce at different scales due to its high speed, safety and efficiency. The Air Transport Action Group (ATAG, 2018) reported that global air transport generates 65.5 million jobs and contributes 2.7 million dollars to the world's economy. This makes the airline industry a catalyst for business and a social transformer that generates wealth. (CANAERO 2017; ATAG, 2018).

It is the youngest transport industry that has grown exponentially in the last century, which has involved high costs in research and development. Even with the fact that it is the fastest and safest transportation system, it is also the one with low profit margins and high fixed costs; These include crew salaries, fuel and flight equipment rental payments (Grupo Aeromexico, 2017). Among these concepts, the most significant one for airlines is fuel, in which they invest between 181 and 226 billion dollars (CANAERO, 2017).

However, it is an industry that is characterized by its high level of cooperation, from the creation of associations such as IATA, which operate since 1945, to the generation of contemporary strategic alliances such as Skyteam, created in 2000. Airlines find a mechanism of cost reduction, among these those of transaction, and improve their income opportunities in coordinated trade actions. Mexico is an important part in the formation of such coalitions, having one of the leading airlines in the national and Latin American market, founding member of Skyteam, the global airline of Mexico, Aeromexico.

This document will deepen the analysis of the airline industry in Mexico and the world, concentrating attention on the case study of Aeromexico, its strategic alliances and the benefits of being part of these in the face of current challenges.

2. BACKGROUND

A. Historical background of the industry worldwide and internationally

The aviation industry has a recent history, in relation to other types of transport, given that, although great thinkers of previous centuries dreamed of flying, it was the Wright brothers who achieved the first flight in an aircraft called biplane in 1903. However, it was not until the outbreak of the First World War, that significant sums of financial capital were invested in research and development for military purposes, and that the development of the airline industry was finally encouraged. At the end of the war, the Germans founded the first commercial airline, the Deutsche Luftreederei, with a regular service on the route Berlin to Leipzig and Weimar (Bridges, 1969).

It was in the 1920s that pioneering airlines emerged in Europe and America. Among these, the following stand out:

1) KLM or Royal Aviation Company, which was founded on October 7, 1919 in the Netherlands, and currently continues to operate under the same name, forming part of the AIR FRANCE KLM group since 2004 (KLM, 2019).
2) Qantas, originally named Queensland and Northern Territory Aerial Services Limited, was founded in 1920 in Queensland, Australia (QANTAS, 2019).
3) Avianca, today Avianca Holdings S.A. I started operations in 1919 in Colombia, and today it is part of Star Alliance (AVIANCA, 2019)

Like these, other airlines appeared during the 20's, however, were companies that faced financial problems due to the low demand of the service, which led them to be subsidized by the government or nationalized, to finally disappear or be absorbed (Bridges, 1969). That was the case of Mexicana de Aviación. Later, with the Second World War, air transport was promoted with the increase in the size of the propellers. With this, it started a technical development of the aircraft that produced the growth of the industry, but also, the airline companies faced political and technical obstacles in the transformation of facilities and routes. (Bridges 1969; ICAO 2019).

This type of adverse situations led the aviation industry to organize itself. First, through the creation of the International Civil Aviation Organization, in 1944, with the signing of the Chicago Convention by 54 countries. The purpose of this document was to promote cooperation, friendship and understanding among nations (in fact, this served as a precedent for the UN), and laid the foundations of the regulations and procedures for carrying out air navigation throughout the world (ICAO, 2019). Likewise, the IATA (International Air Traffic Association) emerged the following year, in 1945, in Havana Cuba, with 57 member airlines from 31 nations.

This association was founded with the objective of being a vehicle for cooperation between airlines, promoting reliable, safe and economic air services for the benefit of consumers (IATA, 2019). By grouping the airlines, IATA has managed to simplify the procedures for the elaboration of agreements and standardization of procedures, so that even when operating complicated routes structures, a growth has been achieved in the services offered with high efficiency (Portals, 2012). Participates together with publishing companies in the publication of a series of manuals for exclusive use in air transport, such as:

1) TACT Manuals (The Air Cargo Tariff) with three volumes: one on rules, one on world reference rates and the last one on reference rates in North America.

2) OAG Manuals, which instruct on the management of itineraries for both passenger aircraft and freighters, also divided into North America and the rest of the world.

3) Special Manuals, which describe the handling of restricted materials, handling of live animals, airport operations, etc. (Portals, 2012).

The standardization of IATA came to the point of coding each airport and airline, with global usage codes between lines and official documents, which has facilitated international operations (Portals, 2012).

At the national level, passenger traffic can be divided into three historical phases:

1) Between 1920 and 1946, there were high growth rates around 60%

2) From 1947 until now, passenger traffic has maintained a growing rate, with the exception of fluctuations caused by temporary economic instability.

3) In 2006, the integration of low-cost airlines into the domestic market began, serving new segments of the market, favoring competition and connectivity (CANAERO, 2017)

With respect to the pioneering lines, the Compañía Mexicana de Aviación began operations in 1924, being the first nationally and the fourth worldwide. Originally it started with private capital and in 1957 it was nationalized. But the neoliberal policies of the decade of the 80's let it go through crisis. For both Mexicana and Aeromexico, the commercial opening and open skies policies of Carlos Salinas impact, given their conditions of low competitiveness. Both companies had a poor fleet and were not prepared to face their international competitors. Therefore, the intervention of the State was inevitable, who rescued and restored the industry. However, in the government of Vicente Fox, Mexicana de Aviación was sold to entrepreneurs without experience in the sector, which led to its imminent quiet in 2010 (Leyva, 2011).

On the other hand, Aeromexico is the trunk airline that survived this process. Founded in 1934, it operated for the first time the route between Mexico City and Acapulco. The international opening occurred in 1957 to include routes to the United States, Spain and France. By the year 2000, together with the airlines AirFrance, Delta and Korean Air, they founded the Skyteam alliance. In 2011, they begin their operations in the Mexican Stock Exchange. In 2012, the purchase agreement with Boeing of up to 90 B737-MAX aircraft was signed. As a result of the collaborative work with Delta, in 2015 they formalized a Joint Cooperation Agreement and in November of that year, Delta Air Lines owned 49% of the shares (Aeromexico Group, 2017)

B. News of the industry worldwide and internationally

Currently, air transport generates more than 10 million direct jobs, transports 62 million tons, with a value of 6 billion dollars. 1303 airlines operate with 31, 717 aircraft, 45,091 routes between 3, 759 airports and 170 service providers (ATAG, 2018).

According to CANAERO's 2016-2107 yearbook, the aviation industry contributes $ 2.7 trillion dollars to world GDP, moving more than 3.57 million passengers. The advance of the industry has produced 2,550 bilateral agreements among 170 countries; the number of connections 20 years ago has doubled, with a number greater than 18,000 connections; fuel consumption has been reduced by 80% compared to 1960, and as a consequence also the cost of the ticket has been reduced by half compared to 20 years ago.

This sector has had a growth in passenger volume between 20% and 30% annually in Latin America and the Caribbean, as a result of market liberalization and airline consolidation in the region. This involves the regulatory framework that is divided into 3 main areas: 1) market regulation, 2) economic, 3) technical (Fioravanti et al, 2016).

The first enters with the intervention of ICAO and the 9 freedoms of the air, which have been applied in the polities of open skies. Market regulation also gives rise to strategic alliances, which are a mechanism for reducing costs and increasing benefits for consumers, through the distribution of operations and economies of scale by wholesale purchases for airlines, as well as accumulation of points, transfers, greater variety of destinations and schedules for users. These alliances must ensure free competition, avoiding the formation of monopolies or entry barriers to new competitors (Fioravanti et al., 2016). The second, economic regulation is related to the rules regarding the exploitation and use of infrastructure and airport assets. The third and last, the technical regulation refers to the rules on operational safety that ICAO regulates worldwide (Fioravanti et al.2016).

The International Civil Aviation Organization is currently composed of 193 countries and industry groups with the aim of reaching a consensus on the Standards and Recommended Practices (SARPs) for international civil aviation and on policies that make it possible for the sector of civil aviation is operationally safe, efficient, protected, economically sustainable and environmentally responsible (ICAO, 2019). While IATA, today is composed of 290 airlines, which represent 82% of air traffic, with the mission of promoting the growth of the safe and sustainable air transport industry, which connects and enriches the world (IATA, 2019).

With respect to the performance of airlines worldwide, according to the statistical information of CANAERO (2019), the airlines with the highest ANNA connectivity index worldwide in 2015 were Turkish Airlines, American Airlines and United Airlines. In Latin America, due to its connectivity index, Aeromexico, Copa Airlines and Azul Airlines stand out (CANAERO, 2017).

Aviation statistics in Mexico show that by 2017 more than 2,200 flights a day take off and land, transporting 220,000 passengers a day, generating 1 million direct and indirect jobs and contributing 2.9% of the national GDP. Within the territory operate 8 airlines of national regular service and 57 of regular international service, with 360 aircraft of 8.6 years of average age. It has the airport with the largest number of passengers and operations in Latin America, as well as 3 alliances of passenger airlines and 2 cargos (CANAERO, 2017).

The market shares of Mexican airlines, between 2017 and 2018, according to CANAERO (2019) was distributed as follows:

1) Grupo Aeroméxico with 29.13%
2) Fly with 27.50%
3) Inter jet with 21. 22%
4) VivaAerobus with 16.88%
5) Aeromar with 1.47%
6) Others or the rest with 3.79%

These data reflect the growth of the industry in number of passengers and investment in transportation equipment, which has produced an economic income of 18 billion dollars per year. While keeping in mind that in the last 18 years 11 airlines have declared bankruptcy and the effort to keep the surviving airlines has been significant (CANAERO, 2017). At the national level, the airlines have been organized through the National Air Transportation Board (CANAERO), which acts as an autonomous institution made up of 60 companies related to air transport, with the following objectives:

1) Represent, promote and defend the general interests of the national and international aviation industry, putting the public interest over the private one.

2) Promote the activities of its affiliates in Mexico and abroad.

3) Be a consultative and collaborative body of the authorities for the design, dissemination and execution of policies, programs and instruments for the development of air transport.

4) Promote, guide and provide training on the carrying out of administrative procedures before the authorities, in order to generate a culture of responsibility and observance of the legislation and regulation of the airline industry.

5) Be a source of statistical, legislative and regulatory information on the airline industry (CANAERO, 2019).

The regulatory body of aviation in Mexico is the Secretariat of Communications and Transportation, through the General Directorate of Civil Aviation, whose mission is to ensure that air transport participates in the process of sustained and sustainable growth, which contributes to social welfare, regional development and job creation, supporting the formation of a better integrated and communicated society (SCT, 2019).

Within the regulatory framework, there are several laws related to the regulation of air transport, but among these stand out the Civil Aviation Law and Airports Law. The first, according to its first article, aims to "regulate the exploitation, use or use of air space located on the national territory, regarding the provision and development of civil and State air transport services." While the second, "regulates the construction, administration, operation and operation of civil aerodromes, which are an integral part of the general means of communication."

With respect to Aeromexico, in its last annual report to the Mexican Stock Exchange of 2017, they mention being a global airline under a network model with 43 national and 49 international destinations, with 580 daily passenger flights. His leadership in the market is reflected in his financial situation, by managing an operating income of $ 3, 110 million pesos. Its workforce is composed of 15, 300 people, of which 68.6% are unionized. It is a certified member of IATA, which has 131 aircraft: 15 Boeing 787-8 and 787-9, 3 Boeing 777, 54 Boeing 737-700 and 737-800 or Boeing B737-7 and B737-8 and 59 Embraer 170 and 190 (Aeromexico Group, 2017).

As previously mentioned, Aeroméxico is a founding member of Skyteam, an alliance that today consists of 19 airlines, with access to 1150 destinations worldwide, 14,500 daily departures, 630 million annual passengers and 750 rooms (Skyteam, 2019), distributed by airline as shown in the following table:

TABLE 1: Skyteam member airlines

AIRLINE	DESTINATION	COUNTRIES	DAILY DEPARTURES	ANNUAL PASSENGERS	FLOAT
AEROFLOT	146	52	750	32.8 millones	241
AEROLÍNEAS ARGENTINAS	58	13	337	13.1 millones	84
AEROMÉXICO	92	24	600	20.7 millones	130
AIREUROPA	53	23	226	10.6 millones	54

AIRLINE	DESTINATION	COUNTRIES	DAILY DEPARTURES	ANNUAL PASSENGERS	FLOAT
AIRFRANCE	195	93	1500	97.8 m	312
ALITALIA	95	44	556	21.8 m	118
CHINA AIRLINES	156	29	114	15.1 m	88
CHINA EASTERN	257	35	2248	103.1 m	787
CZECH AIRLINES	49	26	90	2.9 m	18
DELTA	324	57	5800	180m	800
GARUDA INDONESA	90	14	600	24m	202
KENYA AIRWAYS	52	40	154	3.7m	36
KLM	164	73	357	32.7	204
KOREAN AIR	123	43	465	26.7 millones	164
MEA	32	23	69	3m	18
SAUDIA	90	37	540	31.2m	149
TAROM	40	23	55	2.4 m	25
VIETNAM AIRLINES	49	17	400	26.5 millones	89
XIAMENAIR	94	16	546	27.2 m	167

Source: Own elaboration with date from Skyteam (2019)

3. DELIMITATION OF THE PROBLEM

Despite having a privileged position as a country in the airline industry with one of the pioneer airline companies, Mexico has faced adverse situations of both public and private nature, which have resulted in the closure of several airlines in recent years. Therefore, it is relevant to study the Aeromexico case, as a leading company in Mexico and Latin America.

This company has stated in its report before the Mexican Stock Exchange of 2017, its risk factors, among which the following should be noted:

1) Volatility in fuel prices
2) Risks that insurance does not cover
3) Economic recessions
4) Delays in flights
5) Airport access and service charges
6) Lack of guarantee in access to adequate facilities
7) Delay in the development of new infrastructures
8) Terrorist attacks or outbreak of contagious diseases
9) High competitiveness of the industry
10) Restructures derived from bankruptcies or commercial competitions
11) Inadequacy of indebtedness in flight equipment
12) Increase in fixed obligations
13) Lack of adequate liquidity
14) Inability to compete against companies with higher resources or lower costs
15) Revocation of concession by the government
16) Aging of the fleet
17) High operative dependence of the International Airport of Mexico City
18) Termination of strategic alliances
19) High concentration of the Boeing fleet (55%) and Embraer (45%)
20 Delivery delays or low performance of aircraft B787 and B737-Max (Aeromexico Group, 2017).

Just in the last 8 months there have been 2 unfortunate accidents involving the Boeing 737 MAX 8 model. The first one in October 2018, the aircraft of the Lion Air company crashed in Indonesia, killing 189 people. The second in March 2019, with the airline Ethiopian Airlines collided in Ethiopia, killing 157 people of 30 different nationalities. In both cases, the airlines report that the accidents occurred shortly after takeoff and that they were recently acquired aircraft (BBC, 2019). News that impacts the world and propitious of the governments of several countries, including Mexico, USA and Canada, to suspend the commercial operation of the Boeing 737 MAX 8 model (Expansión, 2019).

For Aeromexico this implied the suspension of 6 of its aircraft, which resulted in a 3% decrease in its capacity during the first quarter of 2019 (Grupo BMV, 2019). The Secretary of SCT, Javier Jiménez Espriú, stated that the suspension could have an important economic and operational impact on said airline. (La Jornada maya, 2019) This adding the fact that the airline has an acquisition contract with Boeing for 90 aircraft of this particular model (Grupo Aeromexico, 2017) However, being a founding member of the Skyteam alliance has produced high commercial cooperation, better negotiating position with suppliers, and strengthening of the brand, offering customers a greater number of destinations, flights, schedules and points accumulation opportunities (Group Aeromexico, 2017).

Research question

With this panorama, the following research question arises. How the reduction of transaction costs and be a member of the Skyteam alliance benefit Aeromexico against the suspension of Boeing 737 Max aircraft?

4. THEORETICAL-CONCEPTUAL BACKGROUND

The theoretical concepts relevant to this study are the transaction costs and strategic alliances. The costs of negotiation, decision, surveillance, application and information search are examples of transaction costs (Vargas-Hernández & Hernández, 2014). While strategic alliances are defined by Thompson, Gamble, Peteraf and Strickland (2012: 187) as "a formal agreement between two or more companies in which they agree to work in cooperation with a common object".

In the following section of literature review, the origins and other theoretical details of transaction costs and their implication in strategic alliances are studied.

5. REVIEW OF THEORETICAL AND EMPIRICAL LITERATURE

In Vargas-Hernández & Hernández (2014) reference was made to the first works on the theory of transaction costs, highlighting the authors Coase, Arrow and Williamson. The originator of the theory was Coase, who defined the transaction costs as those related to the negotiation and conclusion of contracts, which are originated by the lack of confidence and uncertainty (Coase, 1937). On the other hand, Arrow (1974) includes the concept of rationality to the discussion, pointing out that thanks to cooperation, the balance between personal fulfillment and the claim of social conscience is achieved, conserving the economic benefits.

He also emphasized the importance of information processing, which, given its volume and individual management limitations, requires several people to achieve better decision making and avoid diminishing returns (Arrow, 1974). Finally, Williamson contributes what he calls the three problems of transaction costs: the specification of assets, technological support and cost minimization. However, his attention was focused on the organizational behavior and governance of the firm, including concepts such as credible commitments and adaptation (Williamson, 1985).

Given the criticism of the theory of transaction costs, indicated by its incomplete formalization, Williamson (2010) explains that this is in its natural progression, which began in the 1930s, identifying the errors and omissions of neoclassical theory. Then, in the 1970s, concepts were included to reinterpret vertical integration, vertical market restrictions and the organization of the labor market, among other similar phenomena to achieve theoretical linkage. For the 1980s, government structures, credible contracting, hybrid modes and transaction sizing were included in the theory, empirical applications and tests were produced that paid for the formalization process that continues today (Williamson, 2010).

It should be noted that it is the possibility of making predictions, the variation of the topic and the application in public policies that make an economic theory meaningful. Elements that the transaction cost theory has fulfilled (Williamson, 2010). One of these applications is described by Hennart (1991) in the article "The transaction cost theory of Joint Ventures: an empirical study of Japanese subsidiaries in the United States", where the theory postulates that the comparison between the costs and benefits of property sharing or having it complete will be the key decision in the formation of joint ventures.

After the econometric study it was confirmed that also the Japanese decide to associate when they need to combine intermediate inputs of high transaction costs in the market, which can occur in three cases; 1) when they enter new industries, 2) when they enter the new market for the first time, and 3) when they want access to the resources of local companies (Hennart, 1991).

In the analysis of transaction costs in the Western Biocluster (Vargas-Hernández & Hernández, 2014), it was obtained that the members of the cluster reduce the negotiation costs through:

1) Decrease in the number of transactions, by operating as a civil association
2) Increase management productivity
3) Encourage trust among its members
4) Reduce the cost of information inquiry through the transfer of knowledge
5) Balance the demands of each member and social welfare
6) Adapt the organization and generate credible commitments (Vargas-Hernández & Hernández, 2014)
7) In this same order of ideas, the relationship between transaction costs and strategic alliances is introduced.

8) Alliances provide different types of relevant benefits to member companies: Replace horizontal mergers and acquisitions
9) Facilitate external contracting and subcontracting
10) Strengthen the competitiveness of companies by generating competitive advantage
11) Grant greater bargaining power
12) Risk decreases when sharing
13) Generate entry barriers to new competitors
14) Contribute to the opening of new markets
15) Promote the development of innovation in products and technology
16) Subtract technical weaknesses
17) Increase skills and abilities
18) Improve the efficiency of the supply chain
19) Produce economies of scale
20) Decrease in costs in general
21) Open the opportunity for joint learning
22) Help companies make better use of their resources and capabilities
23) Promote the acquisition of internal knowledge about new cultures and / or markets
24) Facilitate access to valuable skills that are only found in a certain geographic location
25) Generate synergy among its members (Thomson et al. (2012).

The profile of companies that most requires and resorts to this type of strategy are those where technological advances occur in an accelerated manner, in different areas simultaneously and whose performance affects other companies or industries (Thomson et al., 2012). with this profile, so historically has formed partnerships to reduce their costs and improve service.

6. METHODOLOGY

Given the nature of the phenomenon, in order to explain and describe it, the methodology used was qualitative. A documentary investigation of secondary data was developed, both theoretical and empirical literature, on the aviation industry in its national and international context, the strategic alliances of this and other sectors, as well as its relationship with transaction costs. Recent events and their relation to the object of study were analyzed.

7. ANALYSIS OF RESULTS

As a result of the documentary research carried out, it is concluded that, thanks to the formation of strategic alliances, transaction costs are reduced, which has a significant impact on the aviation industry, given its high costs and low levels of utility.

In the Mexican case, it is more evident in benefit, not only because of operational costs, but also because of the inconveniences and performance problems of the corporate and state government that the airline industry has faced, favoring the closure of 11 airlines in the last 18 years.

The cooperation between the airlines reduces the costs of negotiating and concluding contracts by encouraging trust between the parties. The integration of alliances facilitates external contracting, strengthens their competitiveness, provides economies of scale and greater bargaining power, remedies technical weaknesses and share risks, with the generation of synergy.

To answer the question, how would the decrease in transaction costs and be a member of the Skyteam alliance benefit Aeromexico in the face of the suspension of Boeing 737 Max aircraft? It is deduced that, for this company, belonging to Skyteam benefits him, giving him greater bargaining power over Boeing, considering that among the 19 airlines they have a fleet of 3686 aircraft and great potential demand.

Faced with this situation, Boeing will have to provide quick and effective solutions that do not continue to affect Aeromexico's operations and revenues, given that, at best, it could lose contracts and commercial relations with all Skyteam members, especially with Delta, as a majority shareholder of the Mexican airline.

8. CONCLUSIONS

The tragedy resulting from the two unfortunate air accidents in the months of October 2018 and March 2019, where two Boeing 737 MAX 8 model aircraft collapsed, have put the airline industry in the spotlight, with the suspension of this model by the governments of various parts of the world.

In Mexico, the trunk airline, Aeromexico, has suffered economic repercussions with the suspension of 6 of its aircraft of said model. But the problem is greater, given that a large percentage of its aircraft are manufactured by Boeing and today it has purchase contracts for 90 aircraft of the model in question. However, historically the aviation industry has managed to overcome high operating costs, management failures and other adverse situations thanks to the support among its members. Organizations such as ICAO and IATA, created after the Second World War, laid the foundations for industrial organization of international cooperation par excellence.

Aeroméxico has the backing of the Skyteam alliance, made up of 19 airlines, including the American Delta, which is its current majority partner, which not only strengthens commercially in front of its customers, with a better service, but also in front of its suppliers, with greater bargaining power.

The decrease in transaction costs within the strategic alliances makes it easier for Aeromexico to hire external contractors, in this case, its negotiating position vis-à-vis Boeing, who will have to provide immediate solutions to avoid the loss of a client of high influence and dominance as it is the Mexican airline.

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Bridging the GAP: From Conventional HRM to Green HRM

Princy Garg[1], Aarushi Batra[2]

[1]*princygarg26@gmail.com*, [2]*batraarushi17@gmail.com*

Abstract: **Talking about, changing perspectives from a financial perspective to a competent based Green Economy. Though, the debate to link CSR (Corporate Social Responsibility) and Green HRM is generating a domain of keen interest to various scholars and researchers. As, we all have heard of the Green Movement, carbon credits, global warming have become synonymous with Environmental change. Let's get to know about the Green HRM, the Challenges and a great shift from mainstream HRM to Strategic HRM, thinking of providing Sustainable growth for theory and practice. In this article author, has explained the sustainable practices for the business organization to go green.**

Keywords: **GHRM, Needs, Benefits and Impacts, Challenges, Green workforce, Carbon footprint.**

1. OBJECTIVES OF STUDY

Objectives of this paper are as follows:

- To explore the literature on the topic GHRM
- To develop a conceptual framework of GHRM
- To find ways to adopt GHRM for an organization and its impact on sustainable development

2. METHODOLOGY

This is a Descriptive Research, using accepted literature definitions and web sources, we looked for various published papers, our scope was narrowed to reports and web based searches and is not empirical in nature. We have confined our research work to theoretical lenses to guide us and evaluate the Green Practices in an organization.

3. INTRODUCTION

Ecological Footprints in today's world has a large concern as compared to older days. To shift to Green HRM in today's business environment, there has become an indispensible need for the business organization to go green and use eco-friendly and environmentally sustained practices. The concept of green HRM does not only includes awareness towards conservation of the environment, but also has become a synonym for sustainable development. To promote green practices, corporations are promoting various practices to reduce Ecological Footprint. Well, to explain Ecological Footprints; one can define it as it is the impact of a human's consumption of natural resources against the earth's ecological capacity to regenerate them. Organizations are forming policies that include the use of Eco-Friendly Practices, to sustain the environment with the help of the interface of every employee within the organization.

Companies develop a powerful social conscience and green sense of responsibility. Consumers demand ethics and environmental credentials as a top priority. Society and business see their agenda align.

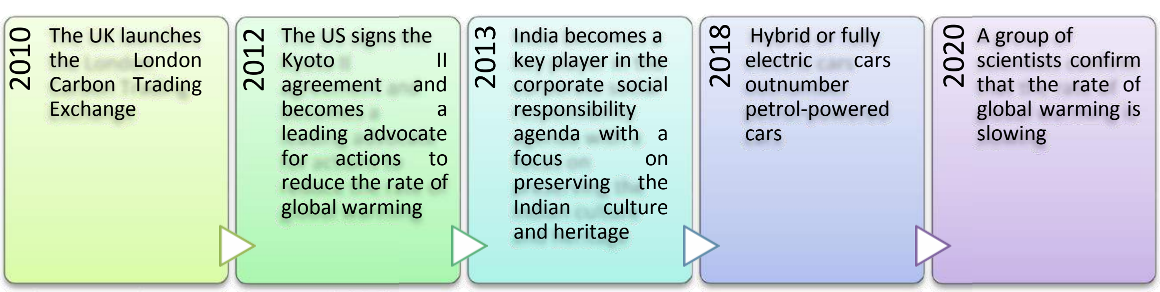

Figure 1: Journey of Green HRM

(Pricewaterhouse Coopers, 2009)

Also, as we all are familiar that, earlier, a firm's success was measured in terms of promotion of economic value, but today's dynamic environment's success of an enterprise is measured in terms of the practices followed by it, the reduction of ecological footprint and importance are given by it to social and environmental factors along with economical and social factors, in order to get success in corporate sector by enhancing shareholder's wealth. Green HR practices have become a crucial factor in today's forward-thinking of organizations across the globe. These practices also help the organization's cost-effective strategies and thus help in having a cost advantage over its rivals.

Before going any further with the details about GHRM practices and understanding how does it make sustainable development possible, we have to understand what does the term GREEN HRM means in the literal sense for an Organization? Does it refer to the use of environment- friendly products and items while performing HR activities? Or does it imply performing HR activities in a sustainable manner in order to reduce environmental cost? Different authors have given different definitions of this term.

Green HRM involves addressing the company's carbon footprint by cutting down on the usage of papers, reducing unwanted travel. Green HRM is about the holistic application of the concept of sustainability to an organization and its workforce. It has been found out in various researches that the HR department in many companies is increasingly greening their processes to gain a competitive advantage over others.

It is the use of HRM policies to promote the sustainable use of organizational resources, particularly in a way that causes or promotes sustainable development of the environment as a whole. It is directly responsible for creating a workforce that understands, appreciate and follows the green initiatives taken by management and maintains the green objectives of the firm throughout all the activities and levels of Human Resource Management. Such kind of workforce sets and thrives to achieve green objectives in performing all the activities involved in HRM processes such as recruiting, selecting, hiring, training, compensating, developing and advancing human asset of the firm. Such a workforce is recognized as a green workforce (Human Resource Management Institute).

Thus, we can say the greening the HRM practices is what is called Green HRM. It refers to a system of policies and practices that makes employee of an organization green for the benefit of individual, business, society and environment as a whole. Since Green HRM practices benefit the society and environment at large, this concept is getting translated into a corporate social responsibility of the organizations.

4. NEED AND BENEFITS

Need:

There is a great need to GO GREEN, but there is till now, no Comprehensive definition to GHRM, it is different with different perspectives. The main purpose is to be energy efficient and pollution-free and as we know, a great sense of ecological consciousness leads to a great sense of Green responsibility. Our lifestyle is affected by our behavior both personal and professional too. To bear the Consequences arising out the use of environmental resources for environmental development one needs to develop a sense of responsibility towards the environment.

For this various Organization needs to take various steps towards it, like organizations need to conduct an environmental audit, by changing the culture by defining strategies to curb Waste management and pollution and also, developing the culture in the organization to utilize natural resources and using natural eco-friendly products.

Benefits:

Over the years now, since every individual is now aware of the dynamic environment we live in, to survive in this competitive environment one needs to adapt as an organization as well as an individual and contribute to the GHRM since the benefits to GHRM have been identified by the great experts and some of them are:

It helps organizations to be Cost-effective without losing their talent,

1. Maintains to retain the Employment Ratio,
2. Helps to boost up Employee's morale,
3. Improves overall brand image of the organization,
4. It helps to explore more opportunities, by going Green and creating a new eco-friendly culture.
5. Helps in Rebates and tax Benefits from government,
6. Reduction in Environmental damage.
7. Increasing competitive advantage to the company.

5. CONVERGRENCE OF HRM TO GHRM:

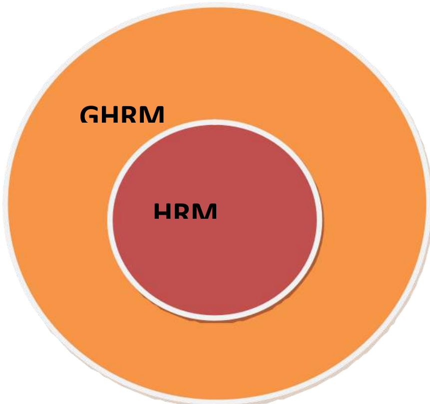

Figure 2: HRM AND GHRM

Green HRM is an agenda that cannot be achieved by merely ensuring the minimization of wastage or by going paperless. GHRM is a manifesto that helps in transforming the human asset of an organization in green human assets or green workforce, as discussed earlier. To create a sense of seriousness and to send a message to all the stakeholders and the society that how much passionate and responsible an enterprise is in conserving the environment and saving it from the climate change, that has become a serious threat to the humankind, it has to adopt green activities in the walk of the HRM systems and performance- from recruitment to retention, all activities must be aligned strategically with the go green agenda of the enterprise. A company can converge its HR activities towards Green HR activities in the following manner:

Figure 3: Convergence from HRM to GHRM

1. Recruitment and Selection:

Recruitment refers to the identification and creation of a pool of potential candidates who can apply for the job, while selection refers to the process of selecting the right person for the right job from the available pool of applicants. Conventionally, the whole process of recruitment and selection focuses on finding the right candidate for the right job.

Attracting high-quality staff in order to gain a competitive advantage has been a challenge for all the corporate houses.

But in today's dynamic environment and increased concern for the environment, companies are increasingly creating a green image of themselves to attract new talent in the organization. German firms such as Siemens, BASF, Bayer, and Mannesmann use environmental activities a d a green image to attract high-quality staff. The Rover Group carmaker, in Britain, makes environmental responsibilities and qualificati ns part of every job profile. (Human Resource Management Institute)

Green recruitment and sel ction refer to a system where the main focus of all the activities is on the environment and performing environmental friendly activities are made the major element in the organization. It can be defined as a process of identification and selectio of all such candidates whose knowledge, behavior, skill, and attitude identify with Go reen's agenda of the organization.

In order to converge from Recruitment and selection to GREEN Recruitment and Selection practices, organizations can adopt the following practices:

- Identifying candidates who are familiar with the concept of recycling, reuse and reduce
- Every step of this process should be inclined to environmental issues.
- Conducting paperless interviews and teleconferencing wherever possible
- Make applicants aware of the commitment of the organization towards preservation and protection of the environment

2. Training and Development:

The training and development process is a part of the HR activities performed in every organization. It aims at providing training to the employees to improve the performance of each and every individual in the organization. A well trained and developed staff is the key success pillar for an organization. Through training, employees are taught particular skills that are required for performing the job effectively and efficiently, while development focuses on personality development and career enhancement of the employees.

To bend this practice of training and development towards Green Training and Development, companies should follow the following practices:

- Incorporating Environmental Management Training with conventional training
- Conducting environmental training need analysis along with other training needs
- Use of Green Groups for environmental management
- Job rotation focused on the development of future green managers
- Development activities focused on employee skills for building sustainable green practices
- Organizing training programs in an energy efficient manner and minimizing wastage of paper and energy

3. Performance evaluation or performance appraisal:

Performance evaluation refers to the formal measurement of the performance of an employee based on his/her job description. This helps in measurement of value addition done by an employee in business revenue as compared to overall employee return on investment. It helps in continuous performance evaluation and provides continuous feedback on employee's performance and helps in the identification of improvement areas.

On the other hand, Green performance evaluation or performance appraisal refers to the addressing of issues related to environmental factors. It includes activities which concentrate on performing environmental friendly activities. An effective green performance appraisal should provide feedback on green practices followed by the employees and held them accountable for environment management activities along with other performance objectives. An organization can add the following activities in its performance evaluation criteria to transform it into green performance evaluation:

- Including Green performance indicators
- Setting green targets and assigning responsibilities to achieve them
- Integrating green criteria in performance reports
- Communication of green schemes at all level of management
- Setting accountability for achieving green targets
- Establishing dialogues on green matters
- Giving feedback on green activities performed by and contribution made by individual employees in green agenda

4. Compensation and reward:

Compensation and reward are the crucial HR activities through which employees are compensated, rewarded, motivated and appreciated for the efforts put by them in the organization. Incentives and rewards motivate employees to do better in the future and create a sense of achievement in them when they are awarded for an excellent performance. It leads to an increase in employee motivation and high morale in them, which helps the organization in growing by leaps and bounds.

In this sense, green compensation and reward system refers to the incorporation of incentives, awards and rewards for employees for achievement of green objectives of the organization. This will motivate them to achieve the targets on time keeping the green agenda in mind. To adopt Green compensation and reward strategy, a company can alter its reward and compensation schemes as follows:

- Pay packages based on a reward for green skills
- Use of non-monetary green rewards such as vacations, leaves, etc

- Use of monetary rewards for achieving green targets
- Green reward system
- Liking suggestion schemes with rewards and awards
- Link career gain such as promotion with participation in green schemes
- Development of negative reinforcements such as penalty or warning for not following green agenda
- Development of positive reinforcements for achieving green agenda
- Distribution of title and awards such as GREEN EMPLOYEE OF THE YEAR award

6. EMPLOYEE RELATION AND TALENT MANAGEMENT:

The concept of employee relations refers to maintaining good relations between employer and employee by collective efforts of management and employee. An organization having good employee relations treat all employees fairly and without any partiality with respect to caste, creed, age, sex, nationality, etc. good employee relations help the company to boost employee morale and make talent retention easy and viable. Talent retention is one of the most important goals of an organization to ensure long term growth and stability in business operations. It refers to the efforts made by the organizations to retain the talented staff and reducing employee turnover by creating a positive and light working environment, providing adequate opportunities to employees, appreciating initiatives of employees and giving them autonomy to experiment with profitable ideas.

- Green employee relations and talent management refer to the incorporation of green agenda with talent retention strategies. This could be done with the help of the following activities:
- Giving independence to staff for experimenting with green ideas
- Altering green schemes in accordance with industry norms
- Unions negotiation with Green agreements
- Encouraging employees to go green in work life as well as personal life
- Using a green mode of transport
- Increasing supervisory support in v=creating green workplace environment
- Integrating staff into keeping the workplace clean
- Incorporating green elements in every aspect of work surroundings

7. GHRM AND SUSTAINABILITY:

Sustainable development is the principle of achieving human or corporate development while sustaining the ability of nature to provide resources for future generation's growth and development. It aims at enhancing the responsibility to develop long-lasting solutions for future growth by adopting environmentally friendly practices. The term Sustainability and Corporate Social Responsibility are often used interchangeably. Sustainable development is well identified by 3 P's: Profit, People, and Planet. Sustainability is often termed as the overall development in today's practices without compromising future generation's needs.

HR is poised to Integrate Sustainability. Today's HR function includes both Developing and implementing sustainability strategy. These functions are getting more diverse and broader with increasing needs for the environment. The HR department is the only department to focus on every aspect right from the beginning of the process. It is the only department that has the capability of changing the attitude of the executives, employees, and managers working at various levels of an organization. It is the HR department that can spread awareness about the climate change in the organization and assist the management in adopting sustainable practices that will help in achieving not only organizational and individual goals, but also in achieving green goals set by the organizations. Only HR department has that potential to motivate and supervise the employees at all levels to continuously aim and thrive for achieving green goals along with ensuring sustainable development. Some of the examples of ensuring Sustainability with the help of HRM include:

1. Helping Employees to identify products to reuse and recycle, which helps in curbing pollution and waste,

2. Encouraging employees and training them to use environment- friendly products, which ultimately boost their morale,

3. Emphasizing opportunities for employment generation, through sustainability

4. By cutting the use of Paper, and recording data on the HRIS database, saves time and paper and also, is energy efficient

8. REVIEW OF LITERATURE

Literature suggests that in order to promote green behavior among employees to achieve green objectives, organizations should adopt green human resource management (GHRM) in an effective and efficient manner. (Jackson, 2010) (Renwick, 2013)

Green HRM includes such practices which consider candidate's green value during the initial stages of recruitment and selection, evaluating green behavior of employees when making compensation plans and conducting performance appraisal. (Cohen, 2010) (Renwick, 2013) (Jackson, 2010)

GHRM helps in developing green skills among employees and create awareness among them. It motivates employees to participate in green activities and initiatives of organization. In other words, GHRM is a very crucial concept to implement green initiatives. Therefore, to great extent, GHRM symbolize, but is different from CSR. (Jie Shen, 2018)

Organizational objectives of adopting green activities and reducing waste, is different from other HRM practices, such as cost reduction, employee development and improvement in productivity. (Jackson, 2010) (Renwick, 2013)

Perception of GHRM policies and practices are different among individuals. It reflects employee's interpretations of how employees are supported, treated and, managed by the organizations. HRM is an organizational phenomenon, but perception of HRM is an individual level concept, which has attitudinal and behavioral workplace consequences. (Lisa Hisae Nishii, 2008)

9. RECOMMENDATIONS

Lately, the term green practices and initiatives have gone viral to develop a green sense of responsibility within the organization, as we all know, environment concerns at the helm of all business decisions that is why everybody is focusing on environmental credentials as a top priority. With an increase in ecological demand, every organization is switching gears from conventional HRM narrow centered practices to green HRM practices. However, to reduce the carbon footprint of each employee and talent retention should be the main focus for every practice. Reducing ecological footprints can be achieved by adopting the following practices in day to day operations of the enterprises:

- Saving paper by **electronic filing,**
- Encouraging employees for **carpooling,**
- Using **teleconferencing,**
- Conducting **virtual interviews**
- Providing **online training,**
- Having **telecommunication facilities ,**
- **Power saving** by setting early morning office timings,
- Conducting **energy audits** at regular intervals,
- Conducting **GO GREEN** drives,
- **Going paperless** by using different software for HR functions,
- Encouraging employees to find a way to **recycle products** wherever possible.

These are some of the ways to develop a sense of going green amongst employees. There are few steps for creating the Sustainable HR practices in the organizations the steps are shown in the diagram as below (Shodgangotri.inflibnet.ac.in):

Figure 4: Steps for Sustainable HR Practices

Evaluate:

In order to adopt Green HRM functions, an enterprise has to evaluate its culture, intent, value system, objectives and agenda that is being followed by it. The culture and value system of the company must be in such a way that it gives a message to its stakeholders that it is concerned with the environment, practices followed by the company and objectives set by it must be in tune with its GO GREEN intentions. Someone has truly said that "Actions speak louder than words." Hence, the company's corporate website and job description must be in tune with its green agenda.

Eliminate:

In order to support the green movement of a company, HR must eliminate all those activities which are doing no good but only degrading the environment. All those activities must be eliminated, or alternatives must be discovered which includes excessive use of energy and paper. Management should introduce the concept of paper recycling and should encourage its staff to minimize paper wastage.

Illuminate:

Consistent efforts should be added to create an authentic brand that will help the company in recruiting, finding and retaining the talent. Management should encourage the employees to use eco-friendly products, not only in office premises but in every aspect of life.

Implement:

Management, in order to achieve the agenda of GO GREEN in a sustainable manner, has to implement certain practices that will ensure minimized use of energy, paper, and elimination of wasteful activities. HR should provide a paper recycling facility in the office premise itself, and if not possible then, HR should buy Post Consumer Recycled (PCR) paper for its day to day activities. Management should conduct video conferencing for meetings and virtual interview that will minimize the use of paper and save the transport cost. Also, it should try to go paperless in its day to day activities by adopting the use of certain software to perform HR functions.

10. CASE STUDY OF HCL

HCL Technologies is a leading global IT services company, working with clients in the areas that impact and redefine the core of their businesses. Since its inception into the global landscape after its IPO in 1999, HCL focuses on ‘transformational outsourcing’, underlined by innovation and value creation, and offers an integrated portfolio of services including software- led IT solutions, remote infrastructure management, engineering, and R&D services and BPO. HCL leverages its extensive global offshore infrastructure and network of offices in 41 countries to provide holistic, multi-service delivery in key industry verticals including Financial Services, Manufacturing, Consumer Services, Public Services, and Healthcare. HCL takes pride in its philosophy of Ideapreneurship which empowers its 1, 03,394 transformers to create a real value for the customers.

People at HCL believe in a better tomorrow. They believe that to make this a reality, companies, and individuals must work together to be responsible and respectful of the earth’s resources.

HCL believes in building a better tomorrow without compromising the wellbeing of their employees, the society and the environment. Six years ago they began their sustainability efforts through an integrated approach covering economic, environmental and social aspects to achieve “Sustainability 10 by 2020”.

Innovation in Employee Transport System of HCL Problem Statement:

Transport, especially road transport, is one of the most polluting activities in the economy. Burning of fossil fuels by vehicle contributes to air pollution by increasing the amount of suspended particulate matter and hazardous gases in the atmosphere. The increased travel demand has resulted in rapid growth in number of motor vehicles in the cities and this leads to congestion of roads and mismanagement of traffic. Consequently, the average travel time increases by at least 12-15 minutes for a journey of about 15 km and in turn, leads to more fuel consumption.

As per JAS (June, July, Aug) 2015 data, nearly 1,400 small diesel cabs with a seating capacity of five i.e. a maximum of four employees and a driver performed a total of 7,24,693 trips to provide transport facility to HCL employees, working in various facilities across NCR.

Solutions proposed:

Among the fuel substitution options, compressed natural gas (CNG) appears to be a relatively wide-scale method of reducing local pollution in the transport sector. The government is also promoting the use of natural, cleaner fuel CNG by incentivizing users in various ways.

Considering the increase in numbers of personal and commercial vehicles on roads, various measures can be taken to control the number of vehicles on roads, such as shifting to public transport or use of vehicles with more passenger carrying capacity, etc.

The following pros and cons were observed:

Pros: Environment friendly, Cost effective and lesser vehicles on the road, hence less congestion.

Cons: Vendor dissatisfaction due to more investment on bigger cabs, less number of CNG filling stations in NCR regions, Long queues at filling stations, Lack of public transport Infrastructure.

Implementation of idea: In HCL, various measures have been taken to make a better, cleaner, greener environment in turn reducing the cost of employee transportation. After In-depth analysis it was decided to induct bigger cabs such as Innova with a seating capacity of 7+1, for employee transportation in phased manner. Earlier two cabs were used to transport a maximum of 8 employees. Hence less routes to cater to the same number of employees, in turn, less number of vehicles on the road, less number of KM run, i.e. less fuel consumed and hence contributing to a better environment.

As per OND (Oct, Nov, Dec) 2015 data, as compared to the previous quarter, there was a 14% decrease in smaller cab routes due to the introduction of Innova in NCR i.e. the total number or routes performed by smaller cabs came down to 6,26,510 from 7,24,693.

Considering the pollution caused by vehicles running on petrol/diesel, HCL management decided to convert its current transport fleet to CNG in a phased manner.

Public transport occupies less road space, consumes less fuel and emits least pollutants per passenger km of travel compared to personal motor vehicles. Hence, there is a need to encourage preference for public transport over personal vehicles. Steps have been taken to promote the use of public transport such as Metro by providing shuttle service to its employees from the nearest metro stations to the HCL office locations.

Emphasis was given on reducing the trip length. It was found that transport was offered to employees residing within a service radius of even 70 kms. The management decided to reduce the service radius to 45 kms. Here the company also offered a proposal to employees to change their current working location to the nearest office premises.

Carpooling functionality was added in the in-house Transportable Application where employees can share their rides with other employees.
(Santosh Jayaram, 2016)

11. CONCLUSION

Our Proposed framework highlights the deep insights about the GHRM system within an organization. The proposed study supports the overall systematic GHRM practices which have led to Transformational changes within the organization and supports environmentally friendly practices. Strategic HRM is a meta-theory insight, which somehow lacks theoretical depth which gives potential opportunities of research to various scholars and researchers to the foundation of GHRM. We have taken a case study in our research method for a detailed examination of the subject of study which gives a framework on how GHRM practices have impacted the culture of the organization and environment with sustainability. In Toto, our framework supports the emergence of effective delivery of GHRM systems. It is legitimately a good potential for academic support but still lacks some theories and perspectives.

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Predicament of Capital Account Liberalization: Origin of Crises or Growth

Dr. Anjala Kalsie[1], Jappanjyot Kaur Kalra[2], Jyoti Dhamija[3]

[1]Assistant Professor, Faculty of Management Studies, University of Delhi
[2,3]Research Scholar, Faculty of Management Studies, University of Delhi, Delhi 110007, India
[1]kalsieanjala@gmail.com

Abstract: The collapse of the Bretton-Woods agreement and moving to the floating exchange regimes required the economies to remove the restrictions on the capital movement and facilitate free trade between the nations. There has been an extensive, controversial and still up in the air debate about the costs and benefits of Capital Account Liberalization (CAL). Detractors have blamed capital account liberalization as being the root cause of banking and currency crises experienced by emerging economies and argue that the deck is particularly stacked against the non-industrial countries, which has experienced few benefits but exposed themselves to considerable risks.

Keywords: Capital Account Liberalization, Banking Crises, Currency Crises, Growth

JEL Classification: F2, F38, G01

1. INTRODUCTION

"Those who cannot remember the past are condemned to repeat it," (George Santayana, (The Life of Reason, 1905)). Past four decades had seen the tremendous changes in the financial systems around the world. The collapse of the Bretton-Woods agreement and shift to floating exchange regimes required economies to remove restrictions on the capital movements, as it facilitate free trade between the nations. Capital flows around the globe had increased rapidly since 1990's. The developing nations are reforming and restructuring their domestic economic policies so as to integrate with the world economy. The IMF (International Monetary Fund) had always adopted the approach of promoting current account liberalization and capital account liberalization, so that nations may have unrestricted access to foreign exchange and trade in goods and services. But Report of the Managing Director to International Monetary and Financial Committee on Progress in Strengthening the Architecture of International Financial System and Reform the IMF states that Executive Board has emphasized on the sequencing of liberalization process to minimize the risk associated with international capital flows. Emerging Market Economies (EME's) started with the process of capital account openness in 1980's, most of which spell trouble without stronger domestic financial system. There has been an extensive, controversial and still up in the air debate about the costs and benefits of Capital Account Convertibility[1] (CAC) or Capital Account Liberalization (CAL).

Before we move on we need to understand two dimensions, related to why were controls imposed and what is the need to liberalize thereafter. For maintaining exchange rate regime and to shield sudden stop or surge of the capital flows, the industrialized nations sustained closed capital account accounts till the World War II or Bretton Woods Era to reduce the macroeconomic shock. Reasons for Moving to Liberalized Economy Framework are related to the movement of resources from the capital surplus-rich nations to capital deficit-developing nations, ultimately for the development of global economy as a whole. It's like achieving the equilibrium between inherent benefits and risk associated with opening the channels for international capital. The Capital Account Liberalization is much debated topic. There are different views expressed by the researchers, policy makers and various international organization of repute like International monetary fund. Each country wants to grow at higher rate which as per some policy maker is possible because of financial integration. Another view in the academia is that the opening up of economy without strong fundamentals both at macro and financial levels will leads the country into crises situation. In the light of the about the present paper is an attempt to explain what capital account Liberalization means.

The novelty of this paper is to understand in depth the view of International Monetary Fund on the Capital Account

[1]The Tarapore committee recommends a pragmatic working definition for Capital Account Convertibility i.e. "CAPITAL ACCOUNT CONVERTABILITY refers to the freedom to convert local financial assets into foreign financial assets and vice versa at market determined rates of exchange. It is associated with the changes of ownership India foreign/domestic financial assets and liabilities and embodies the creation and liquidation of claims on, or by, the rest of the world. CAC can be, and is, co existent with restrictions other than on external payments. It also does not preclude the imposition of monetary and fiscal measures relating to foreign exchange transactions which are of a prudential nature".

Liberalization along with its benefits and risk. To talk about the short history of Capital Account Liberalization around the World. To deliberate whether CAL leads to banking crises and currency crises in BRICS and ASEAN 5 nations.

The objective of this paper is to understand the Capital Account liberalization in the light of IMF definition. Section 2 narrates literature review, section 3 talks about International Monetary Fund views on Capital Account Liberalization, section 4 narrates short history of Capital Account liberalization around the world, section 5 talk about Capital Account Liberalization in BRICS (Brazil, Russia, India, China and South Africa) and ASEAN-5 nations (Indonesia, Korea, Malaysia, Philippines and Thailand), finally in section 6 fixed currencies, monetary policy independence & Capital Account Liberalization: "the impossible trinity" to the "trilemma" is explained.

2. LITERATURE REVIEW

The standard Neoclassical model of CAL states that capital flows from the capital excess nations to the capital deficit nations or the ones which lack in domestic savings, thus reducing the cost of capital and providing higher returns on the investment. Both investors as well as stakeholders seek such investment opportunities which add maximum profits at manageable risk, therefore separating investment decisions from saving decisions, (Blanchard and Fischer 1989) which make them earn more than holding back the capital or investing in less profitable options. Also, integration leads to exchange of technology and knowledge, leading to important inventions. It also enhances the domestic financial markets by improving strength and liquidity of banking system and equity markets, due to competition in the international markets. (Dell'Ariccia et al., 2008) suggest that gains of CAL and market integration are observed more in advance industrialized economies than the emerging economies. There are threshold and prerequisites which are required to be accomplished before the liberalization of financial sector, as presence of weak financial and trade system may increase macroeconomic volatility. Therefore, policy makers of various emerging economies are facing controversies about the degree to which a nation should open capital account as it raises the risk of financial instability which can lead to different crisis. The risk is associated with international flows of capital because production and consumption patterns are not known to the investor, thus distortion leads to greater losses than gains expected.

The various researchers in their study on fuller convertibility of capital account concludes the number of pre requisites in relation to macroeconomic fundamentals and financial stability of a country. Economic theorists provide copious views on liberalization of capital account bringing different benefits and risks for a nation. Economist like (Krugman, 1997; Subbarao, 2013) suggest that countries who are still developing have higher risk of crises as repercussions of increasing CAL and financial integration. Macroeconomic imbalance, weak governance and premature capital account openness has more negative impact than positive upon economic growth and historical evidence shows that it can lead to high beta economy making them vulnerable to contagious effects of external cycles and fluctuation, exchange rate adjustments and asset price bubbles. Yet trade integration can boost economic growth.

2.1 The International Monetary Fund Views on the Capital Account Liberalization: Benefits and Risk

It was during the meeting of the Interim Committee of the IMF in 1997, when the major talk about the liberalization of the international capital movements was undertaken. During this meeting the focus was on the amendment of the Articles of Agreement, mainly pointing to recommendation over the definition of currency convertibility extending to capital account transaction. The important question among the policy makers was for the role of the fund in development of an approach towards the fuller CAC. During the period of 1980-1997, capital flows and number of financial transactions in developing world almost tripled. Developing nations removed restrictions on the transactions during this phase of opportunities to grow at a faster pace. The controls on capital account and various sub categories are stated in the Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER) by IMF under Article VIII. There exist a huge gap between the financial integration de jure and de facto i.e. even after controls are imposed there are routes of capital flows which make the situation during distress more difficult. The IMF AREAER is basically a measure of controls implemented on flows but do not measure the intensity and effectiveness of these controls.

Every new crisis makes it more difficult and an intense topic for debate among the policy makers. The large volatile capital flows before crises relate to increasing inflation, exchange rate appreciation and fluctuating asset prices. Even at IMF it is a controversy yet to be solved, few of the researchers argue that IMF in political pressure asked various member countries to liberalize their financial accounts. IMF through its Independent Evaluation Office prepared a surveillance report on IMF's institutional approach to Capital Account Liberalization in 2005 and updated report after a decade in 2015 (Independent Evaluation Office, 2015). (Gallagher, 2011) rightly mentioned that policies in emerging and developing nations should be such that, surges and sudden stop of international flows should not "jeopardize" the national development projects. The developing nations should focus more on the quantity-based measures of capital controls than their counter using the price-based measure. The flows both inflow and outflow are equally significant, therefore the Capital Account Regulations (CARs) may help to reduce the cost of reserve accrual. The CARs should be posted differently for the residents and the non-residents & should have a dynamic mechanism so that investors and market adapt the regulations. In the IEO (Independent Evaluation Office, 2004) evaluation 2005, reports the IMFs ambiguity in the surveillance and inconsistence in policy advices to the countries with regard to liberalization of the financial account. Even after the evidences and experiences of various nations for the kind of turmoil they faced after liberalizing capital account, IMF is still deliberate to liberalize the economy as an end goal to be achieved. Little emphasis is paid on the type of flows in an economy and burden it faces. The nations should adopt an individualistic approach towards designing, monitoring and enforcing the CARs and policy for liberalization of capital account.

2.2 IMFs "New Institutional View" on Capital Account Liberalization

In year 2012 the IMF announced the new "institutional view" (Arora et al., 2012) on the liberalization and management of international financial flows, in the wake of great financial turmoil and contagion in 2007. There is a need of urgent change in macroeconomic policy to manage risk and economic variables for the steady growth of an economy. IMF now agrees that, free transfer of investments needs a lot of preparation beforehand i.e. it cannot rest upon the weaker economic or financial variables. The idea of free trade is far different from free finance, before liberalizing the capital account a nation needs to meet certain thresholds to prevent any kind of volatilities in the system. Liberalization of capital account can be profitable only if the other policies like fiscal policy, monetary policy, interest rates, policies for the foreign exchange reserves and macro-prudential policies are on the same line. Openness can be done only if the thresholds for these policies are met.

IMF reframed the "capital controls" (CC) as (Chensavasdijai et al., 2016) **"**Capital Flow Management Measures" (CFMs)**.** The CFMs are designed to control and manage capital flows and are divided into residency based measure and currency based & other measures. The residency based measures controls cross-border financial activity by differentiating the flows between residents and non-residents. The other measure controls the flows by implementing reserve requirements and laying down certain preconditions like registrations and holding period requirements. Also the shift in approach of IMF supports that the liberalization process should be gradual, sequenced, and pragmatic, different for the different economies, (Prasad & Rajan, 2008). The evaluation board recommended the IMF to provide its clarity on the issue of openness of capital account. IMF Executive Board in 2001 provided the "Integrated Approach" which is the part of the economic reforms required by the nations and which should be the part of their financial system and prudential regulation, based on sequential and detailed analysis of economic environment and risk levels in each country. The integrated approach focuses on the pragmatic and sequential approach towards liberalization of capital account. Also, great amount of attention needs to be made for the push-factors and supply side of foreign capital flows. Capital account liberalization process should be sequenced in the following pattern to avoid the risks associated with the volatility of capital flows. At first level of the liberalization, Foreign Direct Investment (FDI) Inflows should be allowed, At the next level of liberalization FDI Outflows should opened followed by long-term portfolio flows and finally, short-term portfolio flows and debt should be liberalized.

In their papers, (Dell'Ariccia et al., 2007; Kose, Prasad, Rogoff, & Wei, 2009) supported liberalization of capital account, but concluded that, impact over the growth can only be seen in long-run, through changes in macroeconomic and financial variables in the presence of strong institutional environment. Succeeding, to the global financial crises, IMF had been focusing on the supply side of capital flows and monetary policy. IMF will maintain both Bilateral Surveillance (modification of the balance of payment restrictions) and Multilateral Surveillance (impact of the change in the domestic policies) for the decisions over the capital account policies. The IMF provided framework specifying three criteria for implementation of the CFMs like Exchange rate overvaluation, Reserve adequacy and Economic overheating

The major questions regarding the liberalization of international flows still remained unanswered even after various policy discussions at IMF. The distortions related to the level of controls to be imposed and limits at which a nation can define the level of risk associated with capital flows is not yet defined. Even effectiveness of the capital controls to stabilize the economy and forms of control an economy should impose (price based or quantity based) on the capital flows is ambiguous. IMF still supports the liberalization of the capital account despite of lack of evidences supporting the same. Usage of the CFMs is not clear and the usage is limited. IMF fails to address the calculation of the under/overvaluation of the CFMs and "fiscal policy tightening subjects domestic policy to global finance"(Gallagher, 2011) in case of the capital inflows. The controls on the outflows are the part of counter-cyclical financial policy. The nations are not clear on the measures to deploy for avoiding the risk associated with the international financial flows. During G-20 meet policy makers defined "rules of the game" and recommended careful designing of macro prudential policy to mitigate the risk arising due to capital surges.

3. SHORT HISTORY OF CAPITAL ACCOUNT LIBERALIZATION AROUND THE WORLD

Capital Account Openness impact a nation's Monetary Policy as well as exchange rate regime as suggested by "Robert Mundell" (D. P. Quinn & Toyoda, 2008). Story of financial democracy largely measures the story of conflict between politics and economics. Period from the last decade of 18^{th} century, there was probably the great harmony between economic theory and economic fact than at any later time. Industrialization during these years was spreading widely and was connected historically with the movement toward laissez-faire (i.e. freer enterprise and freedom of trade and exchange with no government intervention) and this was the era of economic expansion that served for the most part of industrial and commercial expansions. During 1925-29, there were some who saw the strains and stresses were gathering beneath the economic surface which would sooner or later upset the economic balance. Cumulative effect of these economic strains resulted in stock market crash in the United States in, October 1929 followed by the Industrial depression. This depression was the result of failure of developing countries to meet obligations arising from international capital flows. Collapse came as the great shock to the business world and the world was in the midst of a "Great Depression" which was to leave a lasting impact on economic and political developments. In the late 1930's stringent regulations were passed to control the foreign trade and foreign exchange due to the difficult economic situations in the Britain and the Western world. The movement toward greater public (government) control of economic activities gained strength and became dominant note for both, economic thinking and economic policies. Consequently, capital transfers were largely left to official sources for several years.

At Bretton Woods in 1947 at International Monetary Conference, one of the major economic reform emerged which was adoption of fixed but adjustable exchange rates, by assigning central parity against American dollar with + one percentage on either side. During this era the major financial transactions and exchange of capital flows were limited to industrial economies (Obstfeld and Taylor, 2002; Pilbeam, 2006). But 20 years down the line the system started trembling as US monetary reserves started depleting and liquid liabilities were higher and adjustment mechanism was inefficient (Bordo and Eichengreen, eds. 1993; Eichengreen, 1996).

(Williamson & Mahar, 1998) in his speech at the Second Annual Indian Derivatives Conference mentioned that "The modern economic analysis" of financial policy in developing countries started with the seminal works of McKinnon (1973) and Shaw (1973). They explained "financial repression" in developing countries as where government majorly controls interest rates, borrowing and lending abroad, regulating and controlling financial institution and implement barriers for new entrants into financial sector. The McKinnon and Shaw & all other authors who favored capital account liberalization state that, the above dimensions would tend to repress savings and therefore the opportunity to invest. Economic growth would suffer as the savings will not be channelized in the best ventures available thus would not have optimal return. Whereas critics say that liberalization of financial sector would not only lead to loss of monetary policy control but also foster financial crisis. During the liberalization of the financial sector a relationship has to be developed between the savings and investment in terms of risk and return. Liberalization provides opportunity for getting the best return on your investment but the risk involved can be very high. The liberalized systems are indeed more prone to banking crises and currency depreciation or contagion effect of financial and balance of payment crises (Reinhart and Kaminsky 1996, Demirguc-Kunt and Detriarche 1997, Williamson and Mahar 1998). These crises occur due to the default in the financial structure, poorly regulated financial sector, and high rate of corruption in a nutshell lack of financial stability.

The Chiles experience with capital controls is generally viewed as a positive factor i.e. the Chilean Encage is also recommended by IMF to other nations facing difficult situation due to international capital flows (Forbes, 2006, 2007). Authors have conflicting views on whether lifting the capital controls leads to growth or it has no impact on growth. The experience of Latin American Nations and Chile shows that financial integration and open markets leads to economic disorders and disturbs institutional environment as well (Diaz-Alejandro, 1985).

The popular proverb "Prevention is better than cure" also applies to the financial system. When we talk about the East Asian Financial flu of 1997-98, the nations like India, China, Sri Lanka and Bangladesh were least impacted than the nations like Korea, Thailand, Philippine, Malaysia and Indonesia and the major reason was a systematic difference between the two groups, with respect to whether or not they had liberalized their capital accounts. Also the restrictions on capital flows played major role for saving these economies. In the following section we study the liberalization of the financial account in the BRICS and the ASEAN 5 nations.

4. CAPITAL ACCOUNT LIBERALIZATION IN BRICS AND ASEAN 5 NATIONS

The picture of the perfect financial world i.e. the free capital flows between the emerging and the advance economies is regarded as a source of great investments and growth opportunities. The standard binary indicator for the Capital Account Openness (CAO) or Capital Account Liberalization (CAL) is based on the Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER)[2]and provides the dejure information i.e. the government control

[2]*AREAER is the database maintained by IMF that keeps the record of exchange and trade agreements for 187 IMF member countries. "The database provides information on different types of capital controls used by countries, restrictions on current international payments and transfers, arrangements for payments and receipts, procedures for resident and nonresident accounts, exchange rate arrangements, and the operation of foreign exchange markets. It also includes measures implemented in the financial sector, including prudential measures"(International Monetary Fund, 2014).*

over the capital transaction which may differ from the actual scenario. The actual scenario is basically recorded by the capital flows in and out of the nation. The capital controls across the BRICS (Brazil, Russia, India, China and South Africa) and the ASEAN-5(Malaysia, Indonesia, Philippines, Korea and Thailand) are compared in Table 1 and 2 below. All the nations have imposed some kind of controls on capital account transactions i.e. restrictions on international capital flows and the degree of control vary from nation to nation.

The capital controls are the regulation that controls inward and outward flow of the capital from the nation. According to IMF AREAER "controls on capital transactions include prohibitions; need for prior approval, authorization, and notification; dual and multiple exchange rates; discriminatory taxes; and reserve requirements or interest penalties imposed by the authorities that regulate the conclusion or execution of transactions or transfers and the holding of assets at home by non-residents and abroad by residents" (International Monetary Fund, 2014). Repatriation means the conversion of foreign currency into the local currency, which is exposed to foreign exchange risk. So there are controls imposed by the nations on repatriation of financial assets.

TABLE 1: Contemporary Position of Capital Controls in BRICS Countries

Measure/Countries	BRAZIL	RUSSIA	INDIA	CHINA	SOUTH AFRICA
Controls on capital transactions	Yes	Yes	Yes	Yes	Yes
Repatriation requirements	Yes	No	Yes	Yes	Yes
Controls on capital and money market instruments	Yes	Yes	Yes	Yes	Yes
Controls on derivatives and other instruments	Yes	No	Yes	Yes	Yes
Controls on credit operations	Yes	No	Yes	Yes	Yes
Controls on direct investment	Yes	Yes	Yes	Yes	Yes
Controls on liquidation of direct investment	No	No	Yes	Yes	No
Controls on real estate transactions	Yes	No	Yes	Yes	Yes
Controls on personal capital transactions	No	No	Yes	Yes	Yes

Source: https://www.elibrary-areaer.imf.org

TABLE 2: Contemporary Position of Capital Controls in ASEAN-5 Countries.

Measure/ Countries	INDONESIA	KOREA	MALAYSIA	PHILIPPINES	THAILAND
Controls on capital transactions	Yes	Yes	Yes	Yes	Yes
Repatriation requirements	Yes	Yes	No	No	Yes
Controls on capital and money market instruments	Yes	Yes	Yes	Yes	Yes
Controls on derivatives and other instruments	Yes	Yes	Yes	Yes	Yes
Controls on credit operations	Yes	No	Yes	Yes	Yes
Controls on direct investment	Yes	Yes	Yes	Yes	Yes
Controls on liquidation of direct investment	No	No	No	No	No
Controls on real estate transactions	Yes	No	Yes	Yes	Yes
Controls on personal capital transactions	No	No	Yes	Yes	Yes

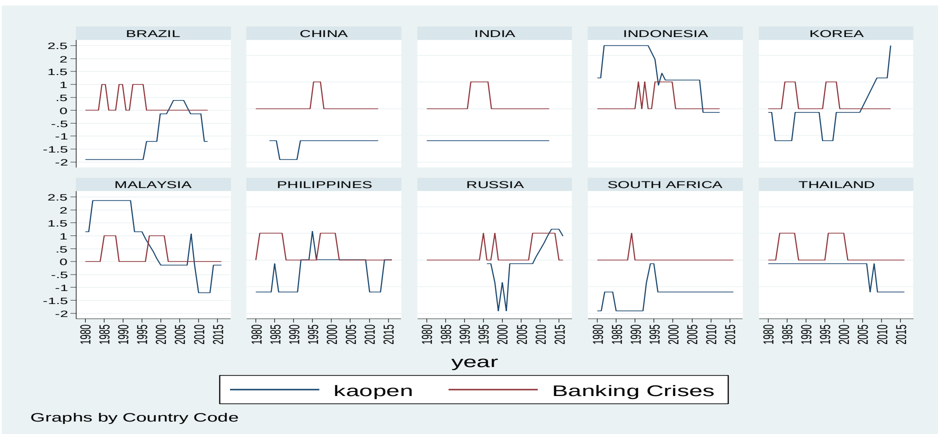
Source: https://www.elibrary-areaer.imf.org

In table 1 and 2 we study the current status of the capital controls in the nations under the study, where; yes indicates that the country had maintained the control on the transaction falling under the category and no means that restrictions are not imposed on the transaction (following this code various authors have developed the binary index for the capital account, (Abiad, Detragiache, & Tressel, 2008; Chinn & Ito, 2007; Fernández, Klein, Rebucci, Schindler, & Uribe, 2015; D. Quinn, 1997; D. Quinn, Schindler, & Toyoda, 2011). In table 1 we discern that amid the BRICS countries only Russia had lifted various controls and among the ASEAN5 countries Korea is most liberalized. All the South East Asian nations have lifted most of its controls from the direct investments.

4.1 *Capital Account Liberalization and Crises in BRICS and ASEAN 5 Nations*

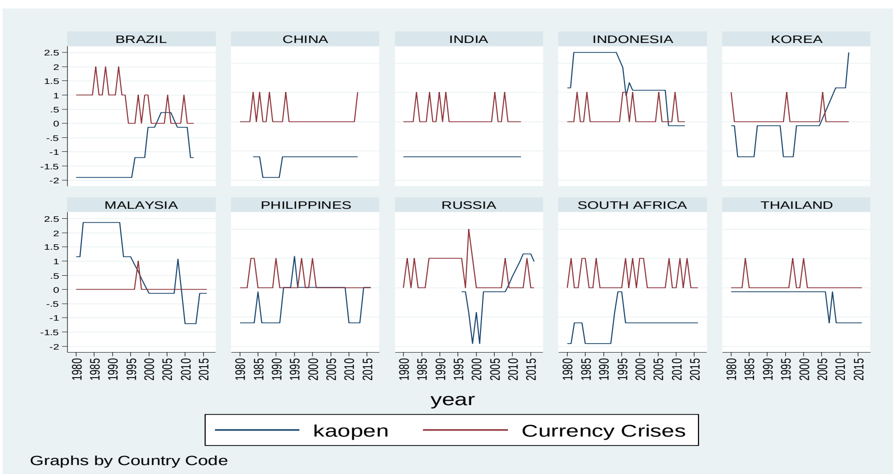
In the graphs 1 and 2 we study the nexus between the capital account liberalization and Banking and Currency Crises respectively for the BRICS and ASEAN 5 Nations. The definition and data for banking crises and currency crises was obtained from (Reinhart & Rogoff, 2009). The Banking crises episodes are defined evaluating the two broad events; first can be when there are major closures or mergers and amalgamation of one or two more financial institutions in the public sector (Government owned and controlled) and second when the banks are not restructured but government provides large-scale funds to multiple financial institutions. Currency crises episodes mark to the depreciation of domestic currency against pegged currency more than 15% or value of metallic currency reduces by 5% or a new currency replaces old depreciated currency. The presence of aforementioned episodes is than binary coded where, one means presence of crises and 0 means Absence of Crisis.

The definition and data for capital account openness has been adopted from (Chinn & Ito, 2008), who developed the index using principal component analysis for k1t (multiple exchange rate), k2t (transactions in current account), SHAREk3 (transactions in capital account), k4t (surrender of export proceeds0. The index is developed using binary codes; where 0 represents restrictive capital account transactions and 1 represents non-restrictive capital account transactions. This index takes the higher values as the economy gets more open to the cross-border capital transactions.



Graph 1: Capital Account Liberalization and Banking Crises

Source: The Data has been retrieved from http://www.carmenreinhart.com/data/ and (Chinn & Ito, 2008)



Graph 2: Capital Account Liberalization and Currency Crises

Source: The Data has been retrieved from http://www.carmenreinhart.com/data/ and (Chinn & Ito, 2008)

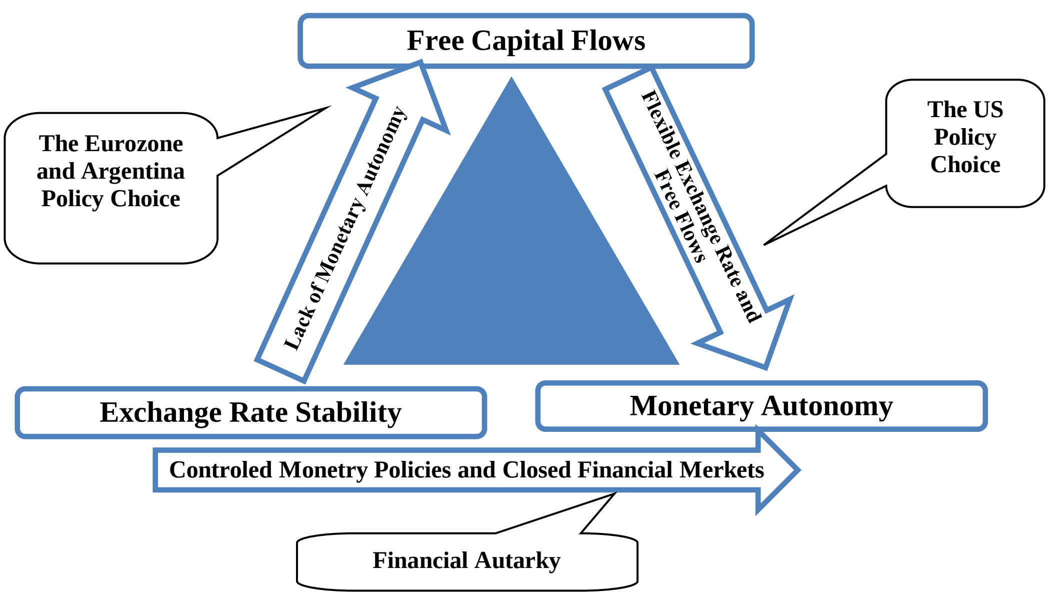
Graphically evaluating the relationship between CAL and Banking Crises we observed that with the increase in liberalization the episodes of banking crises have dropped. It can be seen that among the BRICS nations post crises reregulation of financial sector is undertaken, but the crises events still occurred, therefore nations partially liberalized the capital account. After year 1995-2000 banking crises among the BRICS nations are not evident as they followed sequential pragmatic approach towards liberalization (Prasad & Rajan, 2008). But the scenario is different in ASEAN-5 nations, which witnessed banking crises episodes immediately after liberalizing the capital account. Multiple episodes of crisis can be seen in graph 1 during the period between late 1980's and early 2000's. Except Korea the other four nations reregulated international capital movements. Among the ten nations Korea and Russia are majorly liberalized economies.

In case of the Currency crises among the BRICS nations in graph 2 we can observe that there are multiple episodes of currency crises, but in the recent time china had least episodes of currency crises, whereas Brazil, India and South Africa had witnessed many episodes of currency crises during the period from 2005-2015. Among the ASEAN-5 countries Malaysia had the least episodes of currency crisis followed by Korea, Thailand and Philippines. Indonesia had maximum events of currency crisis and off lately suffered 2 episodes during 2005-2015. The graphic representation shows no correlation between liberalization of capital account and currency crisis.

5. FIXED CURRENCIES, MONETARY POLICY INDEPENDENCE & CAPITAL ACCOUNT

LIBERALIZATION: "THE IMPOSSIBLE TRINITY" TO THE "TRILEMMA"

The Mundell-Fleming model is a shift of traditional IS-LM model of closed to open economy, studying the relationship between the nominal exchange rate system and the output produced in an economy in a short-run. The model is used to argue that the three pillars of the trinity can't uphold in a chorus. The 'Trilemma' is the assertion that a nation can simultaneously choose only two out of the below mentioned three policies in figure 2. The putative tenet by the policy makers is that the combination of the open economy, monetary autonomy and a fixed exchange rate regime can't be held together (failure of the Bretton wood System), but combination of two is possible (Mohan & Kapur, 2009). To have a stable economic growth and smooth financial system nations should achieve price stability, financial stability and the economic stability. The international capital flows impacts the economic situation and the financial condition of the nation. The basic purpose is to keep the economic growth on the track, which gets boosted by international capital flows, cross border trade and independent polices but (Minsky, 1993) raised the question of financial instability, that may increase with the new innovated financial products made available in the market. Basically the nation's economic, financial and monetary policy (Mohan & Kapur, 2009) should be such that it can dampen the instability in system. The different polices of the Mundell's Impossible trinity are Free Capital Mobility, Exchange Rate Stability and Monetary Autonomy.



Source: (Aizenman, 2013) and Authors Presentation

FIG. 1. The Impossible Trinity

The Nations in past had tried to achieve the combination of at least two out of the three policy goals, to recover and prevention from crisis and the economic events, forming the different systems like, The Bretton Wood System- focusing on the monetary autonomy and the exchange rate stability and The Gold Standard System- Free capital mobility and exchange rate stability.

The Bretton wood system got failed when the countries moved to floating exchange rate from fixed exchange rate system. But in the post-Bretton Woods era developed world on one hand moved to the floating exchange rate to manage the open economy and independent monetary policy and the other economies adopted the hard peg for exchange rate management (one of the major reasons for the 1997-98 Asian Currency Crises). Keeping this trilemma into focus, international policy makers have mentioned the transformation from Impossible Trinity (Fixed Exchange Rate, Free capital Flows and Independent Monetary Policy) to Holy Trinity (Price Stability, Sovereign Debt Sustainability and Financial Stability).

The policies of the holy trinity triangle are supportive to each other at normal times and behave differently at the time of crisis and works for sustainable economic growth. But in the short-term to achieve a complete harmony between three policies is difficult. To maintain the economic growth, financial system needs to be sound with the controlled inflation and market forces at place. Perplexingly the policies of holy trinity work in their own way during the different economic situations. The price stability and financial stability interaction works with the sound monetary policy, sustainable and steady economic growth and low inflation over the period. But during the previous crises these policies didn't complimented each other. The reverse interaction involves the easing of the monetary policy, but ended in the increase in inflation and jeopardizing policies in the future. The next interaction moves between financial stability and sovereign debt sustainability. In the difficult times for a nation the revenues are falling, leading to sovereign indebtedness, and failures of institutions resulting to larger financial gap which forces the government to borrow. The ways the private sector helps in funding the government, to bring the sovereign debt at the sustainable levels. It further takes into consideration the Long-Term refinancing Operation which in turns brings arbitrage opportunity. But if value of the bonds declines the banks need to bring the additional capital, therefore shaking financial stability. The next connection is midst the Sovereign Debt sustainability and price stability, which involves Open Market Operations (OMOs) bringing in autonomous Monetary and expansionary Policies. They are quasi fiscal measures which may shake price stability. The reverse relation between the price stability and government debt sustainability is about the level of inflation and rising interest rate, raising the cost of debt for government. So the policy makers need to balance these policy linkages for maintain the growth and avoid crises.

6. CONCLUSION

In the paper we had studied the phenomena of the capital account liberalization, risks and benefits associated with the same. The present restrictions maintained by BRICS and ASEAN 5 nations on the capital Account Transactions using IMF's Annual Report on Exchange Arrangements and Exchange Restrictions was evaluated. Overall all the 10 nations under the study have maintained the controls upon the capital movements. Among the BRICS and the ASEAN 5 nations the Repatriation Requirements are restrictive except Russia, Malaysia and Philippines. The controls on Money Market and Capital Market Instruments are imposed by all the ten economies. Except Russia, all the other nations have maintained controls on the Derivatives and the other instruments. The controls on Credit Operations are maintained by 8 nations and Russia and Korea have liberalized these controls. The Direct Investments are restrictive in all the 10 nations. Except India and China all the other eight nations have liberalized the controls on the Liquidation of Direct Investment. The controls on Real Estate Transactions are lifted by Russia and Korea, where as the other nations have restrictive real estate transactions. Brazil, Russia, Indonesia and Korea have liberalized the controls on the Personal Capital transactions. Thus among the BRICS and ASEAN 5 nations, Russia and Korea are more liberalized than the other economies in the sample.

The collapse of the BrettonWoods agreement and moving to the floating exchange regimes required the economies to remove the restrictions on the capital movement and facilitate free trade between the nations. The capital flows around the globe had increased rapidly since 1990. The BRICS and ASEAN nations are reforming their domestic economic policies so as to integrate with the world economy. Detractors have blamed capital account liberalization as being the root cause of financial crises. As per them it is difficult to find persuasive evidence that financial integration boosts growth. Sound macroeconomic policies, and quality of corporate governance if controlled effectively, than the CAO lead to growth. The international capital flows are highly sensitive to the macroeconomic policies of the nation and the benefits are associated with the soundness of the monetary, fiscal and the political developments. There is no strong evidence that higher and free capital mobility fuels economic growth in the emerging economies. Even with the larger exposure to crises, the evidence suggests that the net effects of financial globalization are still positive, at least in the long run. The main challenge for policy makers is to manage the integration process as to take full advantage of the opportunities, while minimizing its risks.

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Evolution of Cryptocurrency in Light of Network Security Protocol & Regulation Issues

Neeti Jain

Research Scholar, Indian Institute of Foreign Trade
5A/3 Ansari Road Daryaganj, New Delhi -110002
neetijain9@yahoo.com

***Abstract:** In the wake of 2008 financial crisis, alternative financial systems thrived as distrust among private banking institutions and government authorities soared. Bailouts of insolvent banks reached a pinnacle in low interest rates, zero inflation and lack of economic stimuli. Cryptocurrencies born during this time introduced a peer-to-peer financial system without reliance on Banks. As the system operates outside existing regular financial institutions and a lack of consensus on regulation exists between countries, a sound security and regulatory framework is absent. The paper traces the journey of cryptocurrencies through risk, enhanced network security protocols and lack of regulatory mechanism. As the cryptocurrency is young and the operational factor change on daily basis, few comprehensive academic sources exist. Systematic review of 21 cryptocurrencies and theoretical implications of network security protocol mechanisms is presented. The paper concludes that the pathway to success of cryptocurrencies requires three developments – underlying computer algorithm of the currency to stay transparent, robust and protected, usage of it being spread beyond the narrow band of enthusiasts to the global marketplace and sound infrastructure for transporting, securing and saving bitcoin.*

***Keywords:** Cryptocurrencies, Virtual Currencies, Network Security Mechanisms, Hash Algorithm*

1. INTRODUCTION

Relationship between customers, workers and employers has been recast as the outreach of the silicon chip has pervaded all spheres of life. With dramatic improvement of computing power across the world & participation in digital economy, it is imperative to design policies that allow us to make use of digital revolution advantages while minimizing job dislocation.

Digital transformation is referred to as a general purpose technology – its enabled to continuously transform itself, progressively expanding and boosting all industries and sectors. Such transformation rarity was earned by three previous technologies : the steam engine, the electricity generator and the printing press. General purpose technological revolutions are widely disruptive. Payment practices, infrastructures, networked accountancy and their chains of mediators rely on mutual trust to enact, test and validate the transaction of economically coded signs.

Cryptocurrency is a chain of digital signatures where each owner transfers the coin to the next by adding to the end of the coin - digitally signed hash of the previous transaction and a public key of the next owner. Cryptography, an encryption technique is used for securely buying and selling. A “Wallet” stores lines of computer codes on personal hard drives and/or online wallets such as Coinbase. Cryptocurrency, like cash and commodities are subject to being lost, destroyed or stolen. In 2014, Mt. Gox (Bitcoin exchange) had declared USD 350 million worth of bitcoin stolen, forcing the exchange to declare bankruptcy. It highlighted security issues within the world of cryptocurrency. It triggered a wave of information in finance, much as the internet did in online services.

Cryptocurrencies does not guarantee absolute anonymous state. Pseudonymity[1] allows consumers to complete purchase with disclosing identities to merchants. However, from a legal perspective, a transaction can be tracked back to a person or entity. Nevertheless, amid concerns of identity theft and privacy, cryptocurrencies can offer advantages to their users.

As cryptocurrencies do not involve financial intermediaries, the merchants benefit from low transaction costs due to absence of the “middlemen”. Cryptocurrencies have challenged the paradigm of state sponsored currencies and the dominant role of central banks and conventional institutions in the international financial system. Twenty years ago, when the internet came of age, a group of prominent economists and central bankers wondered whether advances in information technology would render central banks obsolete (Kings 1999). The debate has been rekindled by the rise of crypto assets.

These assets may in coming times serve as an alternative means of payment and units of account, resulting in reduced demand for fiat currencies or central bank money. Monetary

[1] Pseudonymity means a near anonymity.

policy relevance would diminish without central bank money. At present, crypto assets are excessively volatile and risky to pose a threat to widely trusted fiat currencies. Notorious cases of fraud, security breaches, operational failures and affiliation to illicit activities have deterred citizens to trust crypto assets. However, technological advancements may address some of the deficiencies. Effective monetary policies have to be carried by central banks

2. LITERATURE REVIEW

Stefan Ingves[2] (2018) points that demand for cash has dropped by more than 50 percent over the past decade as growing number of Swiss people are relying on debit cards and mobile payment applications. The novelty of digital solutions existing earlier for large payments has filtered down to individuals making small payments. In countries such as India, South Korea, Kenya and Tanzania paying through mobile instead of cash or card is commonplace.

If coins and bank notes have had their day, then in future the society cannot have access state guaranteed means of payment. Control accessibility, technological developments and pricing of available payment methods would be vested in private sector. Most likely, there would be limited financial access to the sections of the society that currently lack any means of payment, other than cash. Competition and redundancy in the payments infrastructure would

[2] *Governor, Sveriges Riksbank, Central Bank of Sweden (Oldest central bank in the world). Going Cashless,2018*

Figure : e-Money transformation

Source: IMF Publication: Rise of Digital Money, July 2019

As payments market infrastructure is established, the marginal cost of payments are low and positive externalities are present. Positive externalities mean that the value of being connected to a payments system increases as more people join contrary to when few people use the system.

Payments market can be looked as collective utility, and the state must regulate the infrastructure to ensure robustness and smooth functioning. Firstly, the society must have the service broadly available. Second, the infrastructure must ensure safety and security to sellers and buyers. Third, perceived ease of using the system and efficiency is settling payment fast involving lowest possible cost.

Dong He et al (2016) defines virtual currencies as digital representations of value, issued in their own unit of account. Virtual currencies differ from other digital currencies as e-money, as in the digital payment mechanism for other virtual currencies are fiat currency dominated. Virtual currencies have their own account and are not denominated in the fiat currency.

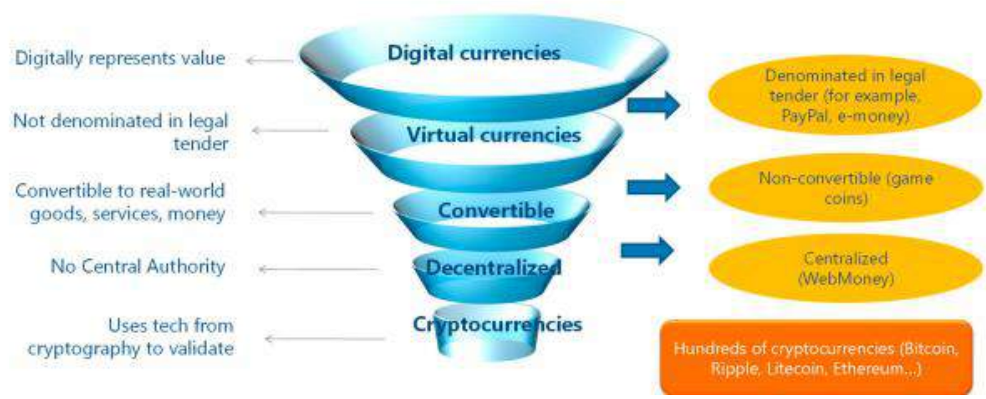

Figure: Taxonomy of Virtual Currencies

Source: Virtual currencies and Beyond, January 2016

Non-convertible Virtual Currency or Closed Schemes exclusively operate within a self-contained virtual environment. Significant restrictions are present for exchange of virtual currencies with other virtual currencies or fiat currency or towards payments for goods and services outside the virtual domain.

Convertible Virtual Currency or Open Schemes allow for exchange with other virtual currencies and with fiat currency.

Payment for goods and services is seamless in the real economy that ensures a better level of contact.

The concept of money is broader than that of currency as different types of assets (Demand draft) exist in addition to coins and banknotes. The value and credibility of a sovereign currency are intrinsically associated with the ability of the state to support the currency.

Damodaran (2014) opines that the final measure of a currency is its strength and durability of easily being converted into other currencies, be abled for storage and saving and its compensation factor for the holder of the currency. Global currencies such as US Dollar or Euro, offer these trading benefits as they are converted into other currencies at minimal cost and when idle, can be invested across banks or securities to generate market determined rate of return. Emerging market currencies are more constrained as conversion restrictions operate and often they cannot be invested beyond their local economies.

Security issues with bitcoin are highlighted through the 2014 collapse of Mt. Gox[1] , where bitcoins worth more than USD 450 million were stolen from supposedly secure servers. These servers are equivalent of banks in the bitcoin economy; and as are unregulated, money of the depositors are neither protected nor insured against bank runs or of bank robberies. While the idea he stated may conflict with cryptocurrency revolutionaries, the bitcoin market would need its own regulation and an insured centralized entity.

[1] *One of Bitcoin's biggest exchange; launched in July 2010. Handled 70% of all Bitcoin transactions worldwide between April 2013 and February 2014.*

Currency	*Issuing Entity*	*Transaction Capability*	*Security, Storage & Convertibility*
US Dollar (Euro)	Issuing Entity: The Federal Reserve (ECB) Trust: Has ebbed & flowed over time, depending upon how independent the Fed (ECB) is perceived to be and how focused it is on protecting the dollar's (Euro's) buying power. It is possible that the shift to protecting the US (EU) economy (with quantitative easing) over the last few years has reduced this trust.	Almost universal acceptance, reflecting the size of the US (EU) economy & the depth of financial markets in the US (Euro Region).	Can be saved relatively securely (in insured bank accounts & treasuries), while earning market-set interest rates.
Chinese Yuan	Issuing Entity: The People's Bank of China Trust: While the Chinese Central Bank gets in the news with its currency interventions, the perception (fair or unfair) is that it is a creature of the Chinese Government and will do its bidding.	Acceptance within Chinese borders but only limited acceptance outside China.	Can be saved in Chinese banks or government securities, but at rates influenced or set by the government.
Argentine Peso	Issuing Entity: Central Bank of Argentina Trust: Controlled by the Argentine government. Any attempt at independence is quickly countered.	Accepted in Argentina, but even Argentines may prefer to be paid in other currencies.	Can be saved, but security can be undercut by government decree.
Gold	Issuing Entity: Nature Trust: Absolute, unless the alchemists finally succeed	Almost universal for big transactions, but	Compact & portable. Can be stored but with a cost to the saver, not a return.
Bitcoin	Issuing Entity: Computer Algorithm Trust: Perhaps higher among tech true believers than the rest of us, but depends ultimately on how impervious the algorithm is to internal manipulation or external assault.	Limited to a small subset of transactions among the technologically adept.	Stored on compute servers, with no return to savers. Unregulated nature of business exposes users to risk.

Source: Ashwath Damodaran[1]

[1] *http://aswathdamodaran.blogspot.com/2014/03/bitcoin-q-bubble-or-breakthrough-both.html*

Damodaran analysed four currencies (US Dollar, euro, Yuan and Peso) along with gold and bitcoin. He concludes favoring US dollar over the yuan, but yuan over the peso. He selects gold over yuan and yuan over Bitcoin.

Bholat (2013) states that central bank's direction of regulation travel towards more granular data may be viewed as a conjectural phenomenon, that is, as a reaction to the global financial crisis. Misreporting was central to the plot of a host of recent financial scandals from Enron to LIBOR. Need for increasingly micro-level data to monitor compliance is a result of increasing volume of regulation in response to the scandals. Recent initiatives at international level like the Financial Stability Board (FSB) has proposed a common reporting template for globally systemically important banks (GSIBs) that will capture detailed data on their counterparty and instrument exposures. In Europe, new reporting standards such as the common reporting (CoRep) templates issued by the European Banking Authority (EBA) are changing the detail of the data that firms report. It is noteworthy that the EU Solvency II directive mandates insurers report their assets to regulators on a security-by-security basis. In UK, the newly established Financial Policy Committee has signaled it will seek to improve and broaden data collections to better execute macro-prudential policy.

Economic welfare shall rise with positive developments in globalization, digitization and technical improvements. The state cannot withdraw from its responsibility by transferring retail payment infrastructure in private hands. It remains to be seen what role will central banks of the world play in the coming times.

3. FINDINGS BASED ON LITERATURE

Primary method of the review was through white papers, though information relating to several coins were not available, in which case the data was collected from the coins' websites. The figure below shows active participation by the emerging Asia-Pacific region.

(By Region)

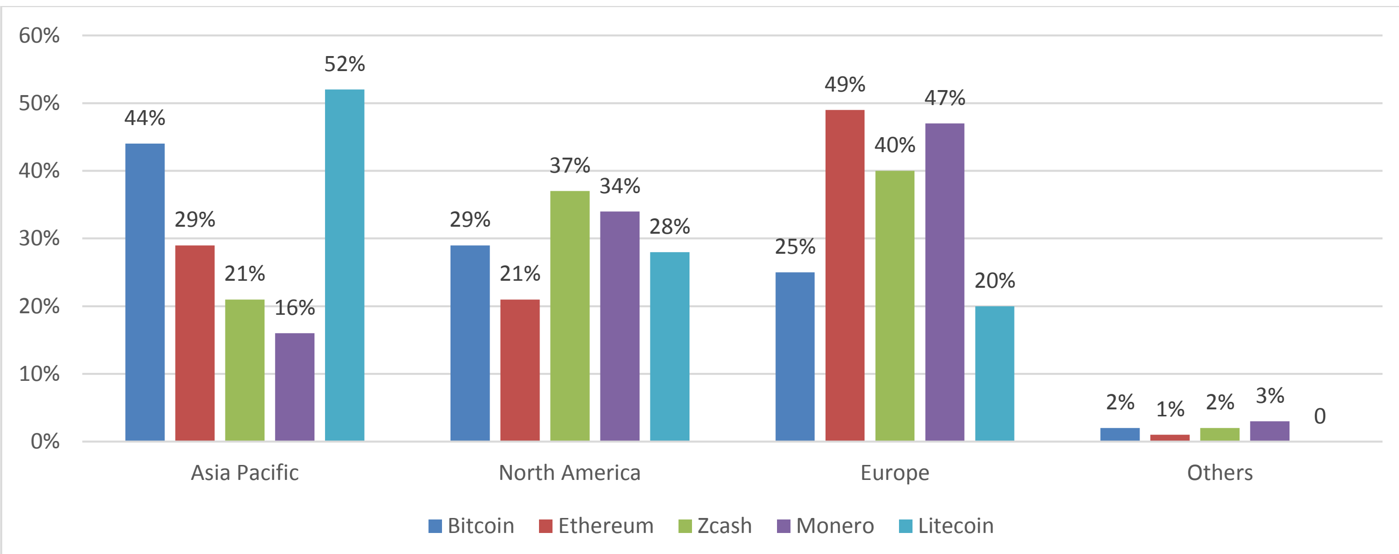

Fig. 1. Distribution of Cryptocurrency Mining Pools Worldwide in 2018

Source : Statista

The table includes the launch date of the crypto currency, market capitalisation (in US Dollars),the consensus algorithm (Hash algorithm), current free floating supply of the crypto currency (in units), the Blockchain mechanism it is operated on and the tendency of the currency to face deflationary scenarios

TABLE 1: Detailed Classification of Crypto currencies

S.N.	Currency	Release	Market Capitalisation (October 2019)	Hash Algorithm	Supply	Blockchain Mechanism	Deflationary
1	Bitcoin	Jan-09	$168,566,822,177	SHA-256	17,782,387	POW	Yes
2	Ethereum	Jul-15	$20,652,057,363	Ethash	106,654,627	POW	Yes
3	Zcash (ReLaunch)	Jul-19	$305,054,476	Equihash	6,840,756	POW & zk-SNARKs	Yes
4	Monero	May-14	$1,105,161,261	CryptoNight	17,064,775	POW	Yes
5	Litecoin	Oct-11	$4,034,512,216	Scrypt	62,404,376	POW	Yes

S.N.	Currency	Release	Market Capitalisation (October 2019)	Hash Algorithm	Supply	Blockchain Mechanism	Deflationary
6	Ripple	Sep-13	$12,989,422,815	ECDSA	42,566,596,173	POW	Yes
7	Binance Coin	Jul-17	$3,185,648,245	ECDSA sign	141,175,490	POS	Yes
8	Dashcoin	Jan-14	$674,438,057	X11	8,885,618	Hybrid POW & POS	Yes
9	Stellar	Aug-14	$1,622,686,812	Undefined	19,412,689,403	Byzantine Consensus	No
10	Bitshares	Jul-14	$80,952,603	Undefined	2,729,930,000	Undefined	-
11	Dogecoin	Dec-13	$317,060,456	Scrypt	120,094,185,233	POW	No
12	Nxt	Nov-13	$14,050,916	SHA-256d & Curve25519	998,999,942	POS	Yes
13	Peercoin	Aug-12	$7,365,127	SHA-256	Unlimited	POW & POS	No
14	Bitcoin SV (Orignal)	Jan-09	$2,519,003,226	SHA-256	17,854,986	POW	Yes
15	Tether	Jul-12	$4,129,108,937	SHA-256	3,574,945,622	POS / Omni	No
16	Namecoin	Apr-11	$7,092,221	SHA-512	14,736,400	POW	Yes
17	Monacoin	Mar-14	$72,356,575	Scrypt	65,729,675	POW	Yes
18	Tron	Jul-17	$1,355,043,273	Lamport	66,682,072,191	dPOS	No
19	Cardano	Sep-17	$1,172,017,710	Ouroboros	25,927,070,538	dPOS	No
20	EOS	Jan-18	$3,385,422,917	EOS.IO	920,765,652	dPOS	No
21	Neo	Jul-14	$794,958,039	SHA256 & RIPEMD160	70,538,831	Byzantine Consensus & POS	No

Although Bitcoin still remains as the dominant cryptocurrency in terms of market capitalization, other cryptocurrencies are increasingly catching up to cut bitcoin’s historically dominant market capital share.

While in March 2015, bitcoin’s market capitalization was 86%, it dropped to 72% by March 2017 and currently in October 2019 it holds 67.83% of the market capitalization. Ethereum (ETH) has positioned itself as the second largest cryptocurrency. Other currencies have witnessed have witnessed exponential rise in their volumes.

The rise of these cryptocurrencies has led to their increased interest and popularity. At present, more than 1634 different cryptocurrencies (referred as Alt-Coins) and estimated number of active users of cryptocurrency wallets has surged from 3,177,707 in 2015 to 43,052,627 in 2019. The crux of cryptocurrencies however, is that policymakers and financial regulators are lagging behind technological developments and are jeopardized about the way to regulate this novel phenomena in this nascent stage. There has been an evolution in the regulatory mechanisms taking place systematically as shown in Table 2.

TABLE 2: Evolution of Network Security Mechanisms

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
POW	1		1		2	2	1					7
POS/dPOS					1				4			5
Byzantine Consensus						1						1
Hybrid				2		1			1		1	5
Other						1						1

Transaction Network of cryptocurrencies works of cryptographic proof without a central authority. At first, the coin changes ownership that is recorded by combination of digital signatures of transacting parties, transaction date and timestamp. A code is generated that represents a coin and its path in the network. The code is then sent to computers connected to and running the cryptocurrency network softwares' nodes. For completion of the transaction, majority of the nodes are required to agree on the transactions occurred. In the event of non-agreement, integrity of the system is violated and there is a probability of double-spending and denial-of-service attack.

Proof of Work (POW) is a piece of data that is costly to produce so as to satisfy certain requirements but is trivial to verify[1]. Economic cost to perform a function is added by POW.The mechanism was implemented by Bitcoin and many altcoins (other cryptocurrencies) use the protocol. Transactions in this network are not considered verified until a certain amount of energy has been utilized to broadcast transaction. Each node takes a block and begins adding a piece of data to the block called nonce. A hash is created by block + nounce that meets the requirement of the hash algorithm. The new (block+nounce+hash) is added to the blockchain and transmitted to all the nodes.SHA-256 hashing function is used by Bitcoin.

Proof of Stake (POS) is an alternative mechanism of POW, that means a form of proof-of-ownership. In place of computational power being relied as a "scarce resource", the resource that the network security relies on is the ownership of the coin itself. As most POS coins do not have capping on money supply, they are inflationary in nature. The system distributes coins to the miners on the basis of their value addition to the network. This created a host of problems and the coins using the network turned to be fraudulent, as the creators gave themselves the majority of the coins. An improvement of this system was delegated proof-of-stake.

[1] *Cynthia Dwork and Moni Naor (1993)*

Delegated Proof of Stake (dPoS) is a consensus algorithm that is developed to secure a blockchain by ensuring representation of transactions within it. DPoS is designed to use voting and election process as an way of implementation of technology-based democracy. It protects the blockchain from centralization and malicious usage. dPOS coins are scalable, more democratic and inclusive than their alternatives. DPoS vs PoS offers more governance power to users with small stakes, DPoS vs PoW does not require as much computing power and, therefore, is not so financially demanding on the use.

Byzantine Consensus Protocol created a distributed network infrastructure. Servers in the network are faced with the problem of deciding if other servers in the network are sending accurate messages i.e. transactions.

The system is tolerant to wide array of failures called Byzantine Generals. Byzantine Generals problem, the Byzantine army is divided between multiple lieutenants who receive an order of attack or retreat from a commanding general.

However, there are a number of traitors - potentially the commanding general himself -

yet all loyal generals need to reach consensus despite a small number of traitors working to foil this plan. The problem is that the loyal lieutenants need to reach consensus on which order to obey by sending each other signed messages. Various algorithms have been proposed that provide solutions to the above problem. Summarization of each mechanisms' utility is presented as follows

TABLE 3: Main Features of each mechanism

Mechanism	POW	POS	dPOS	Byzantine Consensus
Decentralized Control	✓	✓	✓	✓
Low Latency		maybe	✓	✓
Flexible trust			maybe	✓
Long Run Low Energy Cost		✓	✓	✓

At present, the market capitalization of the 21 currencies analysed are presented in the table before as per their network security protocol. The findings suggest that POW mechanism which is scores less on depositor security is still flourishing

TABLE 4: Market Capitalizations by Mechanism (October 2019)

Mechanism	Combined Market Capitalisation (October 2019)
POW	$ 210,263,488,310
POS/ dPOS	$ 9,098,132,145
Byzantine Consensus	$ 1,622,686,812
Hybrid	$ 5,910,924,636
Other	$ 80,952,603

4. RESULTS

Virtual Currencies being volatile in nature, fail to serve as a reliable store of value. They are neither liabilities of a state and a few are not liabilities even liabilities of the private entities that introduced them. National currency pairs are relatively stable and less volatile than virtual currencies. The findings suggest that POW mechanism which is scores less on depositor security is still flourishing. Though networks that are sound and robust are present, the creators are resilient to adopt mechanisms that ensure better stability and storage value. Volatility ensures that they act as drivers of the market and secure profits at the cost of their beneficiaries.

In this state, where there is a lack of institutional backing or deposit insurance, the environment remains highly risky and unsuitable for the long term depositor or currency holder.

5. CONCLUSION

Cryptocurrency industry has expanded in terms of number of coins and circulation, showing resilience in the face of major thefts, including Mt. Gox. Improvement in network protocols demonstrated creativity in implementation of workable solutions. Bitcoin in the coming future may not dominate the industry, but the industry owes its existence to the pioneering anarchic coin.

In cases of preference divergence, international cooperation would involve exchange of experiences of which strategy works best. There would be a gradual discovery of the best policy for firms to organize themselves around upcoming technology. Inequalities are a result of the widening gap in market value and efficiency between firms and new business models and those firms that have not reorganized themselves. Replacement of old processes closes the gaps. Education policy must provide the coming generations with requisite skills to work in the emerging economy while the competition policy needs to ensure that new techniques do not become the province of select firms that come first in a winner-take-all-lottery.

Disruptions in technological payment space are taking place at lightning speed. Quantum computing, that facilitate calculations beyond capabilities of traditional computers, can enable new products rendering current technologies obsolete. Current standards of cryptocurrency could be obsolete that would affect privacy and communication at a global level. It is one facet to the threat to cyber security, given that all essential public services and private information are now online.

In light of the global reach of digital technology, and risk of the race to the bottom, policy corporation is the need of the hour, on the lines of global financial markets. The amorphous nature and location of Internet makes it difficult to oversee country specific regulation towards personal data and intangible assets. Monitoring of peer-to-peer payments transactions, including those funding crime, is difficult as they are not regulated through financial supervisory systems.

The risks need to be mitigated without stifling further innovation. Amidst paradox of regulation, it can be conveniently concluded that action cannot be put off until the answers become completely clear. The future regulatory framework should be attuned to the rapid pace of change, accounting considering unexpected new opportunities and risks likely to arise. Global international institutions like IMF can provide a platform for dialogue addressing challenges posed by digital revolution, integrating issues, experiences and tailoring advice effectively to cater countries' needs. Another approach, undertaken in Abu Dhabi and Hong Kong SAR is to establish regulatory "sand boxes" in order to test financial technologies under a close supervised environment.

Rather than ignoring or Repressing digital revolution, we need to accept and improve it. At the times of great technological change, sensible policies are required to minimalize disruptions and maximize benefits. With willingness to cooperate across borders and domains of digital data, international taxation, labour policies and inequality, education and competition.

An open mind towards crypto assets and financial technology is required, not just for the risks they pose, but also due to their vast potential to improve lives across the globe. Henceforth, existing technologies will improve well-being without diminishing enthusiasm and energy of the digital age. Value addition can take place with the advent of new technology, but it is imperative for central banks to communicate that cryptocurrencies are not currencies rather high risk investments and assets. A review of the supervision and regulatory framework of digital currency is required, as causality unnecessary bubbles arising in future from this relatively new phenomenon are high. Even with short term dislocations, reorganizing the economy around revolutionary technologies generates tremendous long term advantages. Success of cryptocurrencies can be ensured when the larger population buy the idea of holding cryptocurrencies, and it is not just restricted to technology enthusiasts.

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Understanding the Approaches to Attract, Motivate and Retain the Millennial Workforce: A Conceptual Analysis

Surbhi Talwar[1], Anupama Mahajan[2]

[1]*Research Scholar*
[2]*Associate Professor, Bharati College, University of Delhi*
[1]*sur.bnm@gmail.com*, [2]*anupamamahajan05@gmail.com*

Abstract: The rapid changing demographics of the workforce include retiring baby boomers and generation X moving into senior management position leaving a large proportion of millennial in the workforce. As a result of the changes the millennial are bringing into the workforce, the human resource department are compelled to change the existing approach and adapt a new strategy that can help attract, retain and effectively manage millennial or millennial. In this paper we wish to understand the distinctive characteristics of the Millennial. This paper brings together the latest thinking in several new approaches that the human resource department shall adopt for attracting, retaining and motivating the millennial. The paper recommends competitive differentiation, innovation and technology, customised culture, challenging assignments, integrative approach, facilitative career progression and self-selective options to attract, motivate and retain millennial

Keywords: Millennial, Generation Y, personality traits workplace, work-life balance, human resource practices, attracting and retaining, recruiting and training and development.

1. INTRODUCTION

Attraction, motivation and retention of talented employees can provide sustainable competitive advantage to organisations, in the light of increasing global competition. One of the major challenges facing organizations today is how to transform their culture to integrate new business realities and employees with changing values (Graen & Grace, 2015a). Businesses that can best leverage the employee's knowledge and skills to make the cultural transformation will have an advantage over its competitors.

Also, even if the businesses are successful in making the cultural transformation still, they fail. As commented by Twenge, Campbell, Hoffman, & Lance (2010), one of the main reasons for the failure is the level of motivation, needs, and interests of employees based on the generation they belong to. The characteristics of the work have changed significantly. Thus, a key question facing businesses is how to create a deeply engaging and high-performing organizational culture that integrates the strengths of multiple generations and offers them an opportunity to use their many skills and talents (Blattner & Walter, 2015). These generations include baby boomers (born 1946-1964), generation X (born 1965-1982), and generation Y (or millennial, born 1982-1999) (Twenge et al., 2010). A large pool of the participants today is likely to be in the 20 to 30 years age group. These applicants are commonly called Generation Y or millennials (Howe & Strauss, 2000) characterised as confident, independent, and goal-oriented. Generation Y often know more about the digital world as they were born into technology (Meier & Crocker, 2010). To train and motivate these employees, and use their strengths for the benefit of the business is a tough challenge to the managers. As a lot of the characteristics of the millennial workforce differ from their predecessors, still a lot of research is yet to be done in the field of effectively managing the millennial generation. Hence, the present research paper has been designed to understand the unique traits and behaviour of Millennial at work place and to develop strategies to attract, motivate and retain them at the workplace and thereby, reduce the attrition rate; thereby, focussing to achieve the following objectives:

- Understanding the unique traits and behavioural tendencies of the Millennial/Generation Y Workforce.
- Identification of the strategies to attract, motivate and retain the Millennial Workforce.
- To understand if the Millennial Workforce would change the landscape of the business arena.

2. METHODOLOGY

The aim of this paper is to collect and analyse theoretical data on The Millennial Generation. To build the theory primarily the secondary sources of information such as books, articles available in several journals and non-academic sources such as

Forbes have been used. Journals and books selected for the research are focused on three disciplines: human resource management, psychology and business-management. Following keywords were used for the purpose of our research -Millennial, Generation Y, personality traits, Digital Natives, learning style, workplace, work-life balance, human resource practices, attracting and retaining, recruiting, training and development, mentoring, feedback, organizational impacts, diversity management and generational gap

3. WHO ARE MILLENNIAL?

Organizational memory, optimism, and their willingness to work long hours are some of the strengths of baby boomers. Members of the silent generation (born 1925- 1945) raised the baby boomers that stressed individual achievement and work above family. The economic boom and consumer growth of the 1980s and 1990s, high divorce rates, and the introduction of the personal computer were few experiences of the Generation X. The outlook of the millennial towards what they expect from their employers is significantly different from the preceding generations. Millennial are well equipped with education, knowledge, skills, confidence, multi-tasking ability, and plenty of energy. While seeking challenges, they give priority to work life balance. Loundin, 2013 portrayed millennial as the "Peter Pan Generation" or the "Boomerang Generation". They are entitled, optimistic, civic minded, close parental involvement, value work life balance, impatient, multitasking and team oriented" (DeVaney, 2015, p13). Prensky, 2001 addressed them as *'Digital Natives*', being the first generation that have experienced the advent of computers and digital media (Gorman, 2004; Raines, 2002).

Businesses need to recognise the high ambition of these millennial by planning roles that are suitably challenging and complex (Bedingfield, 2005) as they seek purposeful work and expect rewards out of it too. Millennial do not live to work, but are hardworking by nature. Millennial want choice as possible in the job, such as work scheduling, choice of which duties to do and the order in which they are handled. Amar (2004) and Hulett (2006) explained how individuals perceive control when being offered higher choices, which leads to greater job satisfaction. Managers assigning different tasks to employees, allowing them to work on different projects and bring in new and motivating ideas to the company help in achieving motivated and satisfied workforce (Meier & Crocker, 2010). Millennial are motivated if, they feel that their job has a sense of purpose. For them the place of work is an opportunity to interact with their peers. Research indicates that 76% of respondents in the 16 to 24-year-old age group said they were less likely to leave an organisation in which staff is encouraged to socialise (Washington, 2008). There seem to be a number of simple things that would make the workplace "fun", such as casual dress days, company-provided food and refreshments, etc. (Karl et al, 2005). An important way of engaging staff is having fun in the workplace (Cheese, 2007). Hulett, (2006) suggested that businesses can make the job 'interesting' and ' fun' by incorporating non-work interests into jobs, through company-sponsored sports activities or community volunteer work.. Hence, Millennial are well equipped with education, knowledge, skills, confidence, multi-tasking ability, and plenty of energy; while seeking challenges, they give priority to *work life balance.*

According to O‟Malley in his article 'Attracting and retaining Generation Y employees' millennial consider work-life balance as a necessity rather than a luxury. Millennial have different expectations from their work compared to their ancestors (Kerslake, 2005). As commented by Spiro, C. (2006), in his article 'Generation Y in the Workplace', millennial place a high value on relationships with friends and family and are more interested in making their jobs accommodate their family and personal lives. To maintain their work-life balance many employees prefer to work from home. Democratic managers providing higher flexibility to employees get better results than autocratic managers. Millennial are more attracted towards the businesses provide emphasis on better work-life balance. *Hence, businesses must focus on meeting the social requirements of employees; through ensuring an appropriate work-life balance.*

Lowe, D, Levett, K, Wilson, T. (2008) advocates that organisations requiring a long-term commitment must make training and development a part of an organisation's culture. Millennial seek the ability to keep learning and advancing their skill set which can be achieved from imparting training and development programs by the organisation. Millennial are motivated by a desire to enhance professional skills in order to remain marketable (Sayers, 2007). To be successful in attracting, engaging and retaining the employees it becomes imperative for organisations to provide learning opportunities such as further academic study, on-the-job training, job rotation, mentoring, coaching, etc. Millennial are more interested in challenging and meaningful assignments for their self-development and are less interested in a lifelong job (Baruch, 2004). In the absence of clear career paths, millennial look for opportunities to expand their experience by searching for jobs in other businesses. To decrease turnovers of the millennial, organisations can give opportunities for skill building and enhancement through the use of information and technology (Hulett, 2006) and holding training and development programmes capable of *skill enhancement*.

Glass, (2007) in his article 'Understanding generational differences for competitive successes observed that to motivate and retain the millennial consistent and constructive feedback is essential. Baker, (2009) states that as much as it is important to provide feedback on the weaknesses of the employees they demand for coaching in the field of their expertise as well. The confidence and self-esteemed instilled by such coaching to employees helps not only the employees but the organization equally. Continuous feedback helps employees understand their progress which leads to increasing loyalty towards the organisation. It is essential to develop teamwork skills and provide mentoring on the importance of persuasion in order to get organisational results (Behrens, 2009).

To retain the millennial and motivate them existence of an effective remuneration strategy is imperative. Equity both internal and external in the remuneration system must be ensured by the human resource managers. Salary surveys and comparisons with the competitors must be conducted to ensure external equity. Perceived fairness for the remuneration for a job, compared to other jobs in the organisation accounts for internal equity. Nagle, (1999), comments since millennial have a relative short attention span, recognition and rewards must arrive quickly. According to a Research done by Meier & Crocker, 2010 indicates that nearly sixty per cent of millennial listed high salary, good benefits and other compensation as motivational factors of their job. Cingoranelli (2009) suggests that to provide incentives that motivate employees to grow into future leaders a firm should use a clear compensation plan. For taking on new responsibilities, demonstrating leadership, developing others, etc. the plan should reward people. A flexible compensation system should be based on the performance of the employees. Non-cash incentives such as travels or gift vouchers etc. are equally valued by the employees as cash incentives. Younger employees, expect their employers to provide more benefits and other perks than their older counterparts (Balderrama, 2007). Providing a number of options to employees as rewards and compensation to self-select things of higher rewards is another strategy of retaining the millennial. Millennial are likely to trade more pay for work that they feel is more meaningful, at a company where they feel appreciated.

The biggest strength of the millennial is their ability to work well in teams and the ease with which they use technology, which calls for a change in the way things are done. In addition to the fact that millennial are experts in digital communication, they are primed to do well by doing well. They believe that giving back and being civically engaged are their highest priorities (Leigh Buchanon).

Most millennial value a workplace that consider them to be more than a trade-of between skills and salary. A strong culture is the need of the hour to attract the millennial and the Human Resource department can reinforce this by providing various perks to the employees such as health insurance, paid time off, paid sick days or employee development programs. The ways managers are hiring the millennial will have an impact on attraction and retention of the employees. Millennial hiring practices are best practices for the workplace as they create positive and forward-thinking work environment.

Millennial are born in the digital era, hence their access to and use of technology differentiates them from the previous generations. The affinity with the digital devices such as laptops, smartphones, and social media gives them preferential access to information (PWC, 2011).

4. WHAT MOTIVATES MILLENNIAL?

It is a well-known fact that remuneration and other benefits have been important factors for making many important employment decisions, and the employers provide some degree of stability through these basic factors to all generations alike. But for the millennial flexibility and career options provided by employers are also important. So, the employers providing flexible work hours work from home, or sabbaticals are preferred by the millennial. Also, career development is a key factor millennial are looking from the organisation they are working in. they tend to look for other opportunities outside the organisation if they feel stagnant or without opportunities.

The millennial work and make money to enjoy life as they want whether it is for family, to travel, or to study etc. Millennial want to work for an organisation that has something to offer that they want. Given a choice millennial will choose an organisation that can integrate between both work life and personal life. The previous generations wanted to work for great companies, but millennial appear more attracted to a company’s purpose this is because there were several organizations that have disappeared due to bad business. Millennial care a lot about trust. As a matter of fact, many millennial have experienced either themselves or their parents or anybody in the known who had to be separated from the jobs because of bad decision-making abilities of the senior managers. So, millennial don’t trust their employers as their previous generations and with good reason and that gives a reason for them to connect with a values-based employer

Millennial prefer simple, practical, mobile and personalized work environment but above all the expect trust from their employer in leadership values and trust that their employer will invest in their development. If the employer doesn’t have a leadership team that understands how through transparency, innovation, and agility to connect with millennial and is stuck in the traditional policies and hierarchical secrecy, cautionary business processes the organisation is likely to face difficulty attracting and retaining millennial. Leadership must find a new way of doing things. Traditional attitudes that led the employers to gloat that the employees are lucky to have got a job cannot be accepted by the millennial. Millennial are going to be the majority workforce in the future, and in the light of on-going complexity of the business all the employers need to do is to formulate strategies which help in attracting and retaining millennial.

An intergenerational analysis of 9,120 millennial and 4,030 baby boomers senior associate and managers was conducted by Pricewaterhousecooper (PwC) in the years 2011-2012 found that:

- The traditional work life balance accepted by baby boomers is not favoured by the millennial.
- As opposed to baby boomers', millennial like more team-oriented work settings.
- Both generations seek greater work flexibility and are equally committed to their work.
- Millennial place greater importance on respect, trust, feedback and support.

5. WHAT MILLENNIAL DESIRE: CHALLENGES FACING HR MANAGERS

The biggest challenge facing the human resource manager today is creating an engaged workforce. The traditional strategies used to successfully engage the baby boomer generation cannot be put to use with the millennial generation and thus a whole new approach is required for effectively engaging the millennial.

The traditional role of the human resource manager is on the verge of extinction as the practices followed for the baby boomers and the generation X cannot be applied to the millennial. Major adjustments in their engagement models are expected from the employers as after the baby boomer generation the largest age group to emerge is the millennial and is expected to grow as a significant proportion of the workforce. This includes not just discarding the traditional models while implementing a casual dress code but also HR processes re-engineering, implementing tech-savvy HR practices. Though, the traditional role of the employer of motivating, engaging, and retaining people will never cease to exist, but he will have to carefully develop practices to attract, appoint, retain, motivate and develop valuable millennial employees. The following section talks about a few practices the HR department must follow in pursuit of the aforementioned task.

The first step towards creating a strong millennial workforce is to create a workplace ideal to attract millennial. As commented by Hiltrop (1999) ability to attract and retain talented workforce is rapidly becoming an issue for the human resource manager. Often managers fail to acknowledge the different characteristics of the millennial. To make a workplace attractive various factors need to be considered. Therefore, a flexible work environment is required to attract multigenerational workers. According to Eversole, Venneberg and Crowder (2012) flexibility refers to adaptable work schedule, part-time, leaves of absence for family needs or other reasons, job sharing and retirement programs. The main reasons for millennial generation to quit their jobs are: inflexible work environment, excessive working hours, minimal wage growth, lack of growing opportunities (EY's survey, 2014). Hence, millennial desire acknowledgement for their progress, training and development programs, feedback, rewards and support and supervision from the HR department.

Recruiting Millennial is the next step toward creating a valuable workforce. To appoint the 'Digital Natives' traditional recruiting techniques have to be replaced with the new ones. The millennial are always looking for a better job and are ready to walk with new recruiters offering better opportunities. They are continuously searching for job opportunities and given the widespread use of technology and mobile devices by millennial, organizations should use e-recruitment systems that support multiple channels of contact. Also millennial have more confidence than previous generations (Twenge et al., 2012b), which suggests that organizations might consider using realistic job previews on their recruitment websites providing information on all aspects of the job to the potential applicant. Recruitment using social media is another approach that the HR department needs to shift its focus on considering the millennial internet related skills and interests

A well conceptualized training and development program is another HR practice which is instrumental in not only attracting the millennial but also retaining them in the organisation for long. The traditional formal training and learning process adapted by the organisations for the baby boomer generation does not fit to millennial generation as there is a significant difference in their learning styles. Millennial are well educated, active learners and achievement oriented by nature (Brack, 2012). The digitally savvy millennial generation prefers technology based learning activities (Farrel and Hurt, 2014; Sharma, 2016). E-training and development programs are an excellent way of connecting supervisor and worker when they are not co-located. Also, organisations can use more informal ways of learning such as collaborative learning, micro learning experiences, gamification etc.

As commented by Cascio (2016) performance management is a process of providing feedback to the workers about their performance. Performance management is unusually difficult for managers of millennial workforce due their inflated sense of self and skills and are ignorant about their weaknesses which make accepting negative feedback difficult. They tend to question organisational goals, especially when they are not able to understand how performance standards benefit them personally. Electronic performance management (e-PM) should allow organizations to collect data about performance in a streamlined manner, which will enable supervisors to provide more frequent feedback and have more conversations with employees. They are more likely to prefer receiving feedback from computers compared to previous generation.

Hence, performance management is another practice which, if done according to the expectations of the millennial, will help create a motivated workforce.

Working with millennial, another HR practise is to encourage them to work in teams and achieve a common goal. But, lack of competent leadership is one of the main causes for the failure of these teams (Graen, 2013; Hogan & Ahmad, 2010). Development of innovation teams are expected to encourage the individual to express their intellect and personality on a common mission (Graen & Schiemann, 2013). "Leadership sharing" helps teams to work at their full potential. Leadership sharing helps in flexible in decision making; participants to assume leadership roles; collaboration amongst experts; and lastly coordination, knowledge sharing, and communication (Hoch & Dulebohn, 2013). Therefore, teams should learn how to communicate and develop shared leadership to participate in decision making and problem solving. HR department plays an important role in building teams that are successful in attracting millennial (Kaiser, Hogan & Craig, 2008). The key is to develop a team culture where in people are competent and trust each other. Once the trust is built these teams are trained by the HR professionals in leadership sharing methods. Rewarding and recognising the teams for their achievements boasts the morale of the millennial.

In this context Boudreau and Rice (2015) added that to capitalize on their unique HR and employee strengths, organizations must build HR innovations rather than using “best practices”. The success of the HR’s innovative team approach can be assessed when peers see each other less as competitors and contribute more and more towards organisational distinction.

6. MILLENNIAL WORKFORCE: CHANGING LANDSCAPE OF BUSINESS ARENA

Working with the millennial has compelled businesses to change their game for the positive. The working environment in the organisation is undergoing a drastic change to adjust to the distinct characteristics of the millennial generation. Some of those changes are:

Millennial prefer organisations offering flexible work environment, such flexible work hours or work from home. Hence, businesses are incorporating flexible work hour strategy. Infact, organisations are proposing to forgo the cost of maintaining an office entirely, opting for work from home. As the millennial will grow into leadership, it is more likely to see more aggressive flexible approach to make the work environment more efficient, cost-effective and attractive to the workforce.

The last decade has seen a quick rise of millennial to higher ranks and becoming managers of the generation older to them and achieving higher productivity. This can be attributed to their education and hardworking nature. They simply believe that hard work and effort will only help in achieving the organisational goals and they don't shy away from doing so.

Millennial generation is often referred to as ‘Digital Natives’ as they are born into the technological equipped era. Therefore, millennial want their employers to keep them connected to the latest and best technology. In fact, many companies are now offering online interviews which are not only time saving and cost effective, but also help draw tech-savvy top talent to the organisation.

Millennial desire real time feedback on their work and are not willing to wait for a yearly review of their performance. Therefore many organisations have eliminated the annual performance management system and instead use technology or quick and immediate appreciation for a job well done.

Millennial are risk taking generation by nature. Unlike their predecessors, they are not afraid of trying different methods of accomplishing a task. They aren't afraid of futuristic approaches to do a work and more often this works as a catalyst for innovation and creativity.

Millennial are experts in using social networking skills and collaborating techniques to achieve the goals of the organisation. In fact, working in teams is one of their biggest strengths. Organisations are already emphasising on teamwork by creating open office layouts to facilitate co-workers to easily interact and share ideas with each other.

The presence of popular search engines like Google and yahoo has made pool of information even on the complex topics readily available to the millennial which has resulted in millennial wanting to work on complex problems requiring creative answers. Employee diversity, experience and expertise are being leveraged by Global businesses to become more creative. HR professionals advocate Crowdsourcing, in the form of innovation contests which brings thinking minds together.

7. CONCLUSION

HR departments face great amount of challenges with increasing number of millennial in the organizational workforce by the year such as, choice between advancing their careers and pursuing further education or employees feeling their roles have become obsolete, or facing issues with peers or managers. Senior managers not only listen to the problems of the employees but also provide expertise to solve their problems.

Different generations of employees need different approach to be motivated and engaged with the organization. Compared to the previous generation’s millennial have different personality traits. One approach fits all technique does not work and management needs to redesign strategies to attract, hire, retain and motivate millennial. Millennial are enthusiastic and eager to learn and welcome change. They think and operate from a global mind-set. But the preceding generation is often rigid, not flexible to change and prefer old habits over new ones. Organisations providing interesting work, an enjoyable work environment, supportive leadership and offering a good work-life balance are likely to benefit from the talents of millennial employees. Last decade has seen organisations using different ways to train and retain talent in the workplace such as challenging works, international assignments and business development opportunities. In the light of global competition, where millennial are not restricted by time, place and physicality 'getting better' is not enough. Organisations need to make innovative changes to 'get different'. And by getting different means creating a dynamic and innovative workplace culture which enables to attract millennial. Talent management strategies need to be accelerated to concentrate on acquiring, processing, educating and developing innovative millennial workforce.

8. RECOMMENDATIONS FOR FUTURE ACTION

As suggested by Graen and Grace (2015a) organisations are deeply engaged in creating a workplace culture that engages the millennial in finding a solution to the most challenging problem of creating a distinct identity of the company in the marketplace. Based on our understanding of the data available following are a few measures that the HR department must implement in pursuit of creating a motivated workforce of millennial.

- Traditional planning and problem-solving approaches may not be competent enough to create a competitive differentiation. Therefore, to adapt to the rapid changes in market conditions a new team-based organization, and the management practices that create a flexible organization that is capable of innovation and quick response must be built.
- To create a distinct identity of the organisation an innovative and technology based management system must be created by leveraging the Human Resources management and Information Technology.
- A new strategy aiming at providing the millennial with customised jobs and culture, consisting of challenging and meaningful assignments, will instil a sense of belongingness amongst the millennial towards the organisation. This will further lead to lower turnover ratio of an organisation.
- Millennial want integration between their organizations' purposes and their values, and they are likely to leave if the approach fails to do so. Thus, HR initiatives should be competent to attract and retain millennial that is valuable for organizational advancement.
- HR practices must ensure to facilitate career progression for employees, and that they communicate this to potential employees during the recruitment process
- Providing a number of options to employees as rewards and compensation to self-select things of higher rewards is another strategy of retaining the millennial. Millennial are likely to trade more pay for work that they feel is more meaningful, at a company where they feel appreciated.

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