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## From the Editor's Desk

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At the outset, we wish all our readers and others a Happy and Prosperous year 2018.

I am delighted to introduce present issue of Uttaranchal Business Review. Today's turmoil calls for a more subtle reworking of multinationals' strategies, organizational structures, and approaches to societal engagement. Doubts about the future of globalization began to surface during the 2008-2009 financial crisis. But as macroeconomic conditions improved, the gloom gave way to a murky mix of perspectives. In the face of such ambiguity, it is essential to look at the facts to see how globalization is actually evolving.

In this backdrop, we present the December 2017 issue of Uttaranchal Business Review which is a collection of some of the finest contemporary articles. Present issue covers a variety of research papers reports on developments in management, including the latest research results and applications. Besides academic research, the present issue provides an avenue for sharing information related to business management programs. In line with this, Dr. SM Tariq Zafar and his fellow researchers discuss the latest economic upheavals the world is going through. In their research work on title, "An Analysis of World Economic Trends" Dr. Sana Moid has analysed the state of Green Bonds companies in India.

Business Process Reengineering has drawn great attention of academicians and researcher for gaining improvements in productivity, cycle times and quality all around the world. Dr. AN Shankar have studied the potential of Business Process Re-Engineering as a tool for CSR in automobile industry. Mr. Ajita Chandra & Dr. Durgeshmani have explored HRM Practices and Employees Performance in Hospitality Industry.

Data security has become a great challenge in the emerging digital world. Dr. K.R. Subramanian has researched on Data Security in his article. Further Mr. Abhishek Bhatt assesses Security Solutions in Cloud Computing, and so on. Umakant Dubey & his fellow researcher have analysed the social media and its application in their research work on "Analysis Of Social Media And Its Application In Political Communication". Transformation of digital marketing from traditional marketing is well examined by Amarpreet Singh Virdi in his article on "Digital Marketing: A Transformation from Traditional Marketing Strategy". The emphasis on branding of green product and green marketing is explained by Mayank Pant & D.S. Chaubey in their article on "A Notion About Branding of Green Product and Green Marketing".

I thank the editorial team and the publishers for their wide support.

Happy reading....

Sincerely,

**Prof.(Dr.) DS Chaubey**  
(Editor-in-Chief)

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# AN ANALYSIS OF WORLD ECONOMIC TRENDS AND THEIR FUTURE PROSPECTS

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## Abstract

Regional economic dominance largely depends upon its growth factors. It is very tough to analyze global economic trends as they are outcomes of macroeconomic factors and influenced by geopolitical conditions. Global growth has weakened in 2016 which is unchanged from the disappointing pace of 2015. Struggling EMDE region, weak growth in advance economies, declined commodity prices, unpredictable financial flows, challenging situations for commodity exporters. In the year 2017 economic activities, trade, manufacturing and investor confidence started strengthening. Considering these changes, World Bank and IMF revised the global growth projections. Commodity exporters obstacles diminish, commodity importers activities remain robust. But risks to global outlook remain below to par level. Researchers to evaluate and analyze the GDP growth examined the trends of Advance economies, Euro Zone, Emerging and developing Asia, MENA region and Sub Sahara Africa region. The study revealed that most of the economies were struggling due to regional economic conditions but now they are restablising there pace and their expected to perform better in future.

**Key Words:** , EMDE, MENA, Euro Zone, Advance Economies, EDA, Sub Sahara Africa, inflation, unemployment

**Jel Classifications:** A11, D01, Eo1, E27, E40, E58, E63

## Introduction

The projected global growth in the year 2016 was 2.4 percent which was substantially weak and impacted the global economy in all the parameters. The recovery in major advance nations economies stalled. On one side, most of the advance economies in 2016 were having suffocated growth throughout the year. On other side, emerging and growing economies have faced unexpected headwinds, along with low commodity price and lacklustre global trade and capital flows. During the year global economic prospects declined drastically and became strongly unpredictable, which led to declined international trade movement and manufacturing activities in general. During the period mother of all macroeconomic factor inflation, recession and oil played critical role and influenced other economic factors, which in result, impacted global economies in multiple ways. During the period economic conditions remains volatile for commodity exporters. But commodity importing in emerging market and developing economies shown resilience and was on growing trend.

Deterioration in key commodity exporter conditions, unexpected decline in advance

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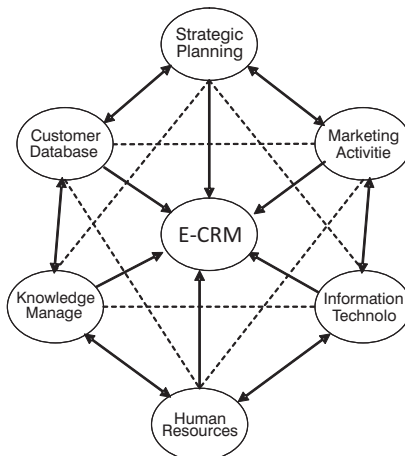
**Mohammed Babiker**

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economies activities, increasing private sector debts in large emerging economies, screwed policies of the nations and geopolitical uncertainties multiplied the economic complexity to a great extent. But in 2017, global activities started firming and started contributing in growth and development. Manufacturing and trade started picking up with growing market confidence and international financing conditions started showing stability and consolidation. The global growth for the year 2017 is projected to strengthen to 2.7 percent and is expected that momentum of growth will continue and in the year 2018-19, growth will further strengthen and expected to rest at 2.9 percent. According to the World Bank that in the year 2017, emerging market and developing economies growth will recover to 4.1 percent and in the year 2018-19, it will further improve and reach 4.6 percent. Economic activities in 2017 in advance nations like United States are comparatively improvising. In the Euro zone and Japan, growth forecasts are on positive note which is reflecting growing domestic demand and exports.

Investments in advance nations economies are stabilising and private consumption growth is gradually gaining momentum. The analysis of economic data show that actual growth continues to exceed potential growth, rising inflation with narrowing output gaps is matter of concern as it has raised the prospects of less accommodative monetary policy. In

**Figure 1: Framework of e-CRM**



the year 2017, advance economies have maintained their expected growth forecast of 1.9 percent and are expected to moderate further in 2018-19. This expected growth in global trade is due to growing confidence and increasing investment, commodity prices are in upswing as hurdles to growth in commodity exporters started declining and on contrary activity in commodity imports continued to be robust. A recovery in industrial activities and increasing global trade after two year of marked weakness. During the year the risks to the global outlook remain tilted to the downside. These risk factors include high trade protectionism in many economies along with elevated economic uncertainties, expected financial market volatility, disruption, investor risk appetite and prolong weak growth potential and market complacency. But restructured investor risk appetite supported emerging markets and developing economies financial markets to a great extent and narrowed corporate bond spreads globally. In the year 2017 due to positive financial market conditions capital inflow in emerging market and developing economies are high.

An unpredictable growth decline in major emerging economies has stocked the complexity in EMDEs. Bank of Japan and European Central bank (ECB) analyzing the declining growth trend and its risks to futuristic growth and below target inflation pursued policy accommodation and United State Federal Reserve normalized policy interest rates slowly than previous expectation. China gradually rebalanced its economy by slowing down. In the year 2015, large number of Low Income Countries (LICs) witnessed low growth than their long term average and declined to 4.5 percent, but in the year 2017, it is expected that growth will pick up to 5.3 percent. External and internal headwinds, declined commodity prices, political uncertainties and challenges and high precautions have reduced the growth of LICs by 0.9 percentage point from the previous forecast.

## **Objective of the Study and Methodology**

The core objective of the study is to analyze and evaluate the global economic trends and growth of economic regions. Considering the importance of economic growth as a core will suggest approach which could help in developing effective and efficient growth mechanism with stability.

The study is done to analyze and evaluate the global economic trend and growth of economic regions. For the purpose secondary data and reports are used, which are collected from published economical and commercial reports, magazines, respective nation's Central Banks, IMF, World Bank's annual report, research articles and financial institutions websites. After judicious evaluation of Global economic trends and region's performance and growth findings are made. The outcome of the study depends on the selected time period by the researchers which may differ from other analysis.

## **Literature Review**

Analysis of global economy is a herculean task as most of the economic data are politically influenced. But economists and academicians try to reveal the obscure facts from the data provided by the nation's economic bureau. Economists have different opinion, but some have common opinion too. All economists have their own predictions depending on their analysis of past economic performance and present economic conditions and environment.

*Hodge (2002)* found that emerging market and developing economies have gained more due to liberalization of trade and service, especially in FDI and transfer of technology and

skills, *Bashar & Sadorksy (2006)*, consider that during inflation period increase in oil price become additional tax and force market participant to adopt alternative energy sources. They also found that during inflation increase risk and uncertainty affect stock price seriously and reduce returns, *Eksi et al. (2012)*, argue that oil is major component in industry and increase in oil price will translate into economic crises and resultantly significant cost-push inflation and higher unemployment, *Julio and Yook (2013)* in their study found that in some cases due to rising political uncertainty adverse impact of declining terms of trade and pro cyclical policy tightening get simplified, which tends to diminish confidence and increase financial market volatility, *Blanchard, Huillier, and Lorenzoni (2013)* in their study found that anticipation of declining future growth influence current consumption and investment and depress aggregate demand, *Melitz (2003)* in his conducted study found that prolonged weakness in global merchandize trade minimises the possibilities of productivity gains through growing specialization and diffusion of technologies in global value chain, *Sher (2014)* found that shrinking and aging labour forces remains a key factor that impact growth, investment and saving pattern, *World Bank (2015)* analyzing the present economic conditions projected that liquidity conditions in global financial markets will remain fragile and leave market prone to sudden reversals, *Bruckner and Pappa (2015)* in their carried out study found that pickup in capital spending has been supported by elevated corporate profits as well as preparation for the 2020 Tokyo Olympics, *Anderson et al. (2015)* found that globally barriers to service sector trade have come down and simultaneously on other side they remained stable in small nations, *Lanz and Maurer (2015)* from their conducted study found that ongoing recovery in goods trade may also boost services exports embodied in trade products, *Chivakul et al. (2015)* found that policy accommodation has pushed investment and a significant turnaround has been witnessed in house prices. He also found that it renewed concerns about overvaluation in some market segment; *Kiley (2015)* found that wage growth will gradually strengthen in coming future, *Lanz and Maurer (2015)* found that recovery in goods and trade may also boost services exports embodied in traded products, *Congressional Budget Office (2016)* expect that monetary policy will remain accommodative in 2017, as they found that fiscal policy has eased to a broadly neutral stance, but unpredictability over the medium term fiscal outlook remained. *Haltiwanger (2015)* found that in the year 2017 labour market conditions will improve, but wage and productivity growth will remain sluggish. He also stated that stagnant productivity partly reflects declined firm entry rates and also declined start up rate in key innovative sectors along with lower job flows, *Auerbach and Holtz-Eakin (2016)* in their study found that exchange rate and associated policy uncertainties impact the trade activities and corporate taxation to a great extent, *Arteta et al. (2016)* found that since 2014 ECB has undertaken some unconventional measures which has helped stimulate growth, pushed inflation expectations and accelerated steady recovery, *World Bank (2016)* analysed that China's slowdown has been unfolding against the backdrop of weak exports and increased financial market volatility, *IMF (2016c)* emphasised that thorough expenditure review can produce current expenditure that can be more productively reallocated towards infrastructure investment targeted to meet well identified needs, *Caruana (2016)* found that declining global oil prices have impacted revenues and minimised collateral values. He further said that weak balance sheet will push default rates in the oil sector, *Baffes and Haniotis (2016)* in their study found that agriculture is an energy intensive sector; weakness in agriculture prices has also reflected the pass trough from lower energy prices, *Yellen (2017)* found that economic decline will continue to some more

time, as reflected in underemployment and unused capacity in manufacturing above levels of earlier cyclical peaks, *Draghi (2016)* found that overall 1 percentage point upward push in inflation will raise private debt by 6 percentage points of GDP, *European Commission (2017)* analyzed the global economic trend and projected that Euro zone economy in the year 2018-19 is expected to grow moderately, as economic slack diminishes and ECB gradually unwinds exceptional policy measures, *Mojon (2017)* found that Euro Area bond yield exceptionally low which was supported by monetary policy accommodation by the ECB, *De Santis (2017)* found that in some of the Euro nations political events and restructured banking sectors norms have contributed to rise in risk premiums, *Banco Central do Brasil (2017)* consider that recent indicators points of Nigeria can be considered as positive sign of recovery in manufacturing and non manufacturing sector. It further stated that Brazil is expected to slowly emerge from recession in 2017; *IMF (2017b)* analyzed that in many non resource intensive nations rebound is led by heavy investment in infrastructure sector, including West African Economic and Monetary Union (WAEMU)

### Analysis and Interpretations of Global Economic Trend

Analysis of global economy produces the fact that world economy touched its lowest in 2016 and then it started improvising in 2017 and expected to continue its growth in future also. This growth is expected due to positive trends in emerging markets, MENA and Sub Saharan Africa on one side and on other side normalization in advance economies particularly Euro Zone. Growth remain subdued in 2016 due to unexpected events like Brexit, slowdown in China, oil price decline, US post election results and political uncertainties. After global financial crisis weak economic activities and decline investment became major reason of economic slowdown in 2015. IMF lowered growth projection several times due to global economic uncertainties. In the year 2016. US emerged as the growth engine of advance economies to some extent and other major economies decline or remain flat. Due to slashing growth forecast growth drivers get altered and EMDEs replaced advance economies as a future growth driver. According to IMF in the year 2017 main drivers of growth are broad based. Apart of advance economies and emerging economies IMF also included China, Japan, Russia and emerging Europe in higher growth oriented nations. In the year 2017, US is growing by 2.2 percent and is expected to grow by 2.3 percent in 2018. Euro growth is expected to pick up in 2017 & 2018 by 20bps. IMF due to positive financial conditions and growing consumer confidence and strong business environment increased the growth of US by 10bps in 2017 and 20bps in 2018. Flaxy policy and supply reforms will stoke the GDP growth of China in 2017. World trade volumes for the year 2017 have also moved up by 20 bps and for 2018 are projected to move up by 10bps.

**Table No. 1.** Global Real GDP Growth (%)

Year	2013	2014	2015	2016	2017	2018	2019	2020
World	3.3	3.4	3.2	3.1	3.6	3.8e	3.7e	3.7e
Advance Economies	1.2	1.9	2.1	1.6	2.2	2.0e	1.8e	1.7e
Euro Zone	-0.3	1.1	2.0	1.7	2.1	1.9e	1.5e	1.5e
Emerging and Developing Asia (EDA)	5.0	4.6	4.0	4.2	4.6	4.8e	5.0e	5.1e

Year	2013	2014	2015	2016	2017	2018	2019	2020
MENA Region	2.2	2.6	2.1	3.2	2.2	3.4e	3.6e	3.7e
Sub Sahara Africa	5.2	5.1	3.4	1.4	2.9	3.6e	4.2e	4.3e

**Source:** International Monetary Fund (IMF) World economic Outlook Updates Oct. 2016

From the above table number "one" it is found that world GDP has maintained its growth above to 3 percent and touched its lowest 3.1 percent in 2016, but it improves in 2017 and in October it touched 3.6 percent. It is expected that it will grow in coming future and expected to be (3.8) in 2018, (3.7) in 2019 and (3.7) in 2020. Advance economies GDP growth was lowest in 2013 and was 1.2 percent and in the year 2017 it improves and was 2.2 percent in October 2017 it is expected that it will grow by the rate of 2.0, 1.8 and 1.7 respectively. Euro zone growth was found negative in the year 2013 but it improves in corresponding year and touched its highest growth of 2.0 percent in the year 2015 and is expected to grow in future by 1.9 and 1.5 respectively. Developing nation economies GDP growth was found attractive as it maintained its growth status above 4 percent. In the year 2015 it touched its lowest and was at 4.0 percent and is expected to grow in future. MENA region growth was highest in 2016 and was 3.2 percent and it was lowest in 2015. It declined in 2017 and is expected to grow by 3.4, 3.6 and 3.7 percent respectively in future. Growth of Sub Sahara Africa was highest in 2013 and was 5.2 and it touched it lowest in 2016 which was 1.4 percent in 2017 it improves and is expected to grow by 3.6, 4.2, 4.3 percent respectively.

**Table No. 2.** Inflation Rate Average Consumer Prices (Annual % Change)

Year	2013	2014	2015	2016	2017	2018
World	3.7	3.2	2.8	2.8	3.1	3.3
Advance Economies	1.4	1.4	0.3	0.8	1.7	1.7
Euro Zone	1.3	0.4	0.0	0.2	1.5	1.4
Emerging and Developing Asia (EDA)	4.6	3.4	2.7	2.8	2.6	3.2
MENA Region	9.4	6.6	5.9	5.4	7.1	8.1
Sub Sahara Africa	6.6	6.3	7.0	11.3	11.0	9.5

**Source:** IMF Data Mapper October 2017, World economic Outlook

According to IMF most of the advance nation economies are affected by weak inflation and are facing unexpected challenges. Since 2016, inflation expectation in US has increased. Labour market in US improved to some extent but inflation continued to remain below 2 percent mark. From last three years Inflation in Euro zone was steady and in declining trend. It dipped below to 0 percent mark and causes deflation in December 2014, but expected to increase in 2017. It is expected that till 2021 overall inflation will remain below to the ECB's projection, pointing to prospects of continued monetary policy accommodation. It is expected that due to the depreciation of the GBP inflation in UK will rise. In the year 2017 expectation of inflation in Japan has risen, but it will remain below to the apex bank set

target. In 2016 China consumer price inflation was below target throughout the year but producer price inflation increased sharply. Inflation rate in emerging markets developing economies commodity exporters and importers were converging. Inflation expectation for the GCC nations will remain positive in ongoing financial year. It is expected that inflation in MENA nations will be stronger than before and will mitigate deflationary risks in the region. In sub Sahara region economies inflation began to ease, but it remain high in oil and metal exporters. However in countries where impact of drought was less severe, inflation was in control of respective nation's central bank. Inflation in Uganda, Tanzania and Zambia is low, in Ghana it has fallen sharply and central bank took the opportunity and cut the interest rate in early 2017.

From the above table number "two" it has been revealed that in the year 2013 MENA region was having the highest inflation rate, followed by the Sub Sahara Africa. Euro zone was having the lowest inflation rate. In 2014 inflation in MENA nation came down sharply but it remains highest among all the regions. Advance economies inflation remains the same but Euro zone inflation declined below to 1 percentage. In the year 2015 Sub Sahara Africa topped the chart in inflation growth followed by MENA region. Advance economies inflation rate declined below to 1 percent and Euro Zone inflation touched the 0 percentage level and causes deflation. In the year 2016 Sub Sahara Inflation rises sharply and reached to the double digit level and Euro inflation marginally improves but remains very low. In 2017 Sub Sahara Region remains in double digit inflation and followed by the MENA region. Advance economies and Euro Zone inflation increases to some extent. It is expected that in 2018, inflation in Sub Sahara Africa will decline and MENA inflation is expected to rise.

**Table No.3.** Unemployment Rate

Year	2013	2014	2015	2016	2017e	2018e	2019e	2020e
World	6.0	5.8	5.8	5.8	5.7	5.7	5.7	5.7
Advance Economies	7.9	7.3	6.7	6.2	6.1	6.0	5.9	5.9
Euro Zone	12.0	11.6	10.9	10.0	9.7	9.3	9.0	8.7

**Source:** ILO and International Monetary Fund (IMF)

Due to economic slowdown and prevailing unstable global economic environment since 2015, it is expected that in economic regions like Asia, Africa, Latin America and Middle East unemployment rates will go up. In the year 2016, unemployment in Euro Zone fell rapidly but it was still marginally above structural level. Unemployment rates in advance economies are much below in comparison to their peak unemployment rates and became reasons to narrow the output gap. It is expected that in following year, due to decline in unemployment, labour market will be firm. From the above table number "3" it is found that world unemployment rate was highest in 2013 and later it declined marginally, in 2017 it was 5.7 and expected to be the same in following year. In advance economies unemployment rate was highest in 2013 and later in following year it declined. In 2017 it was 6.1 and expected to decline further. In Euro zone unemployment rate was highest in 2013, it was 12.0 percent later it declined and in 2017 it is found to be lowest at 9.7 percent. It is expected that it will decline in following years.



**Table No.4.** EURO Zone GDP Growth (%)

Year	2013	2014	2015	2016	2017e	2018e
Euro Zone	-0.3	1.1	2.0	1.7	1.5	1.6
Germany	0.6	1.6	1.5	1.7	1.4	1.4
France	0.6	0.6	1.3	1.3	1.3	1.6
UK	1.9	3.1	2.2	1.8	1.1	1.7
Greece	-3.2	0.7	-0.2	0.1	2.8	3.1
Ireland	1.1	8.5	26.3	4.9	3.2	3.1
Italy	-1.7	-0.3	0.8	0.8	0.9	1.1
Portugal	-1.1	0.9	1.5	1.0	1.1	1.2
Spain	-1.7	1.4	3.2	3.1	2.2	1.9

**Source:** KAMCO Research and International Monetary Fund (IMF)

From the above table number "four" it has been found that Euro zone GDP growth in the year 2013 was lowest and it was -0.3 percent. It touched its highest percentage in the year 2015 and was 2.0 percent later it declined consecutively and is expected to rise in 2018 and could be 1.6 percent. In the year 2013 among all the Euro nations Greece was having the lowest GDP growth that was -3.2. In this year except England and Ireland most of the economies were having negative dip in GDP growth. In 2014 most of the Euro Zone economy recovered except Italy who was having -0.3 percent growth of GDP. In 2015 most of the economies strengthened their GDP growth status except Greece and among them Ireland economy registered astonishing growth which was 26.3 percent. In 2016 Ireland GDP growth was highest among the Euro nations but its growth declined drastically from 26.3 percent to 4.9 percent. In 2017, Ireland growth was again highest among all the respective nations but it declined from previous year's growth percentage and was 3.2 percent.

**Table No. 5.** Key Emerging Economies Real GDP Growth in (%)

Year	2013	2014	2015	2016	2017e	2018e
Brazil	3.0	0.1	-3.8	-3.3	0.5	1.5
China	7.8	7.3	6.9	6.6	6.2	6.0
India	6.6	7.2	7.6	7.6	7.6	7.7
Indonesia	5.6	5.0	4.8	4.9	5.3	5.5
South Korea	2.9	3.3	2.6	2.7	3.0	3.1
Russia	1.3	0.7	-3.7	-0.8	1.1	1.2

**Source:** International Monetary Fund (IMF)

After downward revisions of economic growth estimate in 2015 China with the support of domestic and monetary policies managed to keep its domestic demand high but it continuously faced real estate market, corporate debt and banking system risk significantly. India on other end, balanced its domestic demand with ample pace and stability. Brazil after facing political and economic devaluation and recession observed some sign of improvement and is expected to revive its economy in coming future. From the table number "5" it is been revealed that in the year 2013 Russia has the lowest real GDP growth rate where as China has the highest growth rate followed by India, Indonesia Brazil and South Korea respectively. In 2014 Russian real GDP growth decline further but growth difference between India and China became very thin. It has been revealed that Brazil economic growth declined very drastically and came down to 0.1 percent which was 3 percent in previous economic year. In the year 2015, economic condition in some of the emerging economic nation's worsened and real GDP growth of Brazil and Russia declined drastically. It is noted that Indian real GDP growth pepped China growth and topped the table. In the year 2016 Brazil economy improved marginally but Russian economy improved significantly, but both nation real GDP growths remains negative. India maintained its real GDP growth but china marginally declined and gap between India and China broadened further. In the year 2017 Indian real GDP growth rate decline but is expected that it will recover and will maintain its expected growth rate. It is expected that china real GDP growth rate will decline further. Brazil, Russia and Indonesia economy improved and expected to improved further. It is expected that in the year 2018 India, Brazil, Russia, Indonesia and South Korea real GDP rate will improve and China rate will dip further.

**Table No. 6.** Sub Sahara Africa Economies GDP Growth in (%)

Year	2013	2014	2015	2016	2017e	2018e
Ghana	7.3	4.0	3.9	3.3	7.4	8.4
Kenya	5.7	5.3	5.6	6.0	6.1	6.5
Nigeria	5.4	6.3	2.7	-1.7	0.6	1.6
South Africa	2.3	1.6	1.3	0.1	0.8	1.6
Uganda	4.0	4.9	4.8	4.9	5.5	5.9

**Source:** International Monetary Fund (IMF)

After a sharp decline in 2016 it is expected that in the year 2017 Sub Sahara Economies GDP growth will recover and could be between 2.6 to 2.9 percent. It is expected that it will strengthen further in 2018. These improvements indicate gradual recovery of commodity prices at global level and overall improvement in domestic conditions. Angola and Nigeria will play instrumental role in Sub Sahara region economic rebound. Growth is expected to be positive and healthy among non resource intensive countries. Fiscal consolidation will reduce the pace of recovery especially in metal exporting nations. External downward risks, striker global financing conditions, weak improvement in commodity prices and extra protectionism one side and on other side risk of reluctant implementation of major domestic reforms which are essential to develop and maintain macroeconomic stability and sustain growth.

From the table number "6" it has been revealed that in the year 2013, Ghana was having the highest GDP growth followed by Kenya, Nigeria, South Africa and Uganda respectively. In 2014, Ghana growth came down drastically and Nigeria growth improves and topped the table with highest percentage GDP growth. South Africa and Kenya GDP growth also declined. In the year 2015 decline in most of the nations economies have been registered except Kenya. Nigeria GDP growth declined drastically. In the year 2016, Kenya topped the table in GDP growth followed by Uganda. Most of the economies declined and Nigeria registered negative growth. In the year 2017 Ghana is expected to rebound strongly and it is expected that by the end of the year it will touch the highest GDP growth among all Sub Sahara nations and Kenya will follow the GDP growth with its stable pace along with Uganda. Nigeria and South Africa GDP growth is expected be below to 1 percent.

## Findings

- The study found that after global financial crises weak economic activities and low investment became major reason of economic slowdown in 2015. It is found that economic slowdown continued in 2016 but economic growth and prevailing conditions started improving in 2017 and is expected to improve in coming years.
- The study found that world economy touched their lowest GDP growth in 2016 and highest in 2017. Advance economies touched its lowest GDP Growth in 2013 and highest in 2017. Euro Zone touched its lowest GDP growth in the year 2013 and highest in 2017. Emerging and developing Asia touched its lowest GDP growth in the year 2015 and highest in 2013. MENA region touched its lowest GDP growth in the year 2015 and highest in the year 2016. Sub Sahara Africa touched its lowest GDP growth in 2016 and highest is 2013. It is also been found that World GDP growth, Emerging and developing Asia GDP growth, MENA Region GDP growth and Sub Sahara Africa GDP growth will rise in future and Advance economies GDP Growth and Euro zone GDP growth will decline further.
- The study found that world inflation rate average consumer prices was highest in 2013 and lowest in 2015. In advance economies, it was highest in 2017 and lowest in 2015. In Euro Zone, it was highest in 2017 and lowest in 2015. In emerging and developing Asia it was highest in 2013 and lowest in 2017. In MENA region it was highest in 2013 and lowest in 2016. In sub Sahara Africa it was highest in 2016 and lowest in 2014.
- The study found that World unemployment rate was highest in 2013 and lowest in 2017. In Advance Economies it was highest in 2013 and lowest in 2017. In Euro Zone it was highest in 2013 and lowest in 2017. It is also been found that World unemployment rate is expected to continue same in future. Advance Economies and Euro Zone unemployment rate is expected to decline marginally.
- The study found that in the year 2013 Euro Zone GDP growth of Greece was lowest and UK growth was highest. In the year 2014 Ireland GDP Growth was highest and Italy growth was lowest. In the year 2015 Ireland's GDP Growth was highest and Greece GDP underperformed and was lowest among all the Euro nations. In the year 2016, Ireland's GDP growth was highest among all the Euro nations and Greece GDP was the lowest. In the year 2017 Ireland GDP growth was highest and Italy GDP growth was lowest. It is expected that in the year 2018, Ireland and Greece will have equal growth and will top the chart and Italy will perform better but will have lowest GDP growth among all Euro zone nations.

- The study found that in the year 2013 Emerging Economies real GDP growth of China was the highest followed by the India and Russia was having the lowest GDP growth. In the year 2014 China topped the chart and India followed it subsequently and Brazil was having the lowest GDP growth. In the year 2015 India topped the chart and China followed and Brazil was having the lowest GDP growth. In the year 2016 India remained at the top followed by the China and Brazil was having the lowest GDP growth. In the year 2017 India again topped the chart in GDP growth followed by the China and Brazil is having the lowest GDP growth. It is expected that in 2018 India will continue to grow with highest GDP growth percentage and China will follow and Russia will be having the lowest GDP growth among all the Emerging Economies.
- The study found that in the year 2013, Sub Sahara Africa Economies GDP Growth of Ghana was the highest and Uganda was having the lowest. In the year 2014, Nigeria topped the chart and South Africa was having the lowest GDP growth. In the year 2015, Kenya was having the highest GDP growth and South Africa was having the lowest. In the year 2016, Uganda was having the highest GDP growth and Nigeria was having the lowest growth. In the year 2017, Ghana is having the highest GDP growth and Nigeria is having the lowest. It is expected that in 2018, Ghana will retain its growth performance and will grow with the highest percentage and Nigeria and South Africa will have the lowest GDP growth.

## Conclusion

Global economic growth was on a declining trend since 2015. In the year 2016 most of the emerging and developed economies faced tough economic weather. Advanced economies were having softer growth. Commodity exporters struggled throughout the financial year and faced challenging conditions. Commodity importers were in advantage and showed unexpected resilience. But in the year 2017 global activities started firming. Manufacturing and trade started picking up, commodity prices started stabilizing, international financing conditions improves. Growth in EMDEs is on recovery track, hurdles to growth in commodity exporters reduced to a great extent. Thus, the study concludes that global economic trend is now in upward swing and its future prospects are positive. Its expected that global economic growth will be smooth and stable in coming years.

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# GREEN BONDS: COUNTRY EXPERIENCES, CHALLENGES AND OPPORTUNITIES

## Abstract

The 2008 global financial crisis not only resulted in a turning point for regulation and practices of capital market participants but also changed the behavior of financial players. Investors and financial institutions are currently more concerned about funds allocation. This paper discusses the green project bonds as an alternative way to finance along with presenting its scope and challenges on a global level. As compared to mainstream bonds, green bonds involve the issuing entity with guarantee of repayment of amount borrowed over a certain period of time, and remunerating creditors through coupon with either fixed or variable rate of return. They can be categorized as asset-backed securities tied to specific green infrastructure projects but, to date have most commonly been issued in the form of "use-of-proceeds" bonds that raise capital to be allocated across a portfolio of green projects.

**Keywords:** Green Bonds, Green Finance, Bonds, Coupon rate, Global, Challenges and Opportunities

## Introduction

The International Capital Market Association defines a green bond as: "any type of bond instrument where proceeds are exclusively applied to finance or re-finance partially or completely on new and/or existing eligible Green Projects. Green bonds are debt instruments that are used to finance green projects that deliver environmental benefits. In line with mainstream bonds, green bonds involve issuing entity with a guarantee of repayment of the amount borrowed over a certain period of time, and remunerating creditors through coupon with a fixed or variable rates of return. They can be categorised as asset-backed securities tied to specific green infrastructure projects but have most commonly been issued in the form of "use-of-proceeds" bonds that raise capital to be allocated across a portfolio of green projects. The momentum of continued issuance and market demand has led to growing consensus on what constitutes a green bond and progress has been made on standards and criteria for what constitutes a green project or activity. The narrow definition includes only "labelled" green bonds, including self-labelled and those labelled by independent reviewers. The broader definition also includes unlabelled "pure play" bonds in sectors that are considered as "green" without controversies. The broadest definition is "climate-aligned bonds" as defined by CBI, which includes many unlabelled bonds that are assessed by CBI to be "green". The GBP suggest that the term "green bonds" be used only for GBP-aligned bonds while the wider universe

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should be referred to as climate or environmental themed bonds. For the statistics cited in this report the green bond definition used is cited as well.

Green bonds are becoming an increasingly popular financial instrument used by a number of development banks, state and municipal entities, as well as private companies to raise capital for green investments that alleviate climate change accelerating the global transformation towards resource-efficient and low-carbon sustainable economies. Since the first issue of a green bond in 2007, its market has grown rapidly in OECD countries. Facing a particularly high exposure to climate and environmental risks while public funds are limited, emerging market economies in the Americas and Asia are, however, increasingly turning towards green bonds as well, viewing them as a promising instrument to mobilize private capital for the green investments urgently needed.

## Green Bonds come in six categories

**Corporate Bonds:** A "use of proceeds" bond issued by corporate entity with an option to issuer in case of default on interest payments or on return of principal. This category includes bonds issued by "YieldCo" to finance asset acquisitions.

**2. Project Bonds:** A bond backed by single or multiple projects for which investor has direct exposure to risk of the project, with or without recourse to the bond issuer.

**3. Asset-backed Security:** A bond collateralized by one or more specific projects, providing recourse only to the assets, except in the case of covered bonds (included in this category). For covered bonds, the primary recourse is to the issuing entity, with secondary recourse to an underlying cover pool of assets, in the event of default of the issuer.

**Supranational, Sub-sovereign and Agency Bonds:** Bonds issued by international financial institutions (IFIs) like World Bank and European Investment Bank (i.e. "supranational issuers"). SSA bonds have features similar to a corporate bond relating to "use of proceeds" and recourse to the issuer. Agency bonds are included in this category, as are sub-sovereign national development banks.

**Municipal Bonds:** Bonds issued by municipal government, region or city. A national government entity could theoretically also issue a "sovereign" bond; no green sovereign bonds have been issued to date.

**Financial Sector Bonds:** A type of corporate bond issued by a financial institution for specifically raising capital to finance "on-balance sheet lending" (i.e. to provide loans) to green activities (e.g. ABN AMRO or Agricultural Bank of China). This type of bond is considered separately for the purpose of OECD scenarios modeling for retaining a distinction between financial sector bond issuances which finance lending and those

## History of Green Bonds

In addition to the usual characteristics, it is certified that proceeds of green bonds will be used for specific "green" purposes. The green bond market started in 2007 when the EIB (European Investment Bank) issued its first ever climate awareness bonds which was followed by a \$400mn green bond issue by the World Bank in 2008. Corporate did not enter immediately and took some time but in 2013, the first sizable "green" (classified as 'use of proceeds') bond was issued.

To better identify what can be called "green", the Climate Bond Initiative, 2009, came out with "Green Bond Principles", since been adopted by a consortium of banks and financial institutions as definition of "green". They are voluntary process guidelines recommending transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for issuance of a green bond.

Green bonds are not a product but actually a process. The green bond principles are intentional guidelines on process and lack detail, resulting in lack of consensus on what classifies as a green bond. It is still not sure whether a stringent set of standards constituting green would increase credibility or inhibit growth or innovation.

Green Bonds can provide long-term source of debt capital required by renewable infrastructure projects. Given the fact that cost of project finance debt given by banks is higher than the return for investment-grade project bonds, it may be possible to achieve a reduction in the weighted average cost of capital for green infrastructure financed or re-financed by bonds. Reducing the cost of capital for renewable energy is important because around 50-70 per cent of the cost of electricity generation is in the financial cost of capital, with balance remaining physical or operational costs of the installation. Thus, even a small change in WACC can have a major effect on the long-term cost of capital-intensive renewable energy projects and their competitiveness.

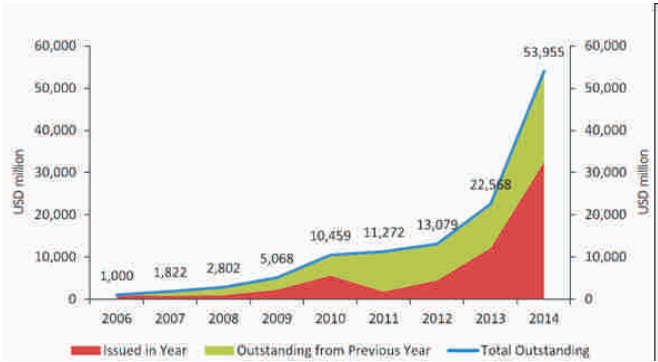
While green bonds can facilitate the flow of capital to low carbon infrastructure investments, the demand for such investment is driven by other factors also like low-carbon policy mandates, clean energy standards or deployment targets. An enabling policy context, therefore, is important for actual use of debt capital available through bond markets.

## Global Market Trends - Green Bonds

Green Bond market has been expanding since 2013, with fresh issue of stocks in last two years resulting in over 80 percent of the total outstanding. As shown in Figure below, the total outstanding investments in Green Bonds as on October 2014 is USD 54 billion, including USD 32.5 billion of fresh issuances, more than cumulative issuance of Green Bonds over the last eight years. In the third quarter of 2014, the total number of Green Bonds issued was 28 with total value at USD 9.2 billion .



**Figure 1:** Historical Issuance of Green Bonds



Source: USAID

The size of bond issuances has been steadily increasing - with over 31 bonds issued in the last two years grossing over USD 500 million each, as compared to seven such issues over the period 2006-2011, indicating an increased market base for Green Bonds.

The significant growth of Green Bond markets over the last few years can partly be attributed to an overarching trend towards including environmental, social and governance (ESG) issues into the decision process for investments by institutional investors. Currently, over USD 45 trillion of Global "Asset under Management (AUM)" incorporate ESG issues into investment decisions and are participant to Principles of Responsible Investments.

**Figure 2:** PRI Signatories in Various Geographies



Source: USAID

It is important to analyze international market trends while exploring Green Bonds for Indian market. The key learning from the international market are as mentioned below:

*Interest arbitraging against normal bonds does not exist:* Currently, Green Bonds market is at its initial stage but is rapidly expanding and reaching a critical mass with larger investor participation. The current market trends indicate that while demand and supply gap existing, it is still not reflected into pricing advantage for Green Bonds.

*Green Bond investments are not social funds:* All issuers should view Green Bond issuance to be competing with other normal bonds. On the contrary, investors prefer Green Bonds over normal bonds falling into similar risk/reward equation.

*The bond tenures are still low against requirement:* The recently issued Green Bonds have low tenure between 3-10 years; however, there are bonds that have occurred for maturity of over 15 years. For the Indian market, shorter tenure Green Bonds issuance is suggested in the initial stage and should go for longer tenure after the consolidation in the bond market develops.

## **Perspectives of Green Bond Stakeholders**

### **Issuer Perspective**

Issuing a green bond requires a number of parties working together for generation of marketable product: issuers for issuing the bond and directing the proceeds toward borrowers with appropriate "green" projects, underwriters for marketing and selling of the bond to investors, and investors for purchasing the bonds. In some cases, the issuer and the borrower can be the same party.

### **Investor Perspective**

Green bonds are still viewed by investors and asset managers as a highly forte product because of relatively small level of issuance compared to broader markets for traditional bonds. However, several large asset managers have launched green bond funds for serving interested investors. There are some perceived benefits of green bonds for particular investor types. For example, green bonds can help foundations, pensions, and family offices conduct "mission-related investment," aligning investment of their central part assets with their broader social and environmental objectives. Additionally, investors interested in place-based investment may be drawn to green bond issuances for supporting projects in specific geographic areas or communities. Nonetheless, such advantages are currently not adequate for inducing investors for accepting a lower rate of interest on green bond versus a comparable conventional government. Investors are primarily interested in investing in green bonds whose characteristics match their overall investment objectives (e.g., risk-return profile, duration). Family offices and small foundations have been first movers in buying green bonds, which asset managers interviewed attribute for a stronger willingness of taking risks on part of their portfolio, or for accepting a lower level of return in exchange for a green bond that is "mission-aligned" with their organization's social or environmental goals

### **Overview of Green Bonds in India**

India has set ambitious renewable energy goals for improving energy access and energy security while taking action on climate change. To procure the necessary finance for achieving the national targets, this is the centrepiece of India's climate commitments made

at the 2015. UN climate negotiations, the Government of India is working with different market players for enabling market creation and removing key obstructions for mobilizing finance. Likewise, investment from multilateral and national development banks can establish standard models and provide market liquidity. The Government of India is interested in green bonds and approached at least eight domestic lenders to raise lowcost, long-tenure funds through green bond energy plans. Encouraging national players like the Rural Electrification Corporation (REC), Power Finance Corporation (PFC), Industrial Development Bank of India (IDBI), Indian Renewable Energy Development Agency (IREDA), and private sector entities like India Infrastructure Finance Corporation Limited (IIFCL), ICICI Bank, and Yes Bank have entered enter the market helping scaling up green bonds in India. As more and more of financial entities enter in Indian green bond market for providing capital for renewable energy projects of all sizes, the cost of financing prospects in the market will become more favorable.

In 2015, the green bond market in India kick-started with smaller issue of \$100 million to \$200 million with a huge potential of scaling-up. Green bonds are also varied in terms of credit ratings (AAA to BBB) with most green bonds rated AAA to A, providing stability and higher quality of bonds. However, challenges that exist for green bonds issuance includes high currency hedging cost, poor sovereign rating (BBB-) and lower tenure causing obstacle in its growth. Several entities have issued the green bonds in India, raising more than R120 billion (\$1.85 billion) so far:

**Yes Bank:** Yes Bank issued its first green infrastructure bond in February 2015. Euro denominated R10 billion (\$161 million) 10-year issue and received a AA+ rating. It was oversubscribed by almost over two times, demonstrating huge demand. The issue proceeds were being utilized to fund renewable energy infrastructure projects.

**Export-Import Bank of India:** Exim Bank issued India's first ever and Asia's second dollar-denominated green bond in March 2015. The BBB- rated issue was oversubscribed by more than three times with majority of investors including asset managers, with banks and sovereign wealth funds with insurance companies accounting for remaining interested parties. The Exim Bank did not get an external green certification, but provided a series of detailed investor updates and assured audit certification for the use of proceeds.

**CLP Wind Farms:** CLP Wind Farms became the first Indian corporate sector to issue green bonds in September 2015 and managed to raise R6 billion (\$90.3 million), receiving an AA- rating and attracting primarily Indian mutual funds as investors with a coupon of 9.15% per annum, in three equal tranches of R200 crore (\$30 million) with maturity in every April in 2018, 2019 and 2020.

**Hero Future Energies:** Hero Future Energies issued the country's first certified climate bond in February 2016 and raised R3 billion (\$44 million) by issuing nonconvertible debentures - certified by Climate Bonds Standard - for financing the development of wind energy projects in the states of Madhya Pradesh, Telangana, and Andhra Pradesh.

**IDBI Bank:** India's State-Owned IDBI Bank raised \$350 million in BBB-rated 5-year green bonds for renewable energy projects in November 2015, becoming India's first public-sector bank for raising funds through green bonds. The issue, certified through the Climate Bond Standard, was oversubscribed by over three times, with prospective investors offering a total of \$1.1 billion.

**IREDA:** In January 2016, IREDA issued tax-free R10 billion (\$150 million) green bonds was oversubscribed by over five times on the opening day and offered retail investors up to 7.68 percent interest rate for tenures ranging between 10 and 20 years. Factoring in tax savings, the effective interest rate for investors is substantially higher than bank fixed deposits, which attract income tax on interest income. The IREDA green bond successfully reached a broad base of investors including retail individual investors, high net-worth individuals, and institutional buyers.

**Table 1:** Issuances of Green Bonds in India

A list of issuances of Green Bonds in has been provided below.

Date	Issuer	Amount	Purpose
February 2015	Yes Bank	INR 10 Billion	Renewable Energy
March 2015	EXIM Bank	USD 500 million	Eligible green projects in Bangladesh and Sri Lanka
August 2015	Yes Bank	INR 3.1 billion	Renewable Energy
September 2015	CLP India	INR 6 billion	Renewable Energy
November 2015	IDBI Bank	USD 350 billion	Renewable Energy
January 2016	IREDA	INR 10 billion	Renewable Energy
February 2016	Hero Future Enger	INR 3 billion	Renewable Energy

## The Regulatory Rhymes

The SEBI (Issue and Listing of Debt Securities) Regulations, 2008 ("SEBI Debt Regulations") governs public issue of debt securities and listing of debt securities issued through either public or private placement route, on a recognized stock exchange in India. While, on-shore Green Bonds have been issued and listed under SEBI Debt Regulations, however, in the absence of clear directions or provisions in the SEBI Debt Regulations it was not clear as to what would constitute a Green Bond and what process is required to be followed? With the objective of brining uniformity related to Green Bonds and for removing future confusion around the subject matter, SEBI in its meeting held on January 11, 2016 approved the new norms for issuing and listing of 'Green Bonds'.

Even though the process of issuing Green Bonds is same as issuing other corporate bonds, there are few additional disclosures required related to periodic reporting of fund allocation. The issuer would have to make disclosures including use of proceeds, listing of projects to which Green Bond proceeds have been allocated in the annual report and periodical filings made to stock exchanges. The other salient features are as under:

- i. The issuance and listing of Green Bonds shall be governed by the existing SEBI regulations for issuance of Corporate Bonds i.e. SEBI (Issue and Listing of Debt Securities) Regulations, 2008. However, the issuers of the Green Bonds will have to make additional disclosures/ follow procedures.
- ii. The definition of Green Bonds should be prescribed by SEBI from time to time. However, care must be exercised in defining the green label for such bonds and should be aligned with the international guidelines and investors expectations.

- iii. Requirement of independent third party reviewer/ certifier/ validator, for reviewing/ certifying/ validating the pre-issuance and post-issuance process including project evaluation and selection criteria, for lending credibility to the issue of Green Bonds. However, given the fact that availability of such third party reviewer/ certifier/ validator in India is not sufficient and globally such review is not compulsory, the same has been kept optional by SEBI.
- iv. Escrow account for tracking the proceeds of Green Bond is not made compulsory by SEBI. However, issuer is required to present details of the systems/ procedures to be used for tracking the proceeds of the issue, including the investments made and/or investments earmarked for eligible projects and the same shall be verified by the external auditors.

## Benefits

The green bond market can offer several important advantages for green investment:

*Providing an additional source of green financing.* Given massive green investment needs, bonds are one complete financing instrument for addressing such projects. As traditional sources of debt financing is not sufficient in light of immense green investment needs, there is a need for introducing new means of financing that can influence a wider investor base including institutional investors (such as pension funds, insurance companies and sovereign wealth funds) managing over USD 100 trillion in assets globally. The development of the green bond market can provide an additional source of funding to green lending by banks and green equity financing by investors.

*Enabling more long-term green financing by addressing maturity mismatch.* In many countries, the ability of banks to provide long-term green loans is constrained due to the short maturity of their liabilities and a lack of instruments for hedging duration risks<sup>6</sup>. Corporate sector accessing short-term bank credit also face refinancing risks for long-term green projects. If banks and corporate sector can issue medium- and long-term green bonds for green projects, these constraints on long-term green financing can be mitigated.

**Enhancing issuers' reputation and clarifying environmental strategy.** Issuing a green bond is an effective way for developing and implementing a credible sustainability strategy for investors and general public by clarifying how proceeds raised will contribute towards pipeline of tangible environmental projects. Green bonds can thus help enhancing an issuer's reputation along with internal sustainable development policies, as this is an effective way for the issuer to display its commitment towards improving environmental sustainability. These enhancements may result in benefits for product marketing as well as potential government policy incentives for business operations. Setting up a green bond framework also can serve for upgrading issuers' environmental risk management process due to their commitment to "green" disclosure.

**Offering potential cost advantages** While the cost advantage is not yet clear in the current nascent green bond market, it is possible that, once the market attracts wider investor base both domestically and internationally, a better pricing for green bonds vs. regular bonds may emerge provided demand is sustained. According to CBI, a number of issuers also report benefit in the increased speed of "book building" translating into reduced costs for marketing and road shows. In some countries, government incentives like tax reduction, interest subsidies and credit guarantees, are also being discussed as

options for further reducing the funding costs for green bonds, with US having already experimented in this area with green property bonds and municipal bonds.

**Facilitating the "greening" of traditionally brown sectors.** The aforementioned benefits of the green bond market can function as a transition mechanism that encourages issuers in less environmental-friendly sectors for taking part in the green bond market (provided they ring-fence proceeds for green projects) and also for reduce the environmental footprint by engaging in green investment activities that can be funded via a green bond. This complements mandatory 'real economy' policies that lead to changes in business models.

**Making new green financial products available to responsible and long-term investors:** Pension funds, insurance companies, sovereign wealth funds and other institutional investors having special preference for sustainable (responsible) investment and long-term investment are looking for new financial instruments for achieving their investment targets. Green bonds provide these investors with access to such products and way for many other investors for diversifying their portfolios. The green label is a discovery mechanism that lowers the "search costs" for investors looking for green opportunities in a vast ocean of bonds.

**Disclosure Requirements for Issuance and Listing of Green Bonds:** A green bond is like any other bond where a debt instrument is issued by an issuer for raising funds from investors. However what differentiates a Green bond from other bonds is that the proceeds of a Green Bond offering are 'ear-marked' for use towards financing 'green' projects.

SEBI (Issue and Listing of Debt Securities) Regulations, 2008 (hereinafter "ILDS Regulations") govern public issue of debt securities and listing of debt securities issued through public issue or on private placement basis, on a recognized stock exchange.

Thus, an issuance of Green Bonds in India, shall be governed under ILDS Regulations, requiring issuer to make disclosures as required under ILDS Regulations. However, given the nature of such bonds there is a requirement for defining what all constitutes under Green Bonds and the specific disclosure requirements with regards to management of proceeds, reporting requirements etc.

While even today Green Bonds can be issued under ILDS Regulations, the proposal under consideration removes uncertainty about what constitutes a green bond and what is the process required to be followed. This is intended to benefit those funds/investors which have a mandate to invest only in green initiatives. These funds/investors will no longer have to need to apply their separate test for eligibility and as such facilitate quicker decision making.

## Green Bond Indices

An overview of the green bond indices in the market and their inclusion criteria is set out in the figure below.

**Table 2:** Green Bond Indices

	Minimum size	Investment	Bond types grade only	Coupon	Maturity	Green criteria
Solactive	\$100m	Mixed (non-investment grade and unrated included)	Corporate , Bank, Development Bank,	Fixed only	>6 months	Complies with Climate Bonds taxonomy
S&P Dow Jones	n/a	Mixed (non-investment grade and unrated included)	Corporate , Bank, Development, Bank, Municipal (ex US), ABS	Fixed, zero step up, fixed to float, floaters	> 1 year	Complies with Climate Bonds taxonomy Separate unlabelled climate project bond index
Barclays& MSCI	\$250m	Yes	Corporate , Bank, Development Bank, Municipal (ex US), ABS	Fixed only	Maturity in index	Complies with Climate Bonds taxonomy MSCI environmental assessment unlabelled climate bonds are eligible
Bank of America Merrill	\$250m	Yes	Corporate , Bank, Development Bank, Municipal (ex US), ABS	n/a only	>1 month	Complies with Bloomberg Green Bond definitionLynch

As the bulk of assets under management globally are passive investments tracking indices, green bond indices are an important set up for ensuring accessibility of green bond investment to the mainstream, passive funds. This facilitates green bond market to be scalable, avoiding being a niche market only. Development of range of green bond indices allow a range of green bond funds to be launched tracking the different indices. Another important role for green bond indices is building a performance history for the financial performance of green bonds.

## Why Green Bonds Are a Necessary Tool for leveraging and supporting broad clean energy deployment in India

*Green bonds expand the quantity of clean energy finance and broaden investor base:* To meet India's clean energy targets, variety of mechanisms and instruments are required for mobilizing adequate finance in timely manner. Infrastructure financing in India has traditionally been supported by institutions such as banks, non-banking financial companies (NBFCs) and financial institutions. Given the huge investment required for scaling renewable energy, existing traditional financing sources like domestic bank loans are not sufficient for supporting capacity addition. Thus, new innovative financial instruments - like green bonds - that tap into international resources for leveraging a wider investor base like pension funds, sovereign wealth funds and insurance companies are needed for achieving India's climate and clean energy goals.

*Green bonds provide access to low cost, long term capital:* Green bonds are cost-competitive with other bonds and can provide capital at a lower cost as compared to a

commercial bank loans. Cost of capital through green bonds can be lowered even further with strategies of forex hedging and standards and certifications, Banks are usually unable to invest in long-term projects, creating maturity mismatch between traditional bank loans and longer payback period typical for most renewable energy and sustainable development projects. In India, interest rates are high, increasing the intensive upfront capital investment for most green projects. Green bonds address both these challenges. Offering a competitive risk return profile as compared to traditional bonds, green bonds can provide lower cost, stable funding for renewable energy projects regardless of an individual government's policy support for clean energy.

## Global Experiences

**Japan:** The Ministry of the Environment, Japan has set up "Green Bond Guidelines, 2017" on March 28, 2017 with the purpose of spurring issuances of Green Bonds and investments in them in Japan. This "Green Bond Guidelines" have been developed with the objective of spurring issuances of Green Bonds and investments in them in Japan. In course of development, for maintaining credibility of the green characteristics of Green Bonds, the Guidelines seek to prevent "green-wash" bonds from being issued and invested in.

As the International Capital Market Association continues to update its recommended Green Bond Principles with the objective of improving integrity and transparency of green bond market internationally, developments in Japan also continue to move toward this goal. One of the developments that have been seen is a growing practice among some issuers for arranging of second opinions on compliance of product with ICMA's Green Bond Principles. This goes toward one of the main areas of importance with respect to green bonds - the credibility of the bond as a "green product" in terms of the use of its proceeds.

A key area of concern for investors interested in green bonds is level of certainty of "greenness" of the bonds, which can be addressed by obtaining a second opinion in respect of compliance with Green Bond Principles. Moving towards a credible definition of "green bonds" with some level of certainty for Japanese market will require constant monitoring of international trends as well as a consideration of practical factors.

**Singapore:** Sustainable investments have gone main stream, and Singapore is taking steps for match demand by growing a green bond market. The global green bond market has grown rapidly over the years, reaching more than US\$80 billion (S\$112 billion) in 2016. Under the green bond grant scheme, issuers can offset up to \$100,000 of costs incurred from obtaining an independent review based on international green bond standards. For qualifying, bonds can be denominated in any currency but must be issued in Singapore, with a minimum size of \$200 million and tenure of at least three years.

From June 2017, the government of Singapore introduced a scheme for green bonds and is hoped to rouse the use of green bonds as an asset class in the country, following global acceleration and growth of the climate bond market in the last four years. To qualify for Singapore's grant scheme, bonds should have a minimum value of S\$200 million with a lifespan of at least three years. The bond can be denominated in any currency, but must be issued in Singapore. Once confirmed, recipients of the grant scheme will be able to offset the cost of obtaining an external review for green bonds for qualifying issuances up to either S\$100,000 or 100% of the cost - whichever is cheaper - per issuance. However, issuers will be able to apply for and receive the grant multiple times.

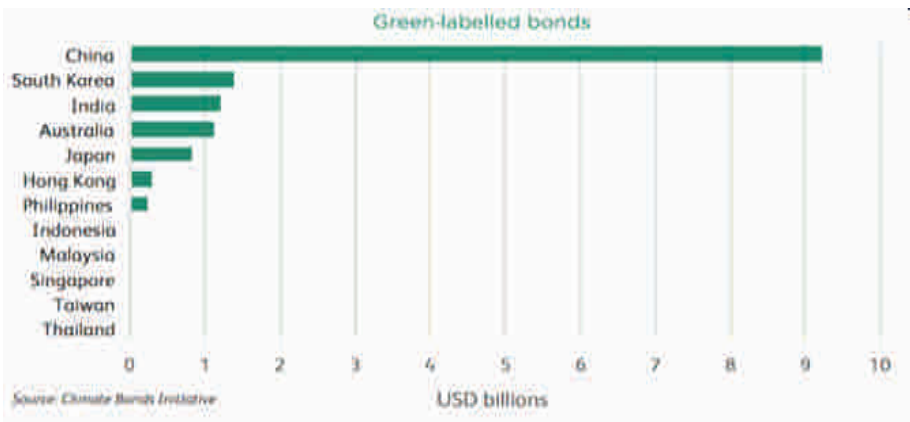


(<http://www.straitstimes.com/business/singapore-to-roll-out-green-bond-grants>)

**Other Asian Economies:** In a region dealing with excessive pollution and greenhouse gas emissions, climate change-induced droughts and floods, exacerbated by high coal-fuelled energy consumption, countries in Asia are exploring innovative clean and green financing products like green bonds for moving towards a sustainable, low carbon economy.

The Asian market for green bonds is dominated by China, South Korea, India and Japan.

**Figure 3:** Asian markets for Green Bonds



Asian markets have witnessed a rapid increase in green bond transactions in recent years, including China, India, Japan, South Korea and the Philippines. Green bonds are going mainstream in the overall bonds market, mainly because of the growing global awareness about the pressing need for environmental protection.

In the second half of 2016 Black Rock, world's largest asset manager, issued a climate change warning, stating that investors could no longer ignore the phenomenon and that they should cause in the costs of environmental problems, such as fossil fuel usage, water consumption, and carbon emissions as a percentage of annual sales when they decided which companies to invest in.

In a global green bond market that more than doubled in size to over \$85 billion in 2016 (versus 2015's levels), Asia's collective market share grew to more than 40% of issuance (from 10% in 2015). China's individual increase in market share (from about 7% to more than 35%) at a time of such accelerating overall market growth reflecting the galvanizing impact of a 'regulatory-push' factor. In Europe and some other developed markets, growth has been led more by 'investor-pull' factors.

Such rapid expansion only comes from broad-based shift: existing green issuers, largely developmental organisations, been joined by an increasingly diverse range of entities, including developed-market corporate like Apple, Toyota, Hyundai and Iberdrola, as well as issuers from emerging economies, mainly in Asia, including Bank of China, China's Industrial Bank, Bank of Qingdao and Xinjiang Goldwind from China, and India's Hero Future Energies and Axis Bank. Moreover, 2016 saw diversification of structure as well as

issuer, with Bank of China launching China's first green covered bond in November; India's first green 'masala' bond was issued in August, by National Thermal Power Corporation, just a month after the offshore rupee market had opened.

**USA:** In 2008, The World Bank Issued First Fixed-Rate Bond Carrying A Green Label. In Less than a decade, the market has grown to \$118 billion in outstanding bonds labeled green. In addition, another \$576 billion in unlabeled bonds fund climate-friendly projects. Investors around the world are increasingly familiar with the challenges of climate change and the energy conversion. More and more of them are clamoring for investment tools taking environmental criteria into account. They are showing interest in the bonds and "100% green" investing. And while green bonds remain a relatively small phenomenon, the market is expanding rapidly. In September 2016, the Luxembourg Stock Exchange announced the opening of the "Luxembourg Green Exchange (LGX)", the world's first platform dedicated for green financial instruments. It aims at capturing a significant chunk of a market that is expected to become enormous. When the platform was opened, 114 Green Bonds were already listed, amounting to over \$45 billion. The bonds meet strict requirements, remarkably concerning invested funds, which must be "used exclusively for financing or refinancing 100% green projects."

Despite this impressive progress, green bonds still represent less than 1% of the world bond market. The United States is world's leading issuer, with more than \$24 billion in green bonds outstanding in mid-2016, according to the Climate Bonds Initiative. The U.S. bond market, with \$40 trillion outstanding, dwarfs those of other countries. Green bonds comprises of merely 0.061% of the total U.S. bond market, a significantly lower percentage than in China, India, and South Africa, and order of magnitude below the share in the Nordic countries, Germany, the Netherlands, and France. Moreover, China is on the brink of overtaking the United States as the leading issuer in 2016. The relatively slow pace of U.S. green bond issuance is a major obstacle to this country's efforts to address climate change. Many market participants challenge that the problem in the United States is lack of supply and not of demand. Green bond issues are typically oversubscribed. Reason behind weak U.S. green bond activity is still not clear. Part of the answer lies in the market's lack of maturity. A combination of irregular deal flow, small offering size, index ineligibility, illiquidity, and lack of standardization limits market activity. But these factors are becoming less constraining as the market grows. The more fundamental explanation for green bonds' slow takeoff in the United States lies not in the bond market itself, but in the broader cultural, political, and legal environment that holds back action on climate change.

**UK:** The UK has become a global hub for green finance initiatives. A wide range of pioneering green finance initiatives and organizations are based in London. London Stock Exchange is attracting international green bond issuance in different currencies and have been issued in the London markets in a range of currencies. In July 2015, the stock exchange established a range of dedicated 'green bond' segments to increase the visibility of the green bonds for investors. As of January 2016, 10 green bonds were listed on the London Stock Exchange. In January 2016, the Green Finance Initiative (GFI) was launched aiming to mobilise the capital required for implementing the Paris climate change agreement and the UN's Sustainable Development Goals.

## Issues with "green" bonds

**1. Green Bond Standards:** The International Capital Markets Association (ICMA) has the

green bond principles and the Climate Bonds Initiative has the climate bond standards. There are also green bond indices being developed by the various banks or rating agency. These indices and principles spell out standards and practices defining what are considered "green". The definitions in both are quite broad and guidelines voluntary; so they do not hamper innovation in green financing. However, the definitions also led to great deal of confusion over what is considered green. CICERO, a second-party reviewer of green bonds, offered "shades of green" methodology, through which green bonds are graded "dark, medium or light" green depending on the underlying project's contribution to "implementing a 2050 climate solution". There is no fixed definition or binding standards. This has kept some mandated green investors, preferring to do their own due diligence, away, thus raising the cost of investing and monitoring. Issuers face reputational risk and potential accusations of "green washing" if proceeds are not used for their intended purposes or if issuers are unable to prove that proceeds have funded projects with a positive impact.

A second problem faced by green investors is their limited capacity to analyse green projects, in which case the role of third party guarantors like CICERO and audit firms like KPMG and EY becomes vital.

**Investors:** So far, all Indian green bond issues have seen 15-20 per cent investment by dedicated green funds including supra-nationals like International Finance Corporation, KfW, European Investment Bank, Asian Development Bank, and other funds, which have a compulsion clause to invest in green projects. For any pricing advantage over conventional bonds, this proportion needs to go up to 50 per cent.

**Funding:** Banks are the major source of direct green infrastructure financing. However, the scale of investment along with the "maturity mismatch" significantly exceeds the capabilities of post-financial crisis banking sector with inhibited balance sheets. Indian PSU banks are already grappling with huge NPAs and are credit inhibited. Bond markets, which provide both an alternative and complement to bank financing of debt, will be required to play a crucial role. Bonds with long tenors are potentially a good fit with institutional investors' long-term liabilities, allowing for asset-liability matching.

**Low Credit Rating of Potential Green Bond Issuers:** Infrastructure companies in India do not have a very good credit rating history. In addition, apart from biggest names in power generation sector, viz., NTPC and Tata power, no other company has credit rating to be able to issue bonds in the capital markets. Because of the nature of business, power generation is capital intensive and relies mainly on debt for funding, which further hampers new companies from being able to raise debt in the capital markets.

**Cost:** The issue of "green bonds" entails an additional monitoring and certification cost. Although this is completely voluntary, it does tend to increase the cost of a "green" issue.

## Issues with Indian energy markets

**1. Repayment Risks:** Indian discoms are not in the best financial state right now. They are burdened by heavy losses and the Ujwal DISCOM Assurance Yojana (UDAY) scheme is a temporary analgesic. The incentives that allowed discoms to accumulate such huge losses by supplying power cheaply still remain. Renewable energy PPAs are more expensive for discoms, and they supply only a miniscule amount of power as compared to conventional energy. In such a situation, discoms will first default on renewable PPAs in case of financial difficulties.

2. **Energy Reforms:** Most states have corporatized state electricity boards but, some still have to unbundle them, separating generation from distribution and, in essence, implementing all the changes suggested in the Electricity Act of 2003.

**Enforcement of RPO:** Considering the financial condition of discoms in the country, RPOs have not been enforced firmly affecting the demand for renewable energy as energy from renewable is more expensive than thermal power and RPOs increase the cost for discoms.

Issues with Indian financial markets:

1. **Seed Financing:** Financing of Greenfield renewable projects in the initial stages is a problem unless the promoter company is highly rated because of risk averse nature of financiers who hesitate in taking risk on project implementation.
2. **Duration Mismatch:** Indian banks lend money for project finance up to a maximum duration of 15 years. Power projects usually have a lifecycle of 20-25 years and they face a refinancing risk. This can be avoided if projects are financed by NBFs or investors with a longer duration horizon like insurance or pension funds.
3. **Insurance and Pension Regulations:** Certain insurance and pension regulations restrict these funds from participating in infrastructure projects.

## Key Challenges for Indian Entities

The following challenges are considered to be the key risk elements for issuance of Green Bonds for Indian entities.

**Hedging costs:** Currently, hedging costs are very high estimated at 8 percent and above for 10 year tenure) and hence take away the cost advantage for foreign currency financing in India. There is a need for exploring instruments/methods that can enable reduction of such costs.

**Credit ratings:** India's current sovereign rating of BBB- is not attractive for risk-averse investors. Thus credit enhancement, offered by multiple agencies like IFC, AFD, and USAID-DCA, can help enhance credit rating. However, there are costs associated with such credit enhancement services and hence cost benefit analysis needs to be done.

**Regulations:** The external commercial borrowing (ECB) guidelines pose certain challenges for the usage of proceeds from Green Bonds. Viable solutions include: Refinancing SPVs by IPPs issuing corporate bonds in foreign currency, On-lending possibility for SPV of Infrastructure Finance Company created for issuance of Green Bonds, Issuances of Green Bonds by an overseas SPV of a domestic FI, Only 25 percent of ECBs are allowed to refinance existing loans. Remaining 75 percent should be used for development of new construction, which poses a challenge for launching Green Bonds for operational assets.

## Policy Recommendations

The current issuances of green bonds are driven more by corporate positioning and branding than by any advantage gained in the market by being "green".

Given the ambitious goals but limited budget capability of the government, the cost effectiveness of government policies becomes an important issue. According to a study by Climate Policy Initiative and the Indian School of Business, debt related policies are most cost effective incentive for green financing. In particular, combination of reduced cost and

extended debt tenors are most effective. Green bonds have the ability of reducing cost of debt for green projects by 150-200bps as compared to project finance loans.

For a green bond having pricing advantage over conventional bonds, over 50 per cent of an issue will have to be subscribed to by funds where it is mandatory to invest in green projects. In such a scenario, issuers will have a market incentive of certifying bonds as green. The amount of money that is currently required to be invested mandatorily exclusively in green energy projects is miniscule compared to the investments required in energy efficiency and green energy projects. For increasing this pool and for meeting the renewable energy targets, government has a primary role to play in the creation of an enabling environment for long-term green investment.

In order to develop a green bond market, the government essentially needs for increasing the funds available for investment in green projects. This can include specific tax incentives and development of long-term finance markets in general. Following measures are recommended:

**Regulatory changes in IRDA:** Regressive regulations are one of the major reasons was corporate debt in under-developed world. A couple of regulatory changes by PFRDA and IRDA will go a long way in creating a market for debt in India. Regulations to some extent are hampering the growth of bond market in India and needs to be relaxed. But, it is not recommended that IRDA mandates insurance companies to invest in areas if they choose not to. Companies handling public money should choose the risk they are willing to take and should not be burdened with additional risks.

- a. The Insurance Act does not permit insurance companies to invest in private limited companies preventing them from investing in many infrastructure projects and renewable projects, specifically because renewable power developers are usually smaller companies that are privately held.
- b. IRDA requires 15 per cent investment in infrastructure and housing for life insurers (10 per cent in infrastructure by non-life insurers). But the following regulations are restrictive:
  - i. Investment is permitted only in highly rated companies.
  - ii. Exposure is allowed up to 25 per cent of the net worth of the infrastructure company (Most infrastructure SPVs are up to 75 per cent debt financed, making their net worth low compared to the size of the investment required. This restriction requires a large number of insurance companies to invest for even very small projects, viz., for an INR 100cr project, INR 75cr of debt would be required and this would still require investment from 20 insurers.) Exposure norms should be restructured depending on the net worth of the insurance company and not the project SPV.
  - iii. Recently, IRDA allowed exposure up to 20 per cent of project cost but requires 100 per cent guarantee by a AA rated parent. This restriction becomes very capital intensive for the guarantor preventing the development of a vibrant bond market.

**2) Regulatory changes required in PFRDA:** Pension Funds/EPF/PPF/EPF/NPS: As with insurance, it is not recommend for pension funds be forced to take risks that they are not willing to, but given the size of the EPF and PPF corpus, even a small allocation to infrastructure or green projects will go a long way in developing the market.

- 3) **Revisiting PSL Norms for Green Investing (RBI):** The RBI priority sector lending requirements allow bank loans up to INR 15 crore for purposes like solar power generators, biomass power generators, wind mills, micro-hydel plants and non-conventional energy based public utilities to be eligible to be classified as priority sector loans under "Renewable Energy". The RBI probably right wants banks to lend to newer borrowers and not classify their existing renewable loans to large players to be classified as PSL.
- 4) **Clear Specifications and Monitoring for Green Bonds (SEBI):** The SEBI, in December 2015, came out with a concept paper for issuance of green bonds in India, which stated that no additional regulations are required for issuing green bonds in India. However, government incentives cannot operate in grey areas where the definition of green is "voluntary". If it is decided to provide incentive for green bonds, the definition of "green" must be standardized.
- 5) **Bond Guarantee Fund:** A green bond guarantee fund on lines of IIFCL bond guarantee program (or an expansion of the same) can have a significant impact on the credit rating of renewable power projects. Apart from the NTPC, Tata Power and a few others, most power companies in India do not have a credit rating that can enable them to issue bonds. Renew Power was able to raise money from the capital markets via credit enhanced bonds where 28 per cent of the bond issue was guaranteed.
- 6) **Retail Tax Incentive for Green Bonds:** For mobilising retail savings, government can include or create a new category for green bonds on the lines of infrastructure bonds which receive an exemption under Sec 80CCF, which will help Indians save more while directing money towards renewable energy.

## Conclusion

As the green bond market continues to grow, so will grow green bond nomenclature. It is difficult to state as one colour- there are various shades - and the analysis of "green" components, and benefits will be left to investors to define. The "green" bond market is relatively new aspect of global capital markets and has been pioneered by multi-national institutions. Although it comes under the fixed income umbrella, the number of dedicated investors with compulsion for socially responsible investing is increasing every year. Considering that fossil fuels have enjoyed huge subsidies throughout their history and have led to environmental degradation and contributed to global warming; it is appropriate that renewable energy and technologies that reduce the carbon footprint get the same advantage. There are subsidies in place for environmentally friendly projects in many countries of the world and technological advancement is driving costs down for them to become competitive with conventional energy.

Green bonds are just another way of classifying and channelizing investments in "green" projects. Although the market is burgeoning, broad guidelines are coming to the front. As the market matures, investors will require that green bond issuers report on the status of deployment and environmental outcomes of the investments. For green bond market to have long-term credibility, investors and governments would need evidence that the projects funded have delivered the intended environmental benefits. Issuers should design monitoring and evaluation processes in advance, and implement key performance indicators and data collection systems to monitor the environmental outcomes of projects over time.

In general, global leaders need to take three steps for reducing the carbon footprint. First, governments around the world would do well to promote the development and standardization of "green" bonds as a way to finance environmentally sustainable projects. Second, there should be incentives for investing in sustainable projects funded by a carbon tax on polluting sources of energy and finally, more funds to be dedicated for investment in environmentally sustainable projects.

In general, global leaders need to take three steps to reduce the carbon footprint. First, governments around the world would do well to promote the development and standardisation of "green" bonds as a way of financing environmentally sustainable projects. Second, there should be incentives for investing in sustainable projects funded by carbon tax on polluting sources of energy and finally, more funds to be dedicated for investment in environmentally sustainable projects.

Major cart off is that green bonds are changing the scenario of available investment products, helping to address solutions to global environmental challenges, and their area variety of options to choose from for institutional and individual investors. It is believed that this will continue to grow in the future as investors, in particular millennial, look to make a positive impact in their communities and worldwide via their investment portfolios.

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# POTENTIAL OF BUSINESS PROCESS RE-ENGINEERING FOR FUTURE HUMAN RESOURCE MANAGEMENT: A CORPORATE SOCIAL RESPONSIBILITY IMPERATIVE FOR AUTOMOBILE SECTOR

## Abstract

The dynamic global environment demands alignment of business processes for sustenance and growth. Economic development in the 21st century is characterized by the opening of developing economies, unleashing the potential of foreign investments, and improved contribution of micro, small and medium enterprises (MSMEs) to global gross domestic product (GDP). Last 25 years witnessed the unshackling and spread of wealth as a function of technological innovations and consequential changes in the consumption pattern of developing nations. Adoption of corporate social responsibility (CSR), as integral to business strategies and mandate by the governments for its implementation have unlocked the Pandora box of both short and long run business opportunities. Conventional perception of managers as to CSR exclusively as expenditure in terms of time and money is in transition. With a positive approach, this conceptual paper confirms the perceived benefits derived from knitting CSR and MSMEs to re-engineer the harnessing process of future high morale human resources at reasonably lower future costs. The focus of the present paper underpins the possibility of leveraging on the demography, socio-economic status and government mandate on CSR for long run business progress; broaden business good by re-engineering the value chain near the termination point of product life cycle. Theoretically, the model suggested herein attempts to identify the win-win propositions underlying the normative political economic theory of CSR.

**Key Words:** Corporate Social Responsibility (CSR), Value Chain, Business Process Re-Engineering Micro Small and Medium Enterprises (MSMEs), Automobile

## Introduction

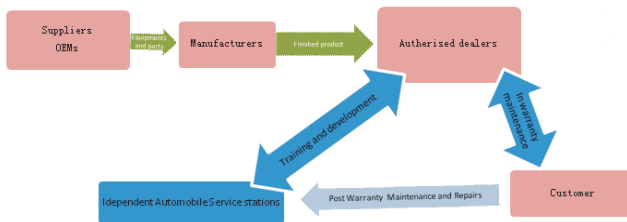
The global economic measures taken during the late 20th century have fruitful outcomes, resulting in better life style and purchasing power of developing nations. It took seamless effort of a quarter of a century to create future markets for the developed economies in the developing countries. Potential demand for automobile sector is a function of purchasing power, life style, infrastructure feasibility, and maintenance during the pre-and post warranty of the product. Increased operations warrant human resources

In order to offer an in-depth, objective orientation one needs to have the fragmented perspective of the components of the value chain that needs to be integrated with the functional activities of CSR. Thus, an effort has been made to describe the role of each fragment of the value chain later they are knitted to evolve a model. The model presented here (Fig:-1) needs CSR efforts to upheaval the marginalized by way of skill orientation in

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MSMEs; Automobile sector is taken as example for its significant decadal rise, and prospect for growth. Utility of the product from the automobile sector have direct bearing on the functioning of the economy. So the fragments of value chain that need alignment are ; CSR efforts, Automobile Sector, MSMEs , and Rural unskilled labour.

**Fig: 1:** Conceptual Model for uplifting MSMEs in Automobile Service Sector



## Corporate Social Responsibility and India

Milton Friedman's perspective of CSR is justified as unless the business units survive and earn from the activities, rewards to the stakeholders cannot be justified. Thus CSR activities shall be tangential to business circumference. Further, the need for sector (industry) wise CSR norms are essential as the stakeholders and the consequential vulnerable community in each sector could be addressed with suitable efforts. Over the years global share of service sector in MSMEs to GDP has considerably grown. India has registered growth in economic parameters and commands a better future. The thrust area being the service sector and the MSMEs, converged efforts of the government and the corporate sector are ensuring the entrepreneurial development by way of innovations. In order to ensure participation of the corporate bodies in private sector, the Companies Act 1956 have been revamped .

Of late, revamp of the Companies Act 1956 have lead to mandatory performance of CSR by the companies. Functional implications are crystal clear that the need for external influence was felt essential to stimulate corporate initiatives. This proves that in practice for country like India, normative political economic theory is suitable. Section 135 of the Companies Act 2013 has specified the following companies (Ref Table-1) to put efforts towards CSR.

**Table -I** Financial criteria for companies to perform CSR

Networth	Turnover	Net Profit Before Tax	Amount to be spent for CSR activities
Rs 500 Crore	Rs1000 Crore	Rs 5 Crores	2% of Average net profits of Past three years

**Source :** Compiled from Ministry of Corporate Affairs GOI (2014)<sup>1</sup>

Further, following activities are included in the CSR spectrum vide Schedule VII of the Act:

- Environment sustainability
- Empowering women and promoting gender equality
- Education
- Poverty reduction and eradicating hunger
- Social business projects
- Reducing child mortality & improving maternal health
- Improvement of health
- Imparting of vocational skills
- Contribution towards Central & State Government funds for socio- economic development and relief
- Such other matters as may be prescribed

On referring to the CSR avenues specified by Ministry of Corporate Affairs (MCA) it's noteworthy that, the MCA included in its ambit the avenues for value addition to the community by way of Social Business Projects, Education , Health and Skill Development . These activities could directly contribute to induction of quality workforce, that in turn will fetch better returns for corporate sector.

In India, the past decade witnessed the increased voluntary participation by the companies in CSR activities. Yet, all the companies did not perceive its significance. The sporadic contribution of the companies was not adequately registered by the government despite of the institution of Global Peacock Award. Yet it was registered that most of the newly incorporated companies did not align the CSR in their mission. This entails the need for government to intervene and regulate the corporate behavior to the tune of stakeholders expectations. Thus it is evident that political economy theory with normative approach to CSR is functional in India.

With a view to offer focused model I would confine my observations and suggestions to automobile sector, aligning its CSR activities for imparting vocational skills amongst the deprived sections of society.

### **Automobile Sector and MSMEs**

Automobiles being one of the determinants of the well being of the transport services, have considerable implications on the economic development and growth. Status of transport

<sup>1</sup>Ministry of Corporate Affairs (2014), Companies Act 2013, [www.ebook.mca.gov.in](http://www.ebook.mca.gov.in) retrieved on 15-02-2016.

sector's performance is the indicator of the economic well being of a country. Of the various media of transportation road transport plays a significant role in connecting the logistically significant locations. The equipments and vessels used in transportation have effective life, due to their very nature of service, demand for regular maintenance cannot be overemphasized. Maintenance of the automobiles is offered by the original equipment manufacturers (OEMs) through authorized dealers and independent automobile service stations. Most of the independent automobile service stations are operating in MSME sector in an unorganized fashion to economize on the capital inputs and working capital. Unskilled seasonal labour is usually employed with their educational background largely below high school. Manpower involved in these MSMEs are rural children and youth vulnerable to unemployment and pathetic living conditions. Owing to poverty and lack of interest in schools they opt to try their luck in the independent automobile service stations.

Automobile owners in developing countries like India tend to cut costs by identifying the cost effective s of maintenance of motor vehicles and prefer independent automobile service stations to authorized dealers. Even though when preferred, the authorized dealers, the time taken, distance travelled, job scheduling, and queuing usually discourage the transport owners to approach the authorized dealers. As the manufacturers and the authorized dealers focus will be mostly on the newly sold vehicles, and the vehicles in the warranty period. Customers beyond the warranty need similar treatment and manufacturers' cost effectiveness at policy level restricts the approach to treat all the customers at par. This is done to upgrade technology and encourage the old customers to buy new models, such that original equipment manufacturers (OEMs) could harvest the bounty of advantages of technological innovation.

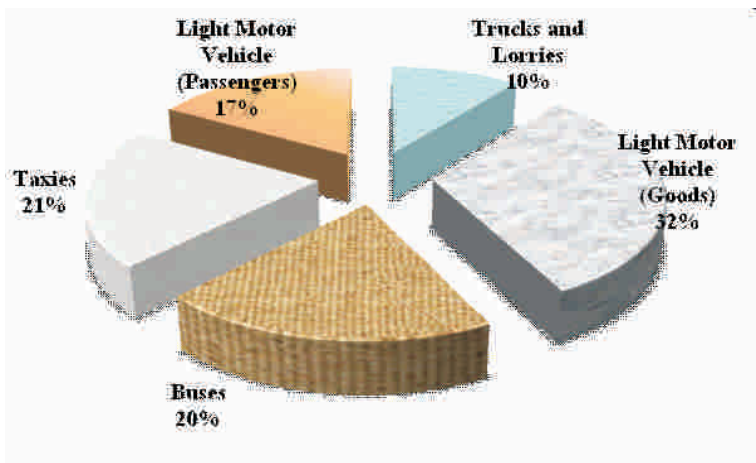
Contribution of automobile sector to the economy is significant, in the form of direct and indirect employment to rural and urban mass, services rendered for logistics, finally the comfort offered for the middle, upper class income group(Ref Fig-I). Automobile and allied equipments sector accounts for 13.9% of BSE S&P SENSEX market capitalization. During the past decade, there has been a significant growth in the automobile ownership in India (Ref Table-II).

**Table-II Paired** - t- test for the decadal change in number of automobiles across their types in India

Types of Automobiles	Df	T	Sig. (2- tailed)
Trucks and Lorries	33	-1.991	.054
Light Motor Vehicle Goods	29	-1.857	.073
Buses	33	-1.891	.067
Taxis	33	-2.001	.054
Light Motor Vehicle Passengers	32	-1.986	.055
Total Transport	34	-2.011	.052

From table-II (Annexure-I), it is inferred that there is a significant rise in light motor vehicles for personal use as Taxis and other light motor vehicles for passenger movement are indicating. This growth in the light passenger vehicles and taxis can be attributed to improvement in life style of people in India . Increase in number of vehicles demands service providers for post warranty repairs and maintenance. The causal mushrooming of micro small and medium enterprises in organized and un organized independent sector have been phenomenal. Figure -I supports that growth in buses is less than the combined growth of the taxis and passenger light motor vehicles. Of course, the vehicles used for goods transportation taken together are contributing to 68% whereby the light goods vehicles are dominating the Pie diagram with 32%. This also indicates the urbanisation of towns and shrinking space for movement of traffic, thus goods transport needs smaller vehicles to reach the market places.

**Fig-I:** Vehicle type wise proportionate contribution to decadal growth in the automobiles (2003-2012)



In order to confine coordinates of the literature on MSMEs, concept is restricted to Automobile workshops. Much of it identifies the problems and prospects of MSMEs in general and few on the economic contribution as a whole with social orientation. Aboltins and Rivza surveyed the automobile workshops in light of the growth in the automobile industry and vehicular traffic in Baltic region, the researchers emphasized on the need to revamp of the independent (un-organised) small and medium auto workshops. They further confirmed that appropriate training and tie-up between authorized dealers and the small and micro enterprises in automotive service sector is essential. Rapid changes in the technology have been affecting the quality service delivery in un-organised sector Aboltins and Rivza (2012)<sup>2</sup>. Study by Evan et al revealed that the scenario of changing technology and the growth in automobile industry have pushed the demand for quality post sales

<sup>2</sup>Krisjanis Aboltins and Baiba Rivza (2012), Automotive After Sales Market in the Baltic Countries and Opportunities for increase of its Competitiveness, Proceedings of the Conference of the School of Business Administration Turība, XIII International Scientific Conference on Sustainable Business Under Changing Economic Conditions, at Riga on 30 March 2012 .Pp 10-18 Retrieved from <http://aurora.turiba.lv/bti/Editor/Manuscript/Proceeding/Proceeding.pdf> on March 2016.

service to its limits in United States of America(Evan et al. in 1999)<sup>3</sup>. The researchers' findings and suggestions are in line with Aboltins and Rivza (2012). As India is advancing towards prosperous economy, the need cited by above researchers need be extended to developing nations like India.

Role of OEMs becomes critical in emerging economies, such that in the ambit of corporate social responsibility (CSR) activities, training of the existing manpower in independent MSMEs would help the skill development. In India majority of roads have to pass through the long span of rural areas, providing services at every village is not a profitable proposition for the OEMs and the authorized dealers. Though, the terms and conditions justify their stand for customers, terrain and the geography demands services to be extended to the remote pockets. With minimal capital, un-organised entrepreneurs have taken initiative along the road sides, but the ball is in the court of OEMs to materialize opportunities. This will ensure services to the consumers through out the country else the customers need to depend upon the authorized dealers that are far located.

Moreover the Public Private Partnership model for timely up-gradation of skills of rural youth in line with the latest technology in automobile, will help the continuum of knowledge and application for customer services. The win-win proposition for the gigantic corporate houses in automobile sector, government, and the MSMEs will enhance employability, customers' reliability, and savings on capital. The process of implementation of above proposition is mentioned herein figure-II. Following are the points of win-win proposition for Automobile sector, Government, and MSMEs :

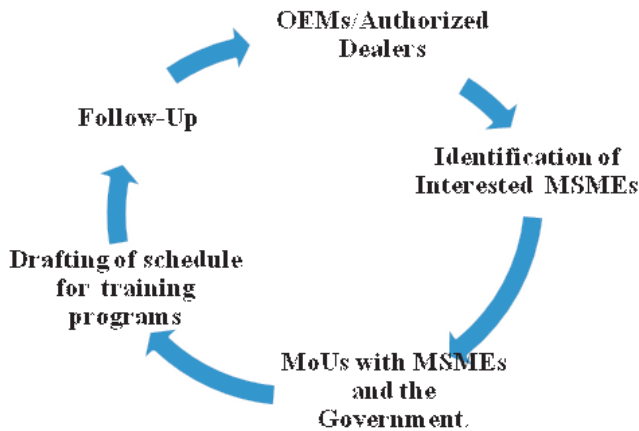
1. Development of Future Workforce : By adopting the MSMEs for skill development; the automobile sector could train its future workforce, for both OEMs directly and the MSMEs of Independent Automobile Service Stations.
2. Building Customer loyalty: The customers with the vehicles nearing the end of its effective life could still restore the original performance at lower price thereby improving loyalty towards brands(Atkearney 2017)<sup>4</sup>. However the reference of a satisfied customer will add up to enhance corporate goodwill.
3. Savings on capital: Skilled workforce will need relatively less capital for start-up and investment in working capital will be negligible as the equipments needed for maintenance will be supplied on credit basis by the OEMs to the registered and trained workers. Utilisation of equipments for maintenance may be reported from time to time so as to re-coup the stores.
4. Time saving for the government: Government's role is limited to authentication of the workers and the companies as confidence building measure. Much of the officers' time could be dedicated towards identification of other nation building ventures.

<sup>3</sup>Evan H, Rodewig L F, Soliman P, and Wheeler S (1999) Changing Channels In The Automotive Industry: The Future of Automotive Marketing and Distribution, Strategy+Business, Marketing Media and Sales, 14(1) Published: (originally published by Booz & Company)

<sup>4</sup>Atkearney (2017), Building world class supply chains in India, [www.atkearney.in/paper/-/asset\\_publisher/dVxv4Hz2h8bS/content/building-world-class-automotive-supply-chains-in-india/10192?](http://www.atkearney.in/paper/-/asset_publisher/dVxv4Hz2h8bS/content/building-world-class-automotive-supply-chains-in-india/10192?) Retrieved on 17-02-2017.

5. Seed money for start-up could be saved: The model suggests the corporate bodies to help train and establish the manpower. Business orientation of the authenticated and registered worker could fetch soft loans partly from OEMs and Government.
6. Discourage seasonal unemployment: The model is targeted to address the problems of seasonal nature of unemployment in rural areas. The peasants in rural areas are vulnerable to their dependence on agricultural activities during the off season skills could fetch some part time source of income generation with adequate confidence.

Figure- II



### Steps for implementation

1. **Find out OEM Branches Operating in the country:** first stage is to find out the number of branches that each of the OEMs/Authorised dealers that are operating across the nation. This exercise may be thoroughly carried out jointly by all the automobile manufacturers with the help of their dealers. As such assimilation of efforts will economise the resource allocation. This phase may conclude within a months time. As the manufacturers have just to compile their records.
2. **Identification of interested MSMEs:** The second stage involves nationwide survey through the main roads and the highways which may be conducted jointly by the branches of all the OEMs. This will help them identify each branch's responsibility radius for offering training to independent MSMEs.
3. **Memorandum of Understanding between the Government OEMs and the prospective trainee MSMEs:** This stage will need government mediation as illiterate and partly educated rural people need sense of security for their deal. Even the OEMs with vision and plans for upgrading local skills need surety for post training services.
4. **Drafting and communication of joint training programme:** Depending upon the number of un-organised MSME participants a routine may be drafted to include all the independent units. The schedule for joint training may be informed. For effective



implementation training programme shall take into account the inculcation of skills and mechanism essential for all the models of automobiles that frequently ply on the roads where the MSMEs are operational.

5. **Follow-up** : Post training joint survey at regular intervals will boost the morale of the workers at MSMEs and will help building interpersonal bond for further activities. This will ensure drafting of schedule for next training programme and updation of skills related to latest technology. New entrants may also be included.

Expenses incurred for this comprehensive exercise may be proportionately distributed amongst the manufacturers and charged under the CSR activities that will reduce tax burden and when reported in the chairman's speech will enhance corporate goodwill.

## Conclusion

The observations of this article are at preliminary stage with implications for the national institutions that will lead to development of policies for MSMEs in Independent automobile service stations. Policies are needed for upheaval of human resources, material resources, and planning for utilisation of land, and other resources in the direction of economic growth to include the income and employment generating un-organised service sectors of MSMEs. In automobile maintenance sector, the skill development initiatives are lacking adequate popularization amongst the villagers. Perhaps the maintenance workers are shy as they do not take adequate initiative to participate.

In the present state of global economy a complete dependence on the public finance is not advisable as the social role of gigantic corporate sector may also be explored. World-wide the recognition of CSR have been mandated and its performance is rewarded thus public private partnership will help channelize resources to improve skills and capacity of the rural human resources in developing nations. Such an exercise will build brand loyalty of customers of automobile sector. Corporate sector does participate in the vicinity of their operations, well connected towns and cities but their contribution needs to be pooled and apportioned in the inaccessible and thinly populated remote pockets of North-Eastern States. The suggested model(Fig-2) is subset of model suggested by Panda NM (1991) . Though the suggested model is implemented by the government since the year 2013, the operations are confined to few sectors. This discussion argues to include intensively the development of vulnerable manpower in the independent automobile maintenance sector.

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#### Annexure-I

Decadal Percentage Change in Number and types of Automobiles in States and Union Territories of India during (2004-2013)

Types States & Union Territories	Trucks and Lorries	Light Motor Vehicle (Goods)	Bus	Taxis	Light Motor Vehicle (Passenger)	Total Transport
Andaman & Nicobar Islands	65.83	NA	108.71	12.16	423.85	152.44
Andhra Pradesh	161.21	603.07	622.88	134.22	197.52	238.46
Assam	(97.39)	369.14	84.54	313.07	140.33	37.05
Bihar	194.12	(58.33)	137.13	375.46	1384.95	246.36
Chandigarh	67.21	225.55	82.81	20NA	NA	207.79
Chhattisgarh	141.30	250.39	539.79	(30.71)	192.88	132.66
Dadra & Nagar Haveli	70.49	220.08	128.57	42.59	29.40	92.46
Daman & Diu	108.12	98.41	50.42	27.91	39.89	88.42
Delhi	(93.15)	66.61	(44.78)	155.27	(45.40)	36.34
Goa	50.95	NA	104.52	86.47	(57.81)	108.56
Gujarat	75.10	144.34	54.62	130.56	118.55	111.76
Haryana	108.24	135.77	356.83	86.43	202.49	134.99
Himachal Pradesh	72.52	2300.60	177.30	120.73	99.68	170.42

Types States & Union Territories	Trucks and Lorries	Light Motor Vehicle (Goods)	Bus	Taxies	Light Motor Vehicle (Passenger)	Total Transport
Jammu & Kashmir	36.03	358.20	33.51	203.00	15.10	97.31
Jharkhand	235.31	NA	50.21	1056.45	527.23	614.77
Karnataka	146.17	181.95	134.66	298.87	68.35	160.50
Kerala	7.48	167.53	501.36	6.63	126.62	155.62
Lakshadweep	NA	225.56	NA	NA	17.40	138.94
Madhya Pradesh	69.86	272.00	65.00	128.35	114.45	118.34
Maharashtra	65.51	188.86	124.32	79.62	32.88	82.85
Manipur	79.98	434.41	55.31	714.33	456.53	204.23
Meghalaya	91.24	NA	74.92	260.50	161.55	167.75
Mizoram	44.01	448.21	41.31	138.74	210.39	146.88
Nagaland	119.96	111.72	64.05	67.20	84.88	107.96
Odisha	167.33	273.14	64.71	178.87	256.88	198.54
Pondicherry	(30.28)	263.84	117.75	(46.38)	47.58	54.28
Punjab	65.83	118.96	62.33	54.72	81.16	78.23
Rajasthan	131.62	461.69	58.42	215.47	125.18	139.65
Sikkim	88.45	283.29	55.91	89.57	NA	96.79
Tamil Nadu	78.38	97.85	103.45	163.87	106.93	102.85
Tripura	53.05	1973.61	43.55	789.49	94.04	139.78
Uttar Pradesh	97.29	270.41	53.20	196.07	150.03	152.79
Uttarakhand	156.90	375.52	94.49	113.19	107.05	157.53
West Bengal	(19.54)	NA	24.83	55.40	104.89	73.04
India	74.90	223.23	138.83	145.76	117.72	133.74

**Source:** Compiled from indiastat.com, NA: Data not available . Figures in braces indicate percentage decline.

# SOCIO-ECONOMIC FACTORS INFLUENCING PURCHASE DECISIONS: A COMPARATIVE STUDY OF HEALTH INSURANCE COMPANIES IN INDIA

## Abstract

The objective of this study was to check the 'Socio-Economic Factors' Influencing Purchase Decision Making among health insurance policy holders in India. Data was collected through a structured questionnaire given to 170 customers. Data analysis was done through logistic regression with the help of the 170 responses received. The study found that factors, viz. dependent factor was health insurance institutional choice and independent factors were age, gender, income, marital status, sum assured, premium, occupation, HI cover, HI type and cover HI have significant relationship in decision making process. The findings of the study and the implications are discussed here below.

**Keywords:** Health insurance, Health Insurance Institutional choice, Socio-Economic Factors.

## Introduction

India's health care industry is at crucial crossroads today. While India continues to chart a course towards modernity and economic development, 40% of the Indians still remain outside the purview of available modern-healthcare benefits. Yet, about 170 million people globally suffer financial turbulence annually, and, 100 million are pushed below the poverty line as a result of the various types of health-care expenditures they have to incur. The Indian healthcare industry is expected to reach US\$ 280 billion by 2020, on account of the increasing demand for specialized and quality health-care facilities. Further, the various hospital services market, which represents one of the most important segments of the Indian healthcare industry, the total industry size is expected to touch USD160 billion by 2017 & USD280 billion by 2020.

Health insurance premiums in India started increasing between the years 2003 and 2014 as the cumulative growth rate was 14.67%. During the same period under study: (a) Health insurance registered a growth rate of 0.0535%. (b) Similarly, the Health Insurance Density also started increasing and the growth rate was 13.72%. (c) Consequently, Health Insurance Claims also started increasing as the cumulative growth rate was 97%. These data show that there exist significant demand and vast potential for the growth of health insurance industry in India.

While health insurance has historically played a significant role in developing the health-care sector in the developed nations, the Indian scenario presents a different picture as less than 15% of the population is covered under some form of insurance (employer's contribution, or self-financed or government-sponsored schemes) and only 2.2% of the

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population were covered under private insurers. The premium declined over the years and because of low penetration, health insurers were more interested in investment in other businesses for various reasons. Besides, factors, such as rise in income levels, aging population, higher medical costs, life-style induced diseases, tax concessions, government incentives, and modern distribution channels have initiated the vast improvements in health care services.

## Research Question

Is there any relationship between Socio-Economic factors of customer of private insurance companies and public insurance companies?

## Review of literature

Yellaiah and Ramakrishna (2012) studied socio-economic determinants of health insurance in India. They had interviewed 200 people in Hyderabad city, to know their willingness to purchase a health insurance policy. They concluded that Demand for health insurance (purchases) and socio-economic determinants namely income; health expenditure; awareness were positively significant and occupation had negatively significant. Dash (2013) examined buying behavior from different stake holder's views from customer, agents and executives of LIC and Private Insurers with help of 7P's of service marketing. He interviewed 405 life insurance policyholders and 207 life insurance executives. He had concluded that Place and people were significantly associated with customers buying behavior of insurance. Bhat and Jain (2006) assessed factors affecting the demand for insurance in a micro-health insurance scheme. The survey conducted through interviewing 301 people in Anand District, Gujarat (state) India. Socio-economic factors namely income, health expenditure was significant determinants of health insurance purchase. Age, coverage of illness and knowledge about insurance were found to positively impacting on purchases of health insurance. Singhi and Jain (NA) conducted a study on acceptability of life insurance by Indian customers. They had interviewed 150 policyholders of life insurance in Delhi, India. They test regarding the factors influencing willingness to purchase a policy. It was found that significance association between investments in life insurance and demographical factors namely age; marital status; gender. Goel (2014) an empirical study was undertaken to test consumer behavior in Rohtak district. These purpose they had interviewed 150 customers. Firstly to know awareness of health insurance and found that there was low level of awareness. Secondly factors influencing purchase of health insurance found to be medical expenditure, tax gains, mandatory and others. Thirdly he had identified barriers for subscription of health

insurance were lack of funds, lack of intermediaries, lack of accessibility and lack of reliability. Fourthly people preferred public health insurer for guarantying their capital. Boating and Vitor (2013) examined individual attitude towards health insurance and factors influencing policy renewal of health insurance on the due date. It was undertaken through interviewing 300 people in the Volta region of Ghana. They concluded that purchasing health insurance and demographical characters namely gender; marital status; religion was statistically significant. They had identified reasons for non-renewal health insurance policy were poor quality of services, lack of money and alternative sources of care. Rajkumar and Kannan (2014) assessed factors that were influencing in purchase of life insurance. They had interviewed 135 people in Tamil Nadu state, India. They have used 7P's frame work of service marketing. They concluded that product (tax rebate, savings and life cover), price (value for money), place (accessibility), promotion (advertisement), people (agent's behavior), physical evidence (office ambiances) and process (compliant redressed mechanism) has significance on purchase decision making. Kansra and Pathania (2012) examined factors affecting the demand for health insurance in Punjab, India. These purpose 200 people were interviewed regarding awareness and problems faced while purchasing a policy. Thus concluded firstly majority was aware of health insurance and awareness was through newspaper. Secondly factors affecting purchase of health insurance were namely Formalities bottlenecks, Agent related problems, insurance coverage issues, lack of awareness and Negative feedback. Yadav and Tiwari (2012) a study was undertaken to evaluate factors affecting customer investment in life insurance. The survey was conducted at Jabalpur District, India, through interviewing 150 people regarding their investment into life insurance policy. Their study found that age and income has statistical significance on purchase of life insurance. The respondents ranked their preferences to invest in life insurance were namely tax benefit, risk coverage, high security and higher returns. Sridevi (2012) explored buying behaviour of consumers of life insurance policies. The survey was conducted with 150 life insurance customers in Perambalur district, Tamil Nadu, India. The study concluded that various factors that influencing buying of life insurance were company loyalty, service quality, easy procedure, satisfaction level, company image and company client relationship.

## Research Gap

The previous studies have done comparisons of socio-economic factors influencing purchase of health insurance policies between buyer and non-buyer but none of them have compared between private and public health insurance consumer buying behaviour.

## Hypotheses

There was no significant relationship between Socio-Economic factors of customer's of private insurance companies and public insurance companies.

## Research Methodology

### Need for the Study

The study was conducted to determine relationship between Socio-Economic factors of customer's of private insurance companies and public insurance companies.

### Objectives of the Study

The aim of the study was to determine relationship between demographical factors of

customers of private insurance companies and public insurance companies in India.

### **Study Site**

The study was conducted in the Jagital district of Telegana state, India

### **Nature of Study**

The study is purely explorative and conclusive in nature.

### **Data Collection Method**

The study took into consideration both primary as well as secondary data. The primary data was collected through a set of structured questionnaires and the secondary sources consisted of review of websites, books and standard journals.

### **The Questionnaire Development**

Initially the rough-cut of questionnaires was developed through polite interactions with local customers and agents in the insurance market. Thereafter, the closed-ended questionnaires were designed and fine-tuned in *two* parts. The first part consisted of general questions related to Name, Address, Age, Gender, Income Level, Occupation and Marital status. The second part related to Purchase of health insurance policy, Company name, premium and coverage.

### **The Sample**

The sample of the study consisted of 250 customers to whom the structured questionnaires were distributed for Data Collection of which only 170 were customers of Public and private insurance company.

### **The Description of Variables**

**Health Insurance Institutional Choice:** It was a dependent factor. Health insurance companies include private general insurance companies and public general insurance companies; customer's who have opted for it. Binary digit was used for converting qualitative data in quantitative data by indicating Public general insurance company as one and private general insurance company as zero.

**Age:** It was an independent factor. Age group of the head of the family, Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Nominal scale was used for converting quantitative data by indicating, score from one to five; Group-I- 21 to 30 years, Group-II- 31-40, Group-III-41-50, Group-IV-51-60 and Group-V- above 60.

**Gender:** It was an independent factor. Gender of the head of the family, Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Binary digit was used for converting qualitative data in quantitative data by indicating male as one and female as zero.

**Occupation:** It was an independent factor. Occupation group of the head of the family, Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Nominal scale was used for converting quantitative data by indicating, score from one to five; Group-I- Self employed, Group-II- professional, Group-III-private, Group-IV-government services and Group-V-others.

**Income:** It was an independent factor. Disposal income was grouped as the head of the family; Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Nominal scale was used for converting quantitative data by indicating, score from one to four; Group-I- less than 5,00,000, Group-II-5,00,000-750,000, Group-III-7,50,000 to10,00,000, Group-IV- above 10,00,000.

**Marital Status:** It was an independent factor. Marital status of the head of the family, Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Binary digit score was used for converting qualitative data in quantitative data by indicating married as one and single as zero.

**Premium:** It was an independent factor. Premium paid was grouped as the head of the family; Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Nominal scale was used for converting quantitative data by indicating, score from one to four; Group-I- less than 12,000; Group-II- 12,000-15,000; Group-III-15,000-30,000, and Group-IV- above 30,000.

**Sum Assured:** It was an independent factor. Sum assured was grouped as the head of the family; Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Nominal scale was used for converting quantitative data by indicating, score from one to four; Group-I- less than 1,00,000; Group-II- 1,00,000-2,00,000; Group-III-2,00,000-5,00,000, and Group-IV- above 5,00,000.

**Hi Cover:** It was an independent factor. Health insurance cover of the head of the family, Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Binary digit score was used for converting quantitative data by indicating single as one and family as zero.

**Hi Type:** It was an independent factor. Health insurance type was grouped as the head of the family; Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Nominal scale was used for converting qualitative data in quantitative data by indicating, score from one to four; Group-I- individual; Group-II- group; Group-III- family floater and Group-IV- combination.

**Cover Hi:** It was an independent factor. Health insurance cover option of the head of the family, Customer has opted for Health insurance companies i.e., include private general insurance companies and public general insurance companies. Binary digit score was used for converting qualitative data in quantitative data by indicating Inpatient as one and outpatient as zero.

### **Sampling procedure**

The respondents were selected within the specified strata, based on their convenience and cooperation.

### **The Field Work**

The questionnaires are given to customers in the Jagital District (comprising Jagital Town, Korutla, Metpelli and Raikal localities) and interviews were conducted.



## Statistical Tools Used

The following study tools were used: Descriptive Statistics, logistic regression analysis, t-test and Reliability and Validity tests.

## Period of the Study

The survey was conducted from June to September 2016.

## Limitation of the study

Study was conducted within the Jagital district and with a sample of 170 respondents only.

## Data Analysis and Interpretation

**Table 1:** Individual Demographic Factors and HI Policy Details

	N	%		N	%
<b>Gender</b>			<b>Marital status</b>		
Male	135	79.41176	Married	165	97.05882
Female	35	20.58824	Single	5	2.941176
<b>Age</b>			<b>Occupation</b>		
21-30	45	26.47059	Self employed	12	7.058824
31-40	52	30.58824	Professional	15	8.823529
41-50	68	40	Private employee	73	42.94118
51-60	3	1.764706	Government service	42	24.70588
above 60	2	1.176471	Others	28	16.47059
<b>Income Levels</b>			<b>Premium Amount</b>		
Less than 5,00,000	45	26.47059	Less than 12000	50	29.41176
5,00,000-7,50,000	52	30.58824	12000-15000	52	30.58824
7,50,000-10,00,000	68	40	15000-30,000	63	37.05882
Above 10,00,000	5	2.941176	30,000 above	5	2.941176
<b>HI cover</b>			<b>Companies</b>		
Self	6	3.529412	Public	35	20.58824
Family	164	96.47059	Private	135	79.41176
<b>Type of HI</b>			<b>Sum Assured</b>		
Group	64	37.64706	Less than 1,00,000	50	29.41176
Individual	6	3.529412	1,00,000-2,00,000	52	30.58824
Family floater	100	58.82353	2,00,000-5,00,000	63	37.05882
Combination	0	0	Above 5,00,000	5	2.941176
<b>Cover HI</b>					
Outpatient	40	23.52941	Inpatient	130	76.47059

**Table 2:** Individual Demographic Factors, Mean and Standard Deviation

Sl. No.	Variables	Private (N=135)		Public (N=35)	
		Mean	Std.Deviation	Mean	Std.Deviation
1	Age	0.962963	0.016314	2.857143	0.109566
2	Gender	2.02963	0.073558	0.142857	0.060012
3	Income	0.985185	0.010436	2.828571	0.096019
4	Marital Status	2.074074	0.074074	0.914286	0.04801
5	SA	2.074074	0.074074	2.371429	0.153862
6	Premium	3.42963	0.102776	2.371429	0.153862
7	Occupation	0.007407	0.007407	3.028571	0.028571
8	HI Cover	1.57037	0.12901	0.142857	0.060012
9	Type	0.051852	0.019154	2.857143	0.060012
10	cover HI	0.962963	0.016314	0.942857	0.039807

The following regression model is used for testing the hypothesis:

$$\text{Health Insurance Institutional Choice} = \alpha + \beta_1 \text{AGE} + \beta_2 \text{GENDER} + \beta_3 \text{INCOME} + \beta_4 \text{MARITAL STATUS} + \beta_5 \text{SUM ASSURED} + \beta_6 \text{PREMIUM} + \beta_7 \text{OCCUPATION} + \beta_8 \text{HI COVER} + \beta_9 \text{HI TYPE} + \beta_{10} \text{COVER HI} + \text{Error}$$

**Table 3:** showing regression statistics:

Regression Statistics					
Multiple R	0.892				
R Square	0.795				
Adjusted R Square	0.782				
Standard Error	0.189				
Observations	170				
Table 4 ANOVA					
	Df	SS	MS	F	Significance F
Regression	10	22.099	2.210	61.699	0.0000001
Residual	159	5.695	0.036		
Total	169	27.794			

**Table 5:** Regression Analysis

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>
(Constant)	0.758	0.151	5.035	0.000
Age	0.546	0.144	3.801	0.000
Gender	-0.406	0.071	-5.729	0.000
Income	-0.572	0.156	-3.673	0.000
Marital Status	-0.343	0.089	-3.876	0.000
SA	0.004	0.033	0.112	0.911
Premium	-0.006	0.033	-.185	0.854
Occupation	0.008	0.015	0.529	0.597
HI Cover	-0.056	0.088	-.641	0.522
Type	0.009	0.018	0.516	0.607
cover HI	0.502	0.067	7.460	0.000

## Hypothesis Testing

The present study showed the statistical significance value for the intercept. Regression using F statistics was significant,  $R^2$  is 79.5%, and thus goodness of fitness this model did suffer from any limitation. It showed a significant relationship between the variables (explanatory and independent).

### 1. Age

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.0000 was lesser than 0.05, level of significance, the null hypothesis was rejected. There was a significant relationship between age of customer's of private insurance companies and public insurance companies. The correlation between Age and institution choice was positively correlated i.e., 0.546.

### 2. Gender

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.0000 was lesser than 0.05, level of significance, the null hypothesis was rejected. There was a significant relationship between gender of customer's of private insurance companies and public insurance companies. The correlation between gender and institution choice was negatively correlated i.e., -0.406.

### 3. Income

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.0000 was lesser than 0.05, level of significance the null hypothesis was rejected. There was a significant relationship between income of customer's of private insurance companies and public insurance companies. The correlation between income and institution choice was negatively correlated i.e., -0.572.

#### 4. Marital Status

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.0000 was lesser than 0.05, level of significance the null hypothesis was rejected. There was a significant relationship between marital status of customer's of private insurance companies and public insurance companies. The correlation between marital status and institution choice was negatively correlated i.e., -0.343.

#### 5. Sum Assured

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.911 was greater than 0.05, level of significance the null hypothesis was accepted. There was no significant relationship between sum assured of customer's of private insurance companies and public insurance companies. The correlation between Sum assured and institution choice was positively correlated i.e., 0.004.

#### 6. Premium

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.854 was greater than 0.05, level of significance the null hypothesis was accepted. There was no significant relationship between premium paid by the customer's of private insurance companies and public insurance companies. The correlation between Premium and institution choice was negatively correlated i.e., -0.006

#### 7. Occupation

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.597 was greater than 0.05, level of significance the null hypothesis was accepted. There was no significant relationship between occupation of customer's of private insurance companies and public insurance companies. The correlation between occupation and institution choice was positively correlated i.e., 0.008

#### 8. Health insurance Cover

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.522 was greater than 0.05, level of significance the null hypothesis was accepted. There was no significant relationship between Health insurance Cover of customer's of private insurance companies and public insurance companies. The correlation between HI Cover and institution choice was negatively correlated i.e., -0.056

#### 9. Type of Health insurance

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.607 was greater than 0.05, level of significance the null hypothesis was accepted. There was no significant relationship between Type of Health insurance of customer's of private insurance companies and public insurance companies. The correlation between Type of HI and institution choice was positively correlated i.e., 0.009

#### 10. Coverage of Health insurance

Variance or Standard deviation was used as a measure of the risk of returns on a security. It showed p-value was 0.000 was lesser than 0.05, level of significance the null hypothesis was accepted. There was a significant relationship between coverage of Health insurance of customer's of private insurance companies and public insurance companies. The

correlation between Coverage of Health insurance and institution choice was positively correlated i.e., 0.502.

## Conclusion

The study found that the majority of HI policy holders were male and married; between 41-50 years of age, were employees of private enterprises, having income levels between 5 to 7.5 lakhs, the premiums paid were between Rs 15,000 to 30,000, preferred to be family floaters and work in private companies, the sum assured was Rs 2 to 5 lakhs and covered inpatients.

The objective of this study was to check the 'socio-economic Factors' Influencing Purchase Decision Making among health insurance policy holders in India. Data was collected through a structured questionnaire given to 170 customers. Data analysis was done through logistic regression with the help of the 170 responses received. The study found that dependent factor was health insurance institutional choice and independent factors were socio-economic Factors. Age, gender, income, marital status, and cover HI were significant. Whereas as, Sum Assured, Premium, Occupation, HI cover, and HI type were insignificant.

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# HUMAN RESOURCE MANAGEMENT PRACTICES AND EMPLOYEE PERFORMANCE: AN EVIDENCE FROM EMPLOYEES WORKING IN HOSPITALITY ORGANISATIONS IN LUCKNOW

## Abstract

The present paper aims to analyse the human resource management practices and its impact on employees performance in hospitality industry in Lucknow. It examines the factors related to HRM practices like Recruitment and Selection Policy, Training and Development Policy, Induction Policy, Compensation Policies, Performance Appraisal Policy, Social Security Policy, Team Building Policies, Communication Policies, Work Empowerment Policies. The HR practices like Performance Appraisal Policy, Social Security Policy, Team Building Policies and Communication Policies have significant impact on employees job performance. The study population, which consisted of employees in the hospitality industry in Lucknow, comprised 169 respondents. To achieve the study objectives, the researcher developed and distributed a questionnaire, collected and analyzed the data using SPSS. An overall analysis was performed based on the descriptive statistics and regression analysis. Result indicated that HRM practices have significant relationship with employees job performances. Our study also confirms that out of nine HRM practices, Team Building Policies and Communication Policies have the significant impact on employees job performance. Authors concluded that Communication Policies of the organisation have strong and positive impact on performance of employees. It may safely be concluded from the findings of the present study that Recruitment & Selection Policy and Training & Development Policy of an organisation are influential in enhancing work performance. It is more informative for the researchers to explore the role of external factors (such as technology and modern appliances, industry trend) in enhancing employee performance in organizations.

**Key words:** Employees Performance, Human Resource Management Practices, Job Performance, Induction Policy, Compensation Policies, Work Empowerment Policies, Social Security Policy

## Introduction

The post liberalisation phase of Indian industry witnessed the growing importance of Human Resources Management (HRM). The fast changing business environment arising due to liberalization, globalization, changing technologies, growth in knowledge and advances in information technology is posing a complex and challenging situation before management (Davis, 1995). The Indian organisations are trying to become competitive to achieve global standards. The growth of privatization has warranted a new focus towards result-orientation, long-term strategies, putting large emphasis on consumer, and stabling better initiative for internal and external communication. Human resources is a source of



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achieving competitive advantage because of its capability to convert the other resources (money, machine, methods and material) in to output (product/service). The competitor can imitate other resources like technology and capital but the human resource are unique. Several authors like Khatri (1999), Rundle (1997), capital (Barney, 1991; Lado and Wilson, 1994), (Wright et al., 1994) are of the opinion that people are one of the most important factors providing flexibility and adaptability to organizations and it is the people that are on adaptive mechanism in determining how the firm will respond to the competitive environment. Several scholars in their research work found that managing people is more difficult than managing technology and the firm that have learnt how to manage their human resources have a better edge over others for a long time to come. HRM can help firms improve organizational behavior in areas such as staff commitment, competency and flexibility, which in turn leads, to improved staff performance (Koch and McGrath, 1996). In order to develop a sound HRM system, the organization should have effective Human Resource Management practices.

**Rational Behind the study**

HRM practices refer to organizational activities directed at managing the pool of human resources and ensuring that the resources are deployed towards the fulfilment of organizational goals Job satisfaction is a factor that would induce the employee to work in the long term. The analysis of nature of relationship between HRM practices and other important organizational variables like job satisfaction, job performance, organisational performance are important for the organization or firm for developing a conceptual framework on the basis of review of the present studies and suggesting the model for HRM practices for improving organisational performances. In the present business environment, human resource (HR) is an indispensable input for organizational effectiveness. Hence, an effective management of human resources has an important role to play in the performance and success of organizations. Accessibility of the researcher with the employees working in some medium and small sector organisation located at Lucknow has motivated researcher to select this topic for the proposed research.

**Review of Related Literature**

The review of literature in this study provides a deep insight of the work done by the experts and researchers on various aspects of HR practices in small and medium organisation. Most of the researchers have done their work by taking the role of HRM as a whole, in the effectiveness of the organisations. Some have tried to find out the major HR challenges. Only a few studies have been taken up to know the innovative HR practices & their impact on the employee productivity as perceived by the employees of different organisations.

None of the studies has tried to find out the perception of the employees regarding the emerging challenges of HRM in improving employees productivity and which in turn may improve organisational performances. Therefore, a need was there to know the extent and impact of innovative HR practices adopted in the organisation as per the perceptions of their own employees. Literature on HRM suggested that the practices or their close versions seemed to have applicability both in developed countries as well as in an emerging economies like India, and therefore might be relevant to most sectors and industries anywhere in the world. The adoption of different innovative HRM practices in some of the Indian companies had improved business performance. This found support from recent studies linking HRM activities and firm's performance.

Human Resource Management can be described as a strategic, integrated and coherent approach to the employment, development and well-being of the people working in organizations. It has a strong conceptual basis drawn from the behavioural sciences and from strategic management, formation of human capital and managing industrial relations. The fast changing technology and its implementation in the firm, the emerging new information and communications technologies are forcing most of the organizations to actively look for new way, new ideas, new experimentation, and develop the solution for improving product and services. Human resource management (HRM) is the policies, practices, and systems that influence employees' behaviour, attitudes, and performance. Many companies refer to HRM as involving "people practices" through which the desired result can be achieved. An organization performs best when all of these practices are managed well. At companies with effective HRM, employees and customers tend to be more satisfied, and the companies tend to be more innovative, have greater productivity, and develop a more favourable reputation in the community (Raymond A. Noe, 2011).

In a survey of human resource development practices conducted by Rao, T.V. (1982) covering fifty three different industries in India, following facts were observed. Seventeen organisations (32 percent) had a formally stated policy emphasises on human resource development. The thirty one organisations (59 percent) did not have any formally stated policy on human resource development but claimed to emphasise it. In five organisations, there appeared to be no such emphasis on human resource development. Secondly, Twenty-six organisations (49 percent) stated that their personnel policies give high importance to the continuous development of their employees. Another twenty one organisations (40 percent) stated that there is some emphasis on human resource development in their personnel policies. Four of the organisations surveyed didn't seem to lay any emphasis on human resource development in their personnel policies. Two did not respond. Thirdly and the most

importantly, there was a separate human resource development department in the organisations studied. This survey indicated a positive trend of using open appraisal system, improving the training function, making up organisational development activities and using employees counselling by an increasingly large number of companies. Barney (1991) pointed out that firms could develop strategic capability and for attaining this, the strategic goal will be to create firms, which are more intelligent and flexible than their competitors. The human resource management function has emerged as one which acts as a differentiator among various firms.

According to Dwivedi (2006), it is very difficult to initiate competitive strategy based on human resources. The key to competitive advantage in the modern world is the application

of sophisticated HR policies and practices. This is because of the fact that competitors are unable to formulate an effective response in the short term. The human resources can help a company to accomplish competitive advantage by lowering costs, enhancing sources of product and service differentiation or by both. However, these activities must be managed from a strategic perspective to accomplish competitive advantage

Chakraborty (2009) explained as to why the managers should be proactive. According to him, "Every organisation, department, team has different people and these people have to be understood, handled and dealt properly. In case you do not act proactively with such people, it would end up destroying the work culture and vitiate the whole work environment." Chaudhari (2009) was of the opinion that, the HRM policies of an organisation are influenced by two major factors: situational factors and stakeholders interest. The situational factors are labour markets, laws of the land, management goals, business strategies, technology, employee demography, position of the company. The stakeholders interest cover expectations of shareholders, management, employees, government and society/community. These factors can act as constraints on the formulation of HRM policies and can also be influenced by HRM policies.

According to Mishra and Pallavi (2010), the companies are taking up people related initiatives as there is a need to manage human resources advantageously, so as not to lose the competitive edge in talent that they have built. Innovative HR practices thus help in building competencies and capabilities of the workforce. In managing their human resources, companies had time and time again focused on values, invested in personnel, emphasized on meritocracy and consequently attaining excellence in HR processes. Innovative HR Practices by organisations can be witnessed, in recruitment and selection, reward and recognition, motivation, cost-cutting, training, performance appraisal, etc. Such HR practices have been said to be quite important so as to retain the best talent in an organization so as to cut the cost in such a competitive environment. Sharma et al. (2010) concluded in their article that, the modern HRM is striving to adopt strategic HRM Practices such as open door policy, balanced scorecard, etc. HRM must follow the latest trends in order to improve the organisational culture.

#### HRM Practices and Employees Performances

Researchers have different opinions of what performance is. Employees performance continues to be a contentious issue in the management research circles. Hamid M, Maheen S, Cheem A, Yaseen R (2017) in their study on title "Impact of Human Resource Management on Organizational Performance" found that higher level of compensation management, organizational citizenship behavior and employee development leads to a higher level of organizational performance. It was also found that compensation management, organizational citizenship behavior and employee development are positively associated with organizational performance.

Tanuja Agarwala (2010) attempted to explore the importance of innovative human resource practices for organizational goal achievement and satisfaction with their implementation along with their association with organizational commitment. Results of the regression analyses showed that the perceived extent of introduction of innovative human resource practices by the organizations was the most significant predictor of organizational commitment. This suggested that higher the extent to which employees believed that innovations in HR practices were important for achieving the goals of their organizations

and the higher the extent to which IHRPs had been introduced by their organizations in their opinion, the higher was their identification with the organization.

Tanveer, et al. (2011) in their study evaluated the impact and links between human resource practices and employee performance of the textile sector of Pakistan. Researcher achieved this by developing and testing the model based on human resource practices including recruitment and selection, training and performance appraisal as independent variables on the employee's performance as a dependent variable. The study confirms relationship between HRM practices and employee performance. Further it is found that good employees performance enhances the firm performance.

Tiwari (2012) review the existing literature available on HRM Practices and develop an understanding of HRM Practices. The researcher also tries to examine the unique HRM practices implemented by different companies. In the study it was found that organizations which implements HRM practices with dedication, remains ahead of their competitors because such practices affects other variables such as job satisfaction, financial performance, employee turnover, employee commitment etc. in a positive way.

Khan (2010) evaluated the effects of human resource management practices on organizational performance in Oil and Gas Industry in Pakistan. A total of one hundred fifty managers of twenty randomly selected firms from Oil and Gas Industry responded to self-reported questionnaire that measured five HRM practices namely; training and development, recruitment and selection, compensation and reward, performance appraisal, and employee relation. The effects of these practices on subjective measures of performance (product quality, productivity efficiency and overall perceived performance compared to industry average) were examined thereon. The researchers used financial and non financial metrics to measure organizational performance. The financial measures include profit, sales, and market share. Non-financial measures include productivity, quality, efficiency, and the attitudinal and behavioural measures such as commitment, intention to quit, and satisfaction (Dyer & Reeves, 1995). Factor analysis was performed to identify human resource management practices. Mean scores and standard deviations were used so as to know the extent to which these practices were concurred in these firms. Regression analysis indicated a positive and statistically significant association of these practices with organizational performance. The results of this study concluded to the remark that the organizations need to proactively pursue a strategic approach to HRM practices and invest in such practices to achieve sustainable competitive advantage in tangible and intangible dimensions.

## Objectives and Research Methodology

The human resource management practices such as recruitment and selection, training and development, performance appraisal policy, compensation, career growth opportunity, employees security, etc have significant impact on employees performance. The opinion of the researcher on this issue is divided and it has created a research gap whether different HRM practices in the organization have similar effect on employees performance. Accordance to these research gaps in the academic literature, the primary objective of this study is:

- a) To examine the important elements of human resource management (HRM) practices used by management of Hospitality organisations to gain competitive edge over competing organisations.

- b) To assess the impact of Human Resource Management Practices and its impact on employees performances.

Present research is exploratory as well as Descriptive in nature. Research is based on primary as well as secondary data. Secondary data was collected from different sources like books, magazines, journals, research papers etc. Primary data was collected by using survey method; a structured questionnaire was designed covering different dimension of human resource management practices and its relationship with organisation performances. The HRM practices promoting organisational performance was rated on the following variable like recruitment and selection practices, Training and development practices of organization ,performance appraisal system of the organization, compensation policies, career growth opportunities, welfare practices of the organization etc. The employees performance was measured on his feeling towards enhanced commitment, organisational association, involvement at work designation, job loyalty, motivation and work Performance etc. Constructs were developed on the basis of review of the literature and research by the different authors. The questionnaire was piloted on a sample of 200 respondents working in the different various small and medium size industries situated in and around Lucknow. Almost 191 responses were received. after editing 169 questionnaires were found suitable and taken for the study. Reliability check was carried out using SPSS and found to be .896 which indicates that data is reliable one. The Mean, Standard Deviation, and regression analysis was carried out to analyse the factor leading to HRM Practices and their performance. Table -1 shows the demographic profile of the respondents.

**Table 1:** Demographic Characteristics of Respondents

	<b>Categories</b>	<b>Count</b>	<b>Percentage</b>
		169	100
Age	Upto 25 Years	8	4.7
	25-35 Years	81	47.9
	35-45 Years	58	34.3
	45 to 55 Years	9	5.3
	55 to 65 Years	13	7.7
Gender	Male	112	66.3
	Female	57	33.7
Marital Status	Married	111	65.7
	Unmarried	58	34.3
Education Level	Upto Matric	11	6.5
	Under graduate	6	3.6
	Graduate	25	14.8
	Post Graduate	52	30.8
	Professional Qualification	75	44.4

	<b>Categories</b>	<b>Count</b>	<b>Percentage</b>
Income Level	Upto Rs15000PM	19	11.2
	From Rs15000to Rs25000PM	58	34.3
	Rs25000 to Rs40000PM	36	21.3
	Rs40000PM to Rs60000PM	31	18.3
	Rs60000 to Rs.150000PM	19	11.2
	Above Rs150000PM	6	3.6

Employees profile in the organization are the key indicator for the success of any organization. The demographic profile of the respondents are the important factor driving their expectation and motives. Demographic characteristic of respondents influence the employees behavior and affect their job performance. The demographic characteristics of the respondents presented in the above table reveals that out of total 169 respondents 4.7% respondents were found in the age group upto 25 years. 47.9% respondents were in the age group 25-35 Years, 34.3% respondents were in the group of 35-45 and 5.3% respondents were in the age group of 45-55 years. 7.7% respondents were in the age group of 55-65 Years. For a research dealing with HRM practices and its influence on employees performance it is important to know the gender categories of respondents as several studies projects that HRM practices have different impact on each gender. It is experienced that men are equally conscious as women. The table depicts that 66.3% were Male and the rest that is 33.7% were female. The information pertaining to Marital Status of respondents shows that 65.7% were married and the rest were unmarried. Educational qualification was another demographic which revealed interesting facts. It is observed that more than three fourth respondents in the sample are either post graduate or having professional degree to their credit as it was indicated by 75.2% respondents in the sample. 14.8% respondents indicated that they are having education upto graduation. Very few respondents(6.5% and 3.6% ) indicated that they were having matric or up to intermediate qualification to their credit. Employees expectation are shaped by their earning capability and It is observed that sample is the combination of middle income category respondent as they account for 66.8% together. They earn up toRs40000PM.

**Table 2:** Human Resource Management Practices: A Descriptive Statistics

	<b>Reliability (<math>\alpha</math>)</b>	<b>Mean</b>	<b>Std. Deviation</b>
<b>Recruitment &amp; Selection</b>	<b>.745</b>	<b>3.4260</b>	<b>.79658</b>
We have a dedicated HR function and well defined recruitment policy in the organisation		3.4024	1.17169
Vacancies are notified well in advance		3.6272	1.30820
My organisation possess the well defined recruitment policy to attract the prospect		3.2426	1.13141

	<b>Reliability (<math>\alpha</math>)</b>	<b>Mean</b>	<b>Std. Deviation</b>
Adequate and relevant information about the organization and job is provided to the candidate at the time of recruitment.		3.4024	1.20178
The selection systems followed in our organization are highly scientific and rigorous.		3.3846	1.24881
Selection system in our organization selects those having the desired knowledge, skills and attitudes.		3.4979	1.13978
<b>Training and Development</b>	<b>.802</b>	<b>3.1870</b>	<b>.84237</b>
The objective of the training programmes is complete understanding of different management functions in its totality.		3.3491	1.14539
Training needs are identified through a formal performance appraisal mechanism.		3.5799	1.11583
The objective of the training programmes is complete understanding of different management functions in its totality.		3.0769	1.16496
Training in our organization includes social skills, general problem solving skills and broader knowledge of the organization and business.		2.9645	1.26253
The contents of the training programs organized are always relevant to the changing needs of our jobs and our business.		2.9645	1.23873
We are assigned challenging jobs to charge our enthusiasm and develop our skills.		3.3373	1.16439
We are encouraged to participate in various seminars and workshops etc.		3.3787	1.22902
<b>Induction</b>	<b>.955</b>	<b>3.3728</b>	<b>1.11407</b>
New recruits are placed at right job after training to exploit their full potential		3.4379	1.11162
In this organization, there is formal induction, orientation and familiarization process		3.3077	1.16496

	<b>Reliability (<math>\alpha</math>)</b>	<b>Mean</b>	<b>Std. Deviation</b>
<b>Compensation</b>	<b>.619</b>	<b>3.7528</b>	<b>.49657</b>
We are being paid adequately for the work we do.		3.6805	1.05432
Pay increments offered by our organization are satisfactory.		3.4970	1.14499
Our organization makes all payments due to us in time.		3.7041	1.04996
Our organization follows the policy of matching pay with performance.		3.9704	.99059
The pay we receive is competitive compared to that of employees doing similar work in other organizations.		3.9763	1.04056
We are satisfied with the benefits we receive.		4.0355	.86529
Workperformance		3.8580	1.00176
Rewards and incentives are fairly distributed in our organization.		3.8876	.93498
Rewards in our organization are strictly linked to employee performance.		3.7396	.61015
<b>Performance Appraisal</b>	<b>.886</b>	<b>3.8521</b>	<b>.49508</b>
Performance appraisal in our organization aims at improving employee performance and strengthening our job skills.		3.9822	.60231
We feel our performance appraisal has been fair and objective.		3.7870	.57906
We receive proper feedback on how we are performing.		3.8284	.54567
Performance appraisal at our organization undertakes to identify the developmental needs of its employees to help them attain their career goals		3.8107	.56664



	<b>Reliability (<math>\alpha</math>)</b>	<b>Mean</b>	<b>Std. Deviation</b>
<b>Career Growth Opportunity</b>	<b>.927</b>	<b>4.4832</b>	<b>.62139</b>
Our organization recognizes the career growth needs of its employees.		4.4083	.78235
Adequate growth opportunities are available in our organization for those who perform well.		4.5325	.59797
In our organization good performers get promoted first.		4.5089	.59879
<b>Social Security Schemes</b>	<b>.957</b>	<b>4.5464</b>	<b>.56868</b>
Our organization provides programs to assist balancing demands of families with children and/or elderly family members.		4.5621	.57527
A number of recreational activities and occasional celebrations are organized in order to let employees show their creativity and enjoy.		4.5740	.55273
Activities like religious preaching, meditation and/or yoga camps are organized to keep employee morale intact.		4.5030	.64664
<b>Team Building Practices</b>	<b>.669</b>	<b>3.2249</b>	<b>.95261</b>
We are motivated to work collectively towards achieving common goals.		3.1657	1.10562
Continuous efforts are made in our organization to create a sense of belonging among employees and feel like a member of the corporate family.		3.2840	1.09209
<b>Communication Policies</b>	<b>.547</b>	<b>3.1479</b>	<b>.76191</b>
Our organization promotes honest and open self expression.		2.6982	1.10628
Most of the supervisors in our organization encourage us to discuss our problems with them.		3.0888	1.14868
<b>Work Empowerment Practices</b>	<b>.738</b>	<b>3.6036</b>	<b>.80155</b>
We are often asked by our supervisors to participate in decision making.		3.6568	.97007

	Reliability ( $\alpha$ )	Mean	Std. Deviation
There is policy of involving in decision making		3.7456	.89329
Employees on promoted for two way communication in the organisation		3.4615	.95119
Valid N (listwise)			

Descriptive statistics are the summary statistics that quantitatively describe or summarize features of a collection of information. Descriptive statistics enable us to present the data in a more meaningful way, which allows simpler interpretation of the data. The results of descriptive statistics presented in the above table indicate that **Social Security Schemes** of the organisation has scored the highest mean ( $m=4.5464$ ) is the most important dimension of HR practices motivating employees to perform better. It is followed by **Career Growth Opportunity** to the employees in the organisation with a mean of 4.4832. Performance Appraisal Policy of the organisation has scored a mean of 3.8521 and a standard deviation of .49508. HR practices like compensation scheme have scored a mean of 3.7528. This shows that employees are of the opinion that the higher the social security scheme of the organisation, the better will be the employees' performance. Another important HR practice emerged as Work Empowerment Policies with a mean of 3.6036 and  $SD=.80$ , Recruitment and Selection Policy of the organisation with a mean of 3.4260 and  $SD=.79658$ , Induction Policy of the organisation with a mean of 3.3728 and  $SD=1.11407$ , Team Building Policies of the organisation with a mean of 3.2249 and  $SD=.95261$ , Training and Development Policy of the organisation with a mean of 3.1870 and  $SD=.84237$ , Communication Policies of the organisation with a mean of 3.1479 and  $SD=.76191$ . This indicates that the better the **Social Security Schemes** of the organisation, the better the employees' performance in the organisation. Higher standard deviation of the factor like Induction Policy of the organisation (1.11407) indicates that employees' opinion on this factor of employee engagement is heterogeneous.

**Table 3:** HR practices and Work Performance: A Descriptive Statistics

	N	Mean	Std. Deviation
HR practices have increased my commitment with the organization	169	3.9882	.54542
HR practices have increased my wish to be identified with the organization	169	4.6391	.51745
HR practices have increased my involvement at work designation	169	4.5917	.53912
HR practices have increased my job loyalty	169	4.3550	.81904
HR practices of the organization have increased my motivation to involve myself with the job	169	3.9172	.81226

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
My individual work capacity and efficiency has increased	169	4.3905	.75681
HRM Practice and Engagement policy has increased my work Performance	169	4.8521	.35608
Valid N (listwise)	169		

In the present business environment, the management everywhere facing competitive challenges to achieve the organizational goals. The fast changing expectations of the employees are forcing management to opt different HR policies and practices to improve the employees performances. Several studies related to the topic indicates that employees could be a competitive advantage if their organization provides more attention and invest in developing employees' skills at the workplace (Danish and Usman, 2010; Zaharie and Osoian, 2013). Huselid (1995) conducted a research after taking eleven HRM practices (personnel selection, labor management participation, incentive compensation, performance appraisal, grievance procedures, information sharing, job design, attitude assessment, recruitment efforts, promotion criteria and employee training) and reported significant relationship between high work practices such as compensation and employees outcomes. For measuring the employees performance some important outcome like increase in commitment with the organization, Increase in the wishes to be identified with the organization, increase in the involvement at work, increase in loyalty, increase in work motivation , increase in work capacity and growth in the work Performance were identified and employees were asked to rate on a scale of 1 to 5 ranging from strongly disagree to strongly agree. Mean and SD presented in the table indicates that HR practices has increase work performance is scored highest mean of 4.85 with SD .35608. it is followed by outcome like increase in wish to be identified with the organization with mean 4.63 and SD= .5174. higher SD(.81904) of outcome like Increase in job loyalty indicates that employees view on this issue is heterogeneous.

### **Human Resource Management Practices and Its impact on Work Performance: A Regression Analysis**

Regression analysis is a form of predictive modelling technique which investigates the relationship between a dependent variable ( Target) and independent variable (s) (predictor). This technique is used for forecasting, time series modelling and finding the causal effect relationship between the variables. In our study regression analysis was carried out to predict the impact of HRM practices on employees work performance. The first outcome of regression model summary indicating R, R<sup>2</sup> and Adjusted R square. Here R is the square root of R-Squared and is the correlation between the observed( HRM Practices) and predicted values of dependent variable( Employees Performance). **R-Square** indicates the proportion of variance in the dependent variable which can be explained by the independent variables .This is an overall measure of the strength of association and does not reflect the extent to which any particular independent variable is associated with the dependent variable. **Adjusted R-square** is an adjustment of the R-squared that penalizes the addition of extraneous predictors to the model. And another outcome of this table is **Std. Error of the Estimate** which is referred to as the root mean squared error. It is the standard deviation of the error term and the square root of the Mean Square for the Residuals in the ANOVA table.

**Table 4:** Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.874a	.764	.751	.17620

**Predictors:** (Constant), Work Empowerment Policies, Social Security Policy, Team Building Policies, Performance Appraisal Policy, Compensation Policies, Induction Policy, Communication Policies, Recruitment and Selection Policy, Training and Development Policy

**Inference:**-The above table shows the R, R-Squared, Adjusted R Square ,Std Error .R denotes the correlation between observed and predicted values of the dependent variable. The value of R ranges from -1 and 1. Small values indicate that the model does not fit the data well. In this case,  $R = 0.874$ . The above table shows the model summary and overall fit statistics. We find that the adjusted  $R^2$  of our model is 0.751 with the  $R^2 = .764$  that means that the linear regression explains 76.4% of the variance in the data.

## ANOVA

**Another outcome of regression analysis is the ANOVA presented in the table below.** ANOVA table reports how well the regression equation fits the data (i.e., predicts the dependent variable). SPSS allows multiple models in a single regression command. Looking at the breakdown of variance in the outcome variable, there three categories i.e. Regression, Residual, and Total. The Total variance is partitioned into the variance which can be explained by the independent variables (Model) and the variance which is not explained by the independent variables (Error). Another outcome of ANOVA table is Sum of Squares which are the sum of squares associated with the three sources of variance, Total, Model and Residual. The Total variance is partitioned into the variance which can be explained by the independent variables (Regression) and the variance which is not explained by the independent variables (Residual). Another outcome of table is df which are the degrees of freedom associated with the sources of variance. Other outcome of ANOVA table is Mean Square which is the Sum of Squares divided by their respective DF. The values of F-statistic is the Mean Square (Regression) divided by the Mean Square (Residual). The p-value is compared to some alpha level in testing the null hypothesis is that all of the model coefficients are 0.

**Table 4:** ANOVAa

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	15.983	9	1.776	57.202	.000b
Residual	4.936	159	.031		
Total	20.919	168			

a. Dependent Variable: Work Performance

b. Predictors: (Constant), Work Empowerment Policies, Social Security Policy, Team Building Policies, Performance Appraisal Policy, Compensation Policies, Induction Policy, Communication Policies, Recruitment and Selection Policy, Training and Development Policy

The the F statistics presented into the table ..... shows the regression mean square divided by the residual mean square. The linear regression's F-test has the null hypothesis that there is no linear relationship between the two variables With  $F = 57.202$  and 168 degrees of freedom the test is highly significant, thus we can assume that there is a linear relationship between the variables in our model.

Another outcome of regression analysis is the **B** which are the values for the regression equation for predicting the dependent variable from the independent variable. The regression equation is presented in many different ways, for example:

$$Y(\text{Work Performance}) \text{ predicted} = b_0 + b_1*x_1 + b_2*x_2 + b_3*x_3 + b_4*x_4 + b_5*x_5 + b_6*x_6 + b_7*x_7 + b_8*x_8 + b_9*x_9$$

**Table 5:** HR practices and Work Performance : Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.645	.174		9.430	.000
Recruitment and Selection Policy	.068	.030	.153	2.276	.024
Training and Development Policy	.067	.045	.161	1.502	.135
Induction Policy	.039	.015	.122	2.600	.010
Compensation Policies	.002	.031	.002	.051	.959
Performance Appraisal Policy	.189	.030	.265	6.307	.000
Social Security Policy	.110	.027	.178	4.089	.000
Team Building Policies	.118	.016	.319	7.206	.000
Communication Policies	.198	.022	.427	8.826	.000
Work Empowerment Polices	-.020	.053	-.045	-.377	.707

a. Dependent Variable: Work Performance

**Inference:**-The regression equation can be written as:

**Work Performance of the employees** = 1.645 + .068\* Recruitment and Selection Policy + .067\* Training and Development Policy + .039\* Induction Policy + .002\* Compensation Policies + .189\* Performance Appraisal Policy + .110\* Social Security Policy + .118\* Team Building Policies + .198\* Communication Policies + (-.020) \* Work Empowerment Policies

## Discussion and conclusions

The understanding in developing the association between human resource practices and job performance outcomes are the important issue and could be more helpful for the management in the development of HR practices to ensure employees achievement and organisational competitiveness. Several studies like Delery and Doty, (1996) Teseema & Soeters (2006) Shezad et al.(2008) indicated that HRM practices have significant relationship with employees job performance out study also confirms that out of nine HRM practices like Recruitment and Selection Policy, Training and Development Policy, Induction Policy, Compensation Policies, Performance Appraisal Policy, Social Security Policy, Team Building Policies, Communication Policies, Work Empowerment Policies. The HR practices like Performance Appraisal Policy, Social Security Policy, Team Building Policies and Communication Policies have the significant impact on employees job performance. Authors concluded that Communication Policies of the organisation has strong and positive impact on performance of employees. It may safely be concluded from the findings of the present study that Recruitment and Selection Policy and Training and Development Policy of the organisation are influential in enhancing work performance; adequate communication policy and establishing effective communication between management and employees, their social security scheme performance appraisal policy and its fair implementation and creating sense of affiliation through team building approach is more influential in improving work performance of the employees. Other theoretical models should be used to understand the subject. The results of this study propose that managers should realize the importance of various HR practices to utilize the potential of human resources adequately. Management should focus more on training and empowerment of the employees to develop effective communication at all level so as to deal with customer effectively. The present study took into account some aspects (Recruitment & Selection Policy, Training & Development Policy, Induction Policy, Compensation Policies, Performance Appraisal Policy, Social Security Policy, Team Building Policies, Communication Policies, Work Empowerment Policies) of HR practices. Influence of other aspects of HR practices (such as safety and welfare practices, work place security, work life balance, staff selectivity and promotion opportunities) on employee performance should also be researched. It is more informative for the researchers to explore the role of external factors (such as technology and modern appliances, industry trend) in enhancing employee performance in organizations.

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# E-BUSINESS AND ITS COMPETITIVE ADVANTAGE IN THE EMERGING BUSINESS SCENARIO: AN EXPLORATION OF LITERATURE

## Abstract

Now-a-days e-business is expanding fast in the whole world. The present government has also made India a digital country which has given growth to the e-business. E-Business facilitates an enterprise to increase its wings to the worldwide consumers. It characterizes a main trend in administration or management which is somewhat similar to the significant trends of business like supply chain management, non-cash payment or the increase in the service economy. To expand the platform of sales to a dimension which is innovative or futuristic, various business houses in the world have integrated software that can work on the platforms accessible by the World Wide Web. E-business increases the working hours of operations through the website that provides 24/7 day information to the customers who have the potential of decreasing the cost of the transaction as well as by increasing competent payment methods like online banking. Here, in this paper we are determining the relation between the e-business with companies' competitive advantage. This is an outstanding attribute that helps the companies to become more attractive to the customers than players in the same business which comprise of superior quality with the lower price rate and better customer service.

**Keywords:** e-Business, Competitive Advantage, Competitiveness, Digital, Strategy, e-Commerce.

## Introduction

Increasing internet and mobile penetration, growing acceptability of online payments and favourable demographics has provided the e-commerce sector in India the unique opportunity to fundamentally alter the way companies connect with their customers. Due to this digital revolution, the e-commerce sector in India has grown exponentially. The ambitious project "Digital India" of the government aims to offer a one-stop shop for Government services has boosted the e business by introducing internet and broadband to remote corners of the country and it has enhanced the trade significantly. This ambitious project has transformed India into a connected economy and it also attracts investments in electronics manufacturing and gives thrust to e business.

Electronic commerce usually well-known as e-commerce that is the buying and selling of products or services through electronic system for instance internet and the computer networks. E-Business facilitates an endeavor to increase its wings to the universal consumer or customers. To enlarge the platform of sales to an innovative dimension, business houses have integrated software that is able to run on platforms obtainable by the



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World Wide Web. E-business has now made a way into customer goods and additional production as well as the service based manufacturing or the industry.

In spite of the actuality that e-business is a comparatively latest trend in the business sector; its brief history is full of controversial happenings. The fast expansion of the recognition of the Web date back to 1995, accompanied by an extremely advantageous phase for e-business corporation or companies. Setting up a completely efficient e-Business website was extremely simple and cost effective and at that time it was thought assurance of achievement and the profits (O'Connor and Galvin, 1998; Janenko, 2003). The amount of e-businesses kept rising in an effort for everyone to have a share from the revenue pie. The e-commerce industry has been directly impacting the micro, small & medium enterprises (MSME) in India by providing means of financing, technology and training and has a favourable cascading effect on other industries as well. The total size of e-Commerce industry (only B2C e-tail) in India is expected to reach US\$ 101.9 billion by 2020.

Technology enabled innovations like digital payments, hyper-local logistics, analytics driven customer engagement and digital advertisements will likely support the growth in the sector. With the increase in the number of electronic payment gateways and mobile wallets, it is expected that by the year 2020, cashless transaction will constitute 55 per cent of the online sales. The growth in e-commerce sector will also boost employment, increase revenues from export, increase tax collection by ex-chequers, and provide better products and services to customers in the long-term. On the turn of the century, their figure reached and their revenue opportunities and possible monetary expansion was restricted. This direct to the enormous stock market fall since a lot of companies dealing in e-business which is well-known as dot.com bust.

With the rising transmission of ICTs, more exclusively the Internet, the worldwide business population is speedily moving towards Business-to-Business e-Commerce known as B2B. The buyers achieve a clear advantage when the Internet provides right to use to the worldwide marketplace, by which they can evaluate prices transversely regions, find out whether prices differ by the order disintegration and obtain alertness concerning replacement products. Due to clearness of the marketplace, consumer can evaluate the services of a variety of e-commerce sites without difficulty. For instant, in case of the e-commerce the competitors are just one click away from the consumer. If customers are not pleased with the products as well as the prices or services offered by a particular sites of the e-commerce.

## Review of Literature

Internet as well as the e-commerce are strongly conducive towards developed countries. Although, they can also provide tremendous advantages to countries which are developing applicable as a perfect business function. Electronic commerce is uprising in business practices. We analyze e-commerce barriers in terms of three categories of negative feedback systems: economic, socio-political and cognitive. While economic and socio-political factors focus primarily on the environmental characteristics, the cognitive component reflects organizational and individual behaviors. Arguably, for the initial adoption of e-commerce in developing countries, the cognitive component plays a more prominent role. As organizations assimilate sophisticated e-commerce practices, environmental factors play more critical roles.

Gupta (2014) in her paper "E-Commerce: Role of e-commerce in today's business", presents a comprehensive definition of e-commerce while isolating it from e-business. The paper enlists the different ecommerce models i.e. B2B, B2C, B2G and C2C, normatively analysing the nitty gritty of each. Rina (2016) also elaborates the different applications of e-commerce in "Challenges and Future Scope of Ecommerce in India", at the same time, defining the degree to which they are operational in the country.

Mishra & Kotkar(2015) trace the timeline and development of B2C e-commerce in "A Study on Current Status of E-Commerce in India: A Comparative Analysis of Flipkart and Amazon" with its inception in the mid 1990s through the advent of matrimonial and job portals. However, due to limited internet accessibility, weak online payment systems and lack of awareness, the progress was very slow. The Indian B2C e-commerce industry got a major boost in mid 2000s with the expansion of online services to travel and hotel bookings which continue to be major contributors even today.

Das & Ara(2015) observe in "Growth of E-Commerce in India" that though online travel and hotel bookings still control the lion's share of e-commerce market, their share has comparatively fallen over the years due to the recent augmentation and consequent rise of e-tailing services. There has been a tremendous surge in the volume of investment in this sector. With the e-commerce markets in the west reaching their saturation, investors see tremendous potential in the Indian market, in the light of which, many start ups have received funding from venture capitalists and private equity firms.

Dr. C. Eugene Franco \*1, Bulomine Regi in his study on "ADVANTAGES AND CHALLENGES OF E-COMMERCE CUSTOMERS AND BUSINESSES: IN INDIAN PERSPECTIVE" analyse the advantages of e-commerce. Some of the advantages include; convenience, Time saving, Options, Easy to compare, Easy to find reviews, Coupons and deals, Increasing customer base, Rise in sales, 24/7, 365 days, Expand business reach, Recurring payments made easy, Instant transactions. However author analyse some of the problems and challenged on the way of an online merchant. Factors like safety and security of online money transaction being the biggest problem along with others have curbed the smooth expansion of the online industry in the country.

Electronic business has turned out to be a significant thought for the reason that businesses can acquire items speedily with no bargaining on price or the quality and able to order remarkable range of various products (Yomnak, 2007). Elizabeth Goldsmith and Sue L.T. McGregor in the year 2000 examined the impact of electronic commerce on customers, community rule or the strategy, business as well as education. A conversation of community

rule of the programs, questions related to research and ideas for the upcoming research are specified. Through E-business, it allows them to save time and cost for delivery and transportation. These findings are affirmed in the study of (Afzal, H., 2007) that e-business leads to lower search costs and will lead to seek more suppliers to keep prices down. In addition, (Farhoomand and Lovelock, 2001), with the use of email and online ordering systems, it is easier, faster and cheaper for businesses to communicate with their suppliers situated anywhere in the world. This allows them to reduce their prices and pass the savings on to their customers. SMEs have to focus on low prices to gain the competitive advantage (Evans, P. and Wurster, T. 2000). Many companies are using e-business with the aim of cutting marketing costs, thus, reducing price of their products and services in order to stay ahead in highly competitive markets (Yörük, D., et.al. 2011) Competitive advantage is a wonderful feature that makes a company extra advantageous to customers than opponents which comprise of better quality with enhanced consumer service at a low price rate (Clark, W., 2006).

### **Competitive Advantage: Theoretical Approach**

The theory of competitive advantage is used extremely often in the literature economic with no understandable description what does the writer signify by concerning this thought in his or her research therefore leading to the circumstances that the significance of the competitive advantage is "for granted it has been taken although it is not completely understood" (Mooney, 2007). Although there is not a one clear meaning of the term competitive advantage, the formation of worth is the objective of any meaning of the thought or idea. Given various unlike theoretical approaches to the creation of value approach to the competitive advantage might be subdivided into two approaches which are dominant resource based outlook of the approach to the competitive advantage buildup by M. Porter.

**Resource-Based Approach to Competitive Advantage.** Competitive advantage as in the beginning of the theory of competitive advantage is interrelated among the approach which is industry focused, developed in the year 1960's which rested on the reason that business competitiveness in the marketplace depends on the formation of exterior atmosphere and on the company's act by which corporate challenges adjust to the atmosphere. The major weak point of the business focused approach to the competitive advantage was its restriction to give explanation multiplicity for the reason that all companies functioning in the similar business based on its reason were forced to decide the equal approach in order to be ready for action or for competitiveness.

Opposing the industry focused strategy to the competitive advantage, model developed by the strategy recognized as source based vision became recognized and conventional approach to the competitive advantage in the scholarly literature. Studies stranded on source based vision center on the firm's inner resources and potential, which are investigated with the suggestions to the external atmosphere of the industry. The tenure of definite resources, which are the chief resource of the competitive advantage, and the concern of the winning use of those assets are the keystone of the source based outlook. Source based vision of the industry were carefully characterized by the scholars Day & Wensley (1988), Barney (1991), Oliver (1997), Aaker (1989) and various others.

One of the most significant concern of a variety of source based vision studies are to classify what resources and competences are essential to construct the competitive

advantage in the business or industry. Various source based vision scholars determined their awareness on the description of the resources, which are essential to generate the competitive advantage (Barney (1991); Amit & Schoemaker (1993); Collis & Montgomery (1995)). Other authors focused their interest on the competences, which are essential for the victorious development of the obsessed resources (Mahoney & Pandain, 1992). Further the mixtures of resources which are significant in making the competitive advantage as well as the competence, which are essential to develop the main resources which were discussed in the scholarly literature (Lippman & Rimmelt (2003)).

## **Conceptualization of e-business benefits and competitive advantage**

As the review of the literature proposes, electronic business might be understood as one of the IT-dependent planned choices to produce significance as well as the competitive advantage. Though the research that is more developed in field is assessing the impact of Information Technology on competitive advantage somewhat than the impact of electronic business on competitive advantage. Approach to the electronic business as a worth construction resource in the corporation have been analyzed by the Akkermans (2001), Christensen as well as Methlie (2003), Barnes et al. (2003) and various other writers who associated the advantages of electronic business with the creation or making of value. Though there is not apparent proof that the advantages produced by electronic business actually lead to the competitive advantage, that is following the resource-based vision and the Porter's strategy to the competitive advantage is associated with the financial performance of the industry.

Drawing on the review of the literature, electronic business advantages in the current research is understood as the impact which is positive of the electronic business results on a variety of business procedure or in other words - the development of all these procedures. The procedures on which impact of electronic business was considered were recognized by means of model known as value chain, which separate procedure of business into four encouraging actions i.e. infrastructure of the industry, management of human resource, development of technology and the procurement, and other five activities such as inbound logistics and operations as well as outbound logistics, marketing or sales and service (Porter, 1998). Therefore the development of activities i.e. value chain was the major indicator of the electronic business advantages. Variable indicating electronic business advantages was divided into nine different self-sufficient variables demonstrating the impact of electronic business on every procedure of the value chain.

The penetration of online shopping and money spent in India is much lesser when compared to USA and UK, but it is growing at a much faster rate than expected and with new entrants in larger number. Online shopping has truly revolutionized and influenced our society as a whole. (Kumari Renu.,2013;) Use of technology has opened new doors and opportunities that enable for a more convenient lifestyle today. Variety of products, quicker services and reduced price are the three significant ways in which online shopping influenced people in India and world as a whole. However, this concept of online shopping led to the possibilities of fraud and privacy conflicts. Unfortunately, it has shown that it is possible for hackers to access personal information. Today with the latest features of technology, measures are being taken in order to stop hackers and criminals from accessing private databases. Through privacy and security policies, developers are doing

their best to put an end to this unethical practice. That will pave the way for its success. (Patna, 2013)

The advantages and benefits encouraged by the electronic business explanations or the solutions are often related with the competitive advantage in different studies; however the theory of competitive advantage is generally applied as a self-obvious.

## **Conclusion**

Effective management of e-business can be a powerful source of competitive advantage. It makes firms to compare prices and products across suppliers without visiting different physical storefronts, which is costly and time consuming. They are able to buy direct from a manufacturer's or wholesaler's website, thus, cut off retail intermediaries, which leads to a lower cost to keep prices down. With this, they were able to position their products/services at a different price ranges in response to their competitors, able to manage price changes/fluctuations, and able to give special discounts to their customers and incorporate added value to their products/services. Electronic business or e-business advantages based on the review of literature were conceptualized the impact of e-business which is positive on diverse business procedures. The competitive advantage was conceptualized as the enhancement in the profits as well as the sales due to electronic business clarifications or solutions. The model concerning the impact that is positive, electronic business on the nine unlike business process with the competitive advantage was developed. Even though numerous studies established that electronic business results have a positive impact on a variety of business development electronic business advantages does not essentially show the way to the improved profits and the sales. Effectual administration of electronic business can be an influential resource of the competitive advantage.

The paper provides insight into the evolution of e-commerce in India, while understanding the nitty gritty aspects of its different aspects, with special emphasis on B2C e-commerce: which has shown tremendous growth in the recent years due to increased consumer awareness, investor trust and technological proliferation. The objective was to review the literature available on e-commerce, so as to trace its development in the Indian Economy while isolating its relevant advantages and limitations. The study has also produced certain trends and factors which shall propel further growth in the e-commerce market in India. A sustainable business practice would be to promote e-commerce and m-commerce as complements rather than substitutes to traditional business. The synergies between offline and online businesses will enhance efficiency and result in a more stable existence. The future also entails a scenario which shall witness a rise in niche businesses, as well as, mergers and acquisitions to enable firms to grow inorganically. Firms need to commit themselves to the provision of services and application of internet marketing, to generate and retain larger audience. Through mobile penetration, opportunities are emerging in the rural markets which, cannot be tapped unless followed by a network proliferation, better mobile app infrastructure, content development in local languages and last mile connectivity. Also, in the aftermath of demonetisation, the share of digital payments is expected to rise, to sustain which, firms need to develop more secure payments infrastructure.

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## ■ DATA SECURITY, LAW ENFORCEMENT AND THE ETHICAL DILEMMA

### Abstract

Businesses are established and they need to grow as it is an inbuilt need of every business. However business has become so inextricably linked with Computer Technology, it is becoming difficult to balance the needs and motivation of all parties, particularly stake holders in trying to prevent today's business case features of mobiles and computers from becoming tomorrow's security concern and nightmare! Mankind is more and more confronted with the ethical dilemma of the appropriate Technology and Human welfare. There are several questions begging the developers' mind to find a balanced solution between Customer delight and Cyber Safety in terms of freedom from crimes and theft. Several of the I-Phone models lately developed have such high security features that it is difficult to crack their code and find the IP address of user in crime related issues. Federal Agencies investigating cyber crimes have an ethical problem of cracking code to find the culprit. The purpose of the article is to focus attention on this and invite creative solutions to address the concerns of both the public and stake holders important for business. This research paper will try and bring out the real issues and suggest suitable approaches to finding a solution to this vexed issue.

**Key Words :** Ethics and data security, dilemma of designers and manufacturers, concerns of law enforcement authorities.

### Introduction

The court case that saw the US technology companies uniting against the FBI has for the time being gone away. However, this debate now, moves into more uncertain territory. The US government has knowledge of a security vulnerability that in theory weakens certain company devices around the world. To protect reputation, companies will rush to find and fix that flaw. Assuming they can do so; this conflict is back to square one. Therefore, the concerned company has called for the matter to remain part of the "national conversation"; while the US department of justice says it will still try to use the courts to ensure cooperation from I-phone makers to help with future investigations.

While software companies and Mobile and other computer devices manufacturers are concerned with Data Security for the end users and customers, recent developments in environment have raised several Law and order problems on account of data security. While the real time solution to the problem may take some time. The question is whether the manufacturer will compromise security issues? Or does the solution lay in both the agencies working together to arrive at an amicable solution. This is a typical example of



ethical issues confronting the Corporate Companies today. During the days of the wild-west and the gun culture how society concerns were addressed is really becoming important for learning from experience. (See Figure 1)

**Figure 1:** Data security concerns- Encryption



The field of data security is ridden with mistaken beliefs which cause people to design ineffective security solutions. Here are some of the most prevalent security myths:

- *Myth-1: Hackers cause most security breaches.*
- In fact, 80% of data loss is caused by insiders.
- *Myth-2: Encryption makes your data secure.*
- In fact, encryption is only one approach to securing data. Security also requires access control, data integrity, system availability, and auditing.
- *Myth-3: Firewalls make your data secure.*
- In fact, 40% of Internet break-ins occur in spite of a firewall being in place.

- To design a security solution that truly protects your data, you must clearly understand the security requirements relevant to your company data, and the scope of current threats to your data.

## Objectives and Methodology

A Questionnaire survey was considered but the problem was to administer the same in a short frame work of time and designing the same to cover several issues of concern. Also there is problem of administering the questionnaire for an unbiased and informed customer segment. So, a comprehensive literature survey and review was considered appropriate and optimum to identify suitable approaches as revealed in the research articles and papers to solve the problem. For the limited purpose of this research and study following specific objectives were considered.

1. A review of modern technologies
2. Appropriateness of technologies and their application.
3. Impact of technologies vis -a -vis future needs
4. How to balance the Technological advances and safety concerns.

The availability of web references and research papers and articles published in the web pages gave the confidence to do a comprehensive data search and compilation of available information. Sufficient Data was available from web pages and other electronic media. The challenge was to identify suitable data, classify and consolidate for analysis and review. This has been done with some efforts in this direction. It is a difficult terrain but the author hopes he has negotiated properly. Conclusions are given at the end of this research paper and author recommends further research in this area of concern.

## Review of Literature

In an Internet environment, the risk of storing, compiling and retrieving valuable and sensitive data are greater than ever before. Figure 2, presents an overview of the complex computing challenges for your data security plan. One must protect databases and the servers on which they reside; and must administer and protect the rights of internal database users; and also must guarantee the confidentiality of e-commerce customers as they access your database. With continuously internet growing, the threat to data processing and traffic over the network has increased exponentially.

**Figure 2:** Internet environment



Cloud computing is quickly becoming a mainstay for many technology companies today because of its superior flexibility, accessibility, and capacity compared to traditional online computing and storage methods. But just like traditional storage and data sharing methods, cloud computing comes with its own set of data security issues. As cloud security risks grow, some advice from data security experts are obtained on the most common (and avoidable) issues companies face when it comes to the cloud and securing their data to avoid security issues and common problems like data loss. See Figure 3, below:

**Figure 3:** Cloud Computing



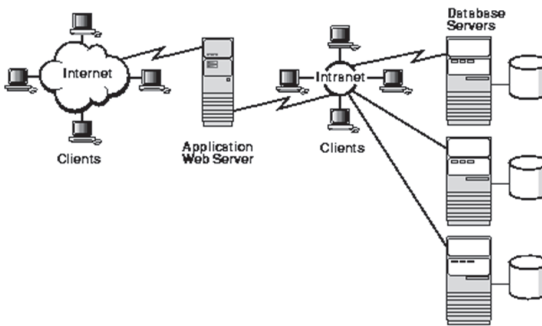
To protect all the elements of complex computing systems, you must address security issues in many dimensions, as outlined in Table 1, below:

**Table 1:** Dimensions of Data Security

<b>Dimension</b>	<b>Security Issues</b>
Physical	Your computers must be physically inaccessible to unauthorized users. This means that you must keep them in a secure physical environment.
Personnel	The people responsible for system administration and data security at your site must be reliable and carry identity cards all the time. You may need to perform background checks on DBAs before making hiring decisions.
Procedural	The procedures used in the operation of your system must assure reliable data. For example, one person might be responsible for database backups. His or her only role is to be sure the database is up and running. Another person might be responsible for generating application reports involving payroll or sales data. His role is to examine the data and integrity. While it may be wise to separate users' functional roles, Data integration has to be done by an expert.
Technical	Storage, access, manipulation, and transmission of data must be safeguarded by technology that enforces your particular information control policies.

A secure system ensures the confidentiality of data. This means that it allows individuals to see only the data which they are supposed to see. Confidentiality has several different aspects, like Privacy of Communications, Secure storage of sensitive data, Authenticated users and Access control. See Figure 4, for the illustrated example regarding Data Security in a Computer Environment. Privacy is a very broad concept. For the individual, it involves the ability to control the spread of confidential information such as health, employment, and credit records. In the business world, privacy may involve trade secrets, proprietary information about products and processes, competitive analyses, as well as marketing and sales plans. For governments, privacy involves such issues as the ability to collect and analyze demographic information, while protecting the confidentiality of millions of individual citizens. It also involves the ability to keep secrets that affect the country's interests.

**Figure 4:** Data Security and Computer Environment



Authentication is a way of implementing decisions about whom to trust. Authentication methods seek to guarantee the identity of system users: that a person is authorized and not an impostor. Access control is the ability to cordon off portions of the database, so that access to the data does not become an all-or-nothing proposition. A clerk in the Human Relations department might need some access to the Employee details but he should not be permitted to access salary information for the entire company. The granularity of access control is the degree to which data access can be differentiated for particular tables, views, rows, and columns of a database. Authentication is the process by which a user's identity is checked. When a user is authenticated, he is verified as an authorized user of an application. Authorization is the process by which the user's privileges are ascertained. Access control is the process by which the user's access to physical data in the application is limited, based on his privileges. The antecedents of new recruits must be closely scrutinized to ensure they are not from hacker organization.

The three 'A's of a DATA security system are AUTHORIZATION, ACCESS CONTROL AND AUTHENTICATION. A secure system ensures that the data it contains is valid. Data integrity means that data is protected from deletion and corruption, both while it resides within the database and it is being transmitted over the network. Integrity has several aspects:

- System and object privileges control access to application tables and system commands, so that only authorized users can change data.

- Referential integrity is the ability to maintain valid relationships between values in the database, according to rules that have been defined.
- A database must be protected against viruses which can corrupt the data.
- The network traffic must be protected from deletion, corruption, and eavesdropping.

A secure system makes data available to authorized users, without delay. Denial-of-service attacks are attempts to block authorized users' ability to access and use the system when needed. System availability has a number of aspects:

**Table 2:** System Availability Aspects

Availability Aspect	Description
Resistance	A secure system must be designed to fend off situations, or deliberate attacks, which might put it out of commission. For example, there must be facilities within the database to prohibit runaway queries. User profiles must be in place to define and limit the resources any given user may consume. In this way, the system can be protected against users consuming too much memory or too many processes (whether maliciously or innocently), lest others be prevented from doing their work.
Scalability	System performance must remain adequate, regardless of the number of users or processes demanding service.
Flexibility	Administrators must have adequate means of managing the user population. They might do this by using a directory, for example.
Ease of Use	The security implementation itself must not diminish the ability of valid users to get their work done.

Information is the cornerstone of e-business. The Internet allows businesses to use information more effectively, by allowing customers, suppliers, employees, and partners to get access to the business information they need and when they need it. Customers can use the Web to place orders which can be fulfilled more quickly and with less error, suppliers and fulfillment houses can be engaged as orders are placed, reducing or eliminating the need for inventory, and employees can obtain timely information about business operations. The Internet also makes possible new, innovative pricing mechanisms, such as online competitive bidding for suppliers, and online auctions for customers. These Internet-enabled services all translate to reduced cost. The promise, of e-business are setoff by the security challenges associated with the distortion of data access. Cutting out the middleman--removing the distributors, wholesalers and retailers from the trading chain--too often cuts out the information security the middleman provides. While putting business systems on the Internet offers potentially unlimited opportunities for increasing efficiency and reducing cost, it also offers potentially unlimited risk. *The Internet provides much greater access to data, and to more valuable data, not only to legitimate users, but also to hackers, disgruntled employees, criminals, and corporate spies.*

The intermediate information processing steps which employees typically perform in traditional businesses, such as typing in an order received over the phone or by mail, are removed from the e-business process. Users who are not employees and are thus outside the traditional corporate boundary (including customers, suppliers, and partners) can have direct and immediate online access to business information which pertains to them. Making business information accessible by means of the Internet vastly increases the number of users who may be able to access that information and the corresponding risks are higher. When business is moved to the Internet, the environment is drastically changed. Companies may know little or nothing about the users (including, in many cases, employees) who are accessing their systems. It is therefore important that companies manage access to sensitive information, and prevent unauthorized access to that information before it occurs.

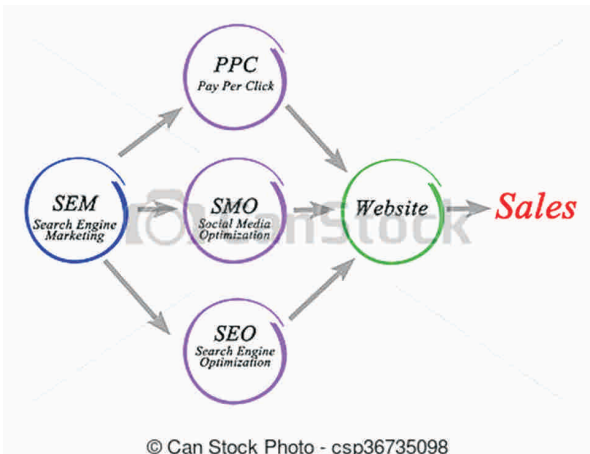
**Figure 5, 6:** Concept of E-Business



E-business relies not only on making business information accessible outside the traditional company, it also depends on making the best, most up-to-date information available to users when they need it. Streamlining information flow through the business system allows users to obtain better information from the system. In the past, data from external partners, suppliers, or customers was often entered into the system through inefficient mechanisms that were prone to error and delay. For example, many companies accepted the bulk of their orders by phone, letter, or fax, and this information was typed in by clerks or sales people. Even when electronic data interchange mechanisms existed, they were typically proprietary and difficult to integrate with companies' internal data infrastructure. Now, businesses that allow other businesses and consumers to submit and receive business information directly through the Internet can expect to get more timely, accurate, and valuable information, at less expense than if traditional data channels were used. The sheer size of the user communities which can access business systems by way of the Internet not only increases the risk to those systems, but also constrains the solutions which can be deployed to address that risk. The Internet creates challenges in terms of scalability of security mechanisms, management of those mechanisms, and the need to make them standard and interoperable.

Privacy of communications is essential to ensure that data cannot be modified or viewed in transit. Distributed environments bring with them the possibility that a malicious third party can perpetrate a computer crime by tampering with data as it moves between sites. In a data modification attack, an unauthorized party on the network intercepts data in transit and changes parts of that data before retransmitting it. An example of this is changing the dollar amount of a banking transaction from \$100 to \$10,000. Data must be stored and transmitted securely, so that information such as credit card numbers cannot be stolen. Network sniffers can easily be installed to eavesdrop on network traffic. Packet sniffers can be designed to find and steal user names and passwords. Identity theft is becoming one of the greatest threats to individuals in the Internet environment. Criminals attempt to steal users' credit card numbers, and then make purchases against the accounts. Or they steal other personal data, such as checking account numbers and driver's license numbers, and set up bogus credit accounts in someone else's name.

**A. Figure 7:** How e-business works





In large systems, users must remember multiple passwords for the different applications and services that they use. For example, a developer can have access to a development application on a workstation, a PC for sending e-mail, and several computers or intranet sites for testing, reporting bugs, and managing configurations. Users typically respond to the problem of managing multiple passwords in several ways. You need granular access control--a way to enforce confidentiality on the data itself. For example, in a shared environment businesses should only have access to their own data; customers should only be able to see their own orders. Systems must therefore be flexible: able to support different security policies depending on whether you are dealing with customers or employees. Systems must often support thousands of users, or hundreds of thousands of users; thus they must be scalable. In such large-scale environments, the burden of managing user accounts and passwords makes your system vulnerable to error and attack. You need to know who the user really is--across all tiers of the application--to have reliable security. This problem becomes particularly complex in multitier systems. Here, and in most packaged applications, the typical security model is that of One Big Application User. The user connects to the application, and the application (or application server) logs on and provides complete access for everyone, with no auditing and unlimited privileges. This model places your data at risk--especially in the Internet, where your Web server or application server depends upon a firewall. Firewalls are commonly vulnerable to break-ins.

Administration of hundreds of thousands of users is difficult enough on a single system. This burden is compounded when security must be administered on multiple systems. To meet the challenges of scale in security administration, you should be able to centrally manage users and privileges across multiple applications and databases by using a directory based on industry standards. This can reduce system management costs and increase business efficiency. Further, creating and building separate databases for multiple application subscribers is not a cost-efficient model for an application service provider. While technically possible, the separate database model would quickly become unmanageable. To be successful, a single application installation should be able to host multiple companies--and be administered centrally.

Complex data security systems require a team of people to ensure security at a particular site. Table 3 below introduces the types of administrators who may be involved.

**Table 3:** The System Security Team

<b>Person</b>	<b>Responsibilities</b>
User	Responsible for using the system for legitimate purposes, protecting sensitive data to which she has access, and managing her passwords securely.
Database Administrator	Responsible for creating and administering database users, granting system and object privileges, and assigning local roles to users.
Operating System Administrator	Responsible for maintaining the underlying security of the operating system.



<b>Person</b>	<b>Responsibilities</b>
Network Administrator	Responsible for ensuring the security of data in transmission.
Application Administrators	Responsible for deploying applications in such a way as to ensure security.
Trusted Application Administrator	Responsible for creating and administering users of trusted applications, and their associated privileges.
Enterprise Security Manager	Responsible for maintaining the security of the directory and for implementing centralized enterprise user security.

Since cloud computing is one of the fastest growing solutions to various architecture problems, the security issues have been highlighted by senior professionals in this area. We have collected and compiled expert advice into this comprehensive guide on safeguarding your company from cloud computing and data security issues. The proper mitigation of security risks before and throughout cloud adoption. Applications, systems and data all have different security thresholds. For example, web, mobile and social sites can be moved to a virtual server without the same degree of security concern. When deciding whether an application, product or service belongs in a cloud server, CIOs and CISOs must consider: Type of data or application, Service-level agreement and Security environment

In order to maintain the confidentiality, integrity and availability of these different systems and datasets, organizations need to change their security controls from these legacy perimeter and detection-based tools to a focus on implementing increased protection at the application and data levels. Data access controls start with categorizing data. Once categorized, data controls can be implemented to deny or allow access based on multiple requirements including - but not limited to - user id, multi-form factor authentication, type of device, application set, time of day and location. Finally, other proactive security solutions (i.e. app scanners, vulnerability assessment scanners and patch management solutions) should be implemented to assure applications and systems are up-to-date with bug fixes and industry best practice configurations.

On a traditional system, key information is always recorded, such as who accessed the system, when they logged in and out, what IP address their session came from, and other such details which enable more thorough cyber-security monitoring. For instance, if an employee logs in with a working username and password, but the originating IP is in Beijing rather than Portland, a traditional system can quickly sound an alert or lock down the employee's account. Alternatively, reviewing access logs can reveal a compromised account being used for malicious purposes, and allow system administrators to prevent further damage. On a cloud system, it is usually impossible to implement that kind of comprehensive security.

The plethora of compliance regulations out there, from securing customer data to financial risk management, means that your organization's cloud usage could expose you to

compliance and legal issues. There is a reason your organization is using public cloud and that is because it is fast. In today's competitive world, speed is critical. However, how do you maintain this speed, and still have the proper risk mitigation and control? The first step of gaining control is discovery of what your organization is doing in the public cloud. Using discovery and sync tools, you can determine which cloud assets are provisioned, how secure and resilient they are, and how much is being spent. Then you can use a cloud service brokerage solution to provide governance and control over cloud activities while still allowing speed and agility for business users. Finally, you can run alternate sourcing scenarios to determine which cloud is best for your application and business needs.

The Tech world has always been long on power and short on thinking about the ramifications of this power. If it can be built, there will always be someone who will build it without contemplating a safer, saner way of doing so, let alone whether the technology should even be built in the first place. While ethics courses have become a staple of physical-world engineering degrees, they remain a begrudging anomaly in computer science pedagogy. Yet as software takes over more of our life, the ethical ramifications of decisions made by programmers only become greater. The trick is to consider this less of a guidebook for making your decisions and more of a starting point for the kind of ethical contemplation we should be doing as a daily part of our jobs.

## **Data Analysis and Conclusions**

Technology has made the human lives evolve to the present stage, starting from the invention of the wheel! Digital and computer technologies have made everything possible with the click of a mouse or the gentle touch of a mobile. Modern lives are characterized by SPEED. The most important criterion for most of the decision making is the speed with which something can be achieved, travelling to planets or in the more sedate commuter train! With the progress and spread of civilization, trade and business were globalized. One of the main requirements of this change is the need to do things fast. With globalization and spread of business all boundaries to human activity were sort of made limitless. This change has been accelerated in these days by development of computer and mobile technologies and the electronic web, mail and highway!

Technologies are always changing and developing to cater to existing and future needs. Mobile technologies are seen to be fastest in development. Handheld devices and faster processing are needed today. Anticipating future needs is a challenging job, but it can be expected. One thing for sure, is there is no looking back. Faster processors will be developed. As stated in the paper the advances in Technologies cannot be stopped altogether, but can be directed appropriately keeping in mind requirements of mankind. What can be done is a critical review of what is beneficial for mankind and try and weed out the unwanted.

A Question that arises often is the appropriateness of Technology. But who will decide the appropriateness? This question cannot be answered straight away. Future needs though can be predicted to some extent, it is not altogether known. Hence one has to live with certain uncertainties, which at best can be reduced. While the Technology companies will go ahead with the developments and use the same with applications on computers and mobiles, the law enforcement agencies will have to keep watch on appropriateness, but again this depends on societal values and outlook!

Everyone is concerned with personal safety and organizations try and protect their privacy

and safety of information. Safety concerns are genuine and cannot be overlooked. While development of technology can leapfrog into something very attractive this has to be evaluated with respect to human concerns of safety and utility. This would need a balancing act. The parties to this balancing are the people and the Government law enforcement agencies.

## **Recommendation**

Enterprises are becoming increasingly digitalized, they are improving their ability to act and react quickly. Like never before these digital leaders can launch products and services more rapidly. But here's the catch. Every one of these new capabilities comes with added responsibility--security risks; Ones that are proportionally larger than the data protection issues companies have dealt with before. Digital businesses know it is essential to secure data at every step of the data supply chain and they are investing heavily in security initiatives to achieve this aim. Cyber security breaches are still a top concern, which makes IT security a critical agenda item.

## **Suggestions**

Fortunately technology for information security has evolved and can help organizations ensure data *confidentiality, authenticity, and availability*. When evaluating technology to help you meet today's security standards, keep the following points in mind. Networks and file servers also need to be locked down and protected, and sometimes that protection is not only from external malicious attacks. Data breaches can occur internally, so access control is important. Make certain that your processes and technology have controls in place to ensure that sensitive information is not distributed or accessed improperly and inappropriately whether internally or externally. To get a control on the information flow in and out of your organization, review what information your critical business groups and knowledge workers use and how it should be classified. Look at the tools and processes you have in place to handle the flow, storage, and access of sensitive information. There are many point solutions that provide specific protection for you, but information management and security need to take a holistic approach. Choosing the tools to keep information confidential may no longer be as simple as ciphers and wax seals, and with so many choices today, it's not always clear which solutions will work best for you - invest in up front analysis and you'll have much more success choosing solutions to help you manage your information systems.

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# SECURITY SOLUTIONS PARADIGM IN CLOUD COMPUTING

## Abstract

Cloud computing refers to the delivery of computing resources over the Internet and it encompasses five important attributes. These are networks, servers, storage, applications and services. Cloud is a model where services are provided to the user through cloud service provider (CSP) on "pay-per use-basis". At present, it is a matter of great concern in cloud computing that how to make assurance in accepting, sharing applications, hardware, etc., in an environment where we don't know who is answerable for securing our data. There are many aspects pertaining to security such as data integrity, data confidentiality, and data privacy. These security components can affect the performance of cloud environment. The cloud computing technology has opened many new horizons to different corporations and IT companies in developed countries. However, different issues related to cloud computing have yet to need further pragmatic approach. In this research paper, author has reviewed various security solutions that had been implemented in various delivery models of Cloud computing. Further, different security solutions as well as algorithms are also elucidated.

**Key Words:** Cloud computing, Infrastructure as a Service, Platform as a Service, Security issues, Software as a Service.

## Introduction

*"Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be hastily provisioned and released with nominal management effort or service provider interaction"[1].*

The main characteristic of cloud computing is that the vicinity of physical resources and devices being accessed are generally not known to the end user. Further, cloud computing offers a wide range of services to the network users e.g., applications, storage, various operations and remote printing, etc. [2]. Indeed, cloud computing is the blending of development and acceptance of existing technologies and paradigms and its objective is to let the users take benefit from all these technologies and that too without having much of knowledge or expertise about each one of them [3]. In [4], cloud computing is viewed like having an infinite credit line. In fact, cloud computing represents the paradigm in which computing infrastructure is viewed as a "Cloud" from which business organizations and individuals can access different applications anytime and from anywhere in the world on demand [6]. Moreover, cloud computing can be visualized as a pragmatic and gigantic

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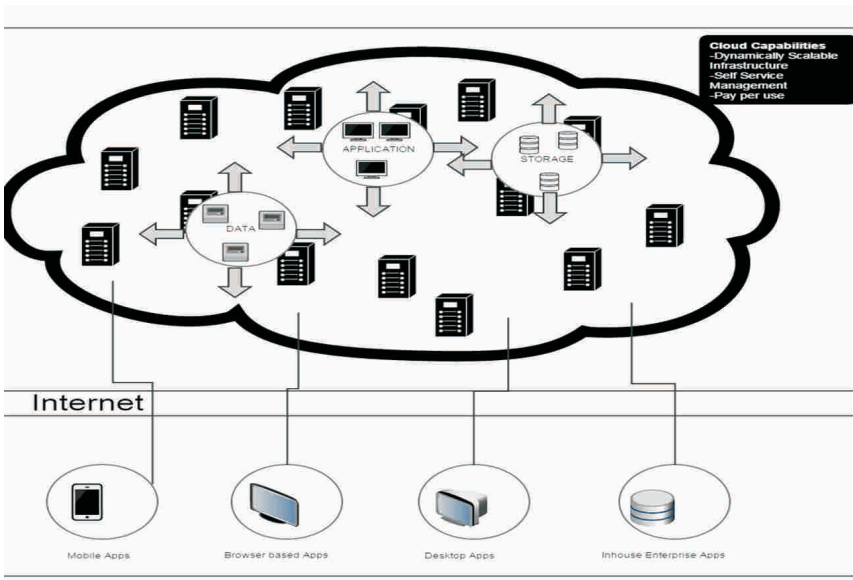
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structure which incorporates the quality of minimizing the costs by improving and developing functionality and economic outcome and thus results in increased collaboration, pace, and

scalability up to a substantial degree [7-8]. The term "cloud" was coined with Internet in 1994 [9]. Further, this term became famous in 2006 when Amazon introduced the Elastic Compute Cloud (EC2) [10]. In early 2008, Open-Nebula was introduced as the first open-source software for deploying private and hybrid clouds, as well as for the union of clouds [11]. Eucalyptus turned out to be the first open-source Amazon Web Service- Application Program Interface (AWS-API) compatible platform for deploying private clouds in early 2008. Furthermore, by middle of 2008, Gartner redefined the cloud computing as:

*"...to treat the relation of consumers of IT services, those who use them and those who sell them"[12].*

**Fig.1.** Conceptual view of cloud computing [16].



In addition, these initial cloud computing paradigms facilitate the users to access different sets of Information technology services, including the Software as a service (SaaS), Platform as a service (PaaS), and Infrastructure as a service (IaaS) layers [15-17]. Google Apps can be considered as an example of cloud computing from where we can access software or application using a browser and it can be utilized on thousands of computers via the Internet [18]. Fig.1 shows a conceptual view of cloud computing.

Perhaps security related issues are the most important concern in the field of cloud computing [8, 19]. It is obvious that insufficient security services can render the cloud system non-trustworthy. For example, managing personal information or data of consumers in a public network requires a high degree of security [8] and consistent care [20]. However, from the point of view of ease and cost of use the cloud computing is considerably beneficial.

Indeed, the customer's data and required computations must be confidential from both the cloud provider and other customers who are using the service [21]. In order to maintain this confidentiality the data are kept at a remote location which is owned by others but it can create problem for the data owner in case of system failure of the service provider [22]. It is a well known fact that data integrity and integrity of data storage is equally important and necessary requirement of the cloud computing. That's why integrity monitoring of data plays significant role in cloud computing to make it less prone to data corruption and crash [23].

Moreover, in cloud computing data security, data integrity, and data leakage all are major issues and for all these issues cryptographic solutions are available. There are different algorithms to get the data security in cloud computing e.g., Rivest, Shamir and Adleman (RSA) algorithm, Advanced Encryption Standard (AES) algorithm, Data Encryption Standard (DES) algorithm, International Data Encryption Standard (IDEA) algorithm etc. [26].

That's why, to make the cloud computing viable, it is of the utmost importance to incorporate the feature of trust and fix the security flaws. In this paper, security issues in cloud technology have been reviewed. Further, different security solutions as well as algorithms are also elucidated.

## Cloud Computing Models

The cloud computing environment consists of multiple types of clouds based on their deployment and usage. Following sub-sections present two important models of the cloud computing. These are the deployment and delivery model.

### B. Deployment Models of Cloud Computing

There are different versions of the deployment models. Different categories of clouds used in deployment model are given below.

1. **Public cloud:** The public cloud is entirely used by common civic. Moreover, a public cloud encompasses an organization with reference to a cloud infrastructure which is shared via the Internet with other organizations and members of public community.
2. **Private cloud:** This cloud may be accessed by the organization itself or by a third party. Examples of private cloud technologies are Eucalyptus, Elastra, and VMware etc. [28].



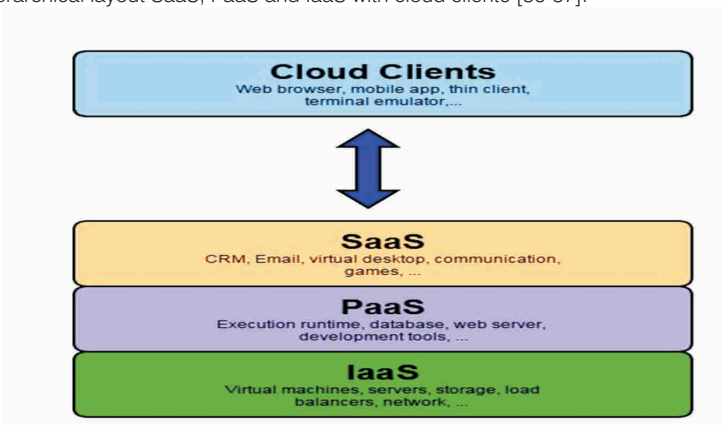
3. **Community cloud:** This cloud is communally shared by many organizations comprising similar security requirements and also they need to store or process data of related sensitivity.
4. **Hybrid cloud:** The combination of cloud deployment models is known as hybrid cloud. Here, each cloud could be independently managed while applications and data would be permitted to move across the hybrid cloud.

### C. Delivery Models of Cloud Computing

Delivery model of cloud computing are mainly of the three types. These are SaaS, PaaS, and IaaS. Brief descriptions of these models are given below.

1. **Software as a service (SaaS):** Software-as-a Service allows organizations to get into business functionality at a very low cost usually less than paying for licensed applications due to the fact that SaaS charges are built on a monthly basis [28]. SaaS is a software dissemination method which gives right to access the software and its functions tenuously as a web-based service [30]. In this service, the user can take benefit of all the applications. There is no need to install or maintain any additional software for using this service. According to some recent reports, SaaS is a rapidly rising market that predicts ongoing double digit growth [31].
2. **Platform as a service (PaaS):** In PaaS, the user has an option of deploying the owned functional programs on the infra-structure of cloud [32]. PaaS is the service that offers the users to deploy user-designed or obtained applications on the cloud infrastructure [33]. In this cloud model, the cloud supplier provides a computing platform, logically comprising operating system, database, programming language implementation environment and web servers [34].
3. **Infrastructure as a service (IaaS):** This model uses virtualization software and thus enables multiple customers to work. These multiple customers are referred as "multiple tenants". The end user avails these offered services based on their needs and pay for what they have used [33]. However, the client has control over the operational system, storage area, and the established programs. Furthermore, an artificial server is entirely available for the user in IaaS [32]. These three delivery models are shown in Fig.2.

**Fig.2.** Hierarchical layout SaaS, PaaS and IaaS with cloud clients [36-37].



## Security Issue in Cloud Computing

Cloud computing exercises three delivery models and these three models can render several types of services to the end user. These service models also consign a different level of security constraints in the cloud environment. IaaS is the foundation of all cloud services, with PaaS built upon it and SaaS in turn built upon it [36, 37]. If the cloud service provider takes under consideration only the security at the bottom of security architecture, the clients become more liable for implementing and supervising the security capabilities [38].

In fact, enterprise security concerns are emerged as the prime issue for the adoption of SaaS applications in the cloud [39]. It is very challenging to assure the security of corporate data as they utilize three services (SaaS, PaaS, IaaS) because each has its own security issues [41].

In short; IaaS and other allied services have enabled start-ups and other businesses to focus on their core proficiencies without troubling much about the provisioning and infrastructure management [37].

PaaS has the only disadvantage that, the advantages itself can be obliging for a hacker to control the PaaS cloud infrastructure for malware command and manage to go behind IaaS applications [43]. Fig. 2 shows the hierarchical layout of SaaS, PaaS, and IaaS with cloud clients.

### D. Security Issues in SaaS

So it becomes complicated for the users to make sure that accurate security measures are being followed and it is also critical to believe that the application would be available when needed [44].

The following key security elements should be carefully considered as an integral part of the SaaS application development and deployment process:

- Data Security
- Availability
- Authentication and authorization
- Network Security
- Backup
- Data Breaches
- Data Integrity
- Web application security

1. **Data security:** Data security is one of the chief and most cited issues in SaaS delivery model. Moreover, extra security checks are needed to prevent the breaches occurring due to security susceptibilities in the application or through malevolent employees [45]. This technology requires proper security principles and mechanisms to eradicate the malevolent users. Indeed, in SaaS model, most cloud users are constantly anxious regarding their confidential data because it might be used for other malign purposes or transferred to other cloud service providers [46]. The issue of data storage protection in mobile cloud computing is discussed in [47].

**Table 1.** A comparison of HMAC, TPA and SIMS security solutions for Cloud Computing.

<b>Parameters→ Solutions Proposed↓</b>	<b>Year</b>	<b>Technique</b>	<b>Cost</b>	<b>Security</b>	<b>Speed</b>	<b>Advantage</b>	<b>Disadvantage</b>	<b>Remarks</b>
Use of Hash Message Authentication Codes (HMAC)	1996	Combining a Hash key with a function	Minimises the cost	Directly related to the underlying hash function used.	one-half CPU cycle per byte (opb) on 64-bit architectures	<ol style="list-style-type: none"> <li>1. Can be used without the need for SSL.</li> <li>2. Key pairs can be deleted.</li> <li>3. Guarantees the authenticity.</li> <li>4. An admin can generate any number of key pairs.</li> </ol>	<ol style="list-style-type: none"> <li>1. Not a lot of consistency.</li> <li>2. Few and inconsistent server side implementations.</li> <li>3. A single character difference can result to different value.</li> </ol>	Advantageous in Security.
Third Party Auditor (TPA)	2008	HMAC	Reduces computation cost	Depends on storage correctness verifier.	18 clock cycles per byte	<ol style="list-style-type: none"> <li>1. Public audit ability.</li> <li>2. Storage correctness.</li> <li>3. Privacy-preserving.</li> <li>4. Batch auditing.</li> <li>5. Lightweight.</li> </ol>	<p>If anyone deletes record then this method can no longer work.</p>	Transparent yet cost-effective method.
Secure index management scheme(SIMS)	2004	Proxy Re-encryption	Provides cost efficiency	Pairing makes it difficult for a vicious third party to decode communication contents.	Single pairing and hash calculation provides quick search speed.	<ol style="list-style-type: none"> <li>1. Confidentiality.</li> <li>2. Search speed.</li> <li>3. Traffic efficiency.</li> <li>4. Calculation efficiency.</li> <li>5. Sharing efficiency among users.</li> </ol>	<p>When the proxy and any delegate in the system collude, they can decrypt everyone else's messages.</p>	Delegators' private key can be recovered.

2. **Availability:** It should be the major goal of the SaaS application providers to ensure that the systems are in running status and ventures are available with services almost all the time [37].

Moreover, flexibility in hardware or software breakdown, as well as the insolvency of service providers should be built in a bottom up manner within the application [48].

3. **Authentication and authorization:** For working with a safe cloud environment, the authentication and authorization applications for venture environments may perhaps need to be altered.
4. **Network security:** In fact, SaaS application treats the vulnerable data attained from the enterprises and stores these data at the SaaS merchant end. The network security encompasses the use of strong network traffic encryption techniques such as the Transport Layer Security (TLS) technique and Secure Socket Layer (SSL) technique [51].

The network layer offers substantial fortification against the customary network security issues e.g., IP spoofing which is a technique used to gain unauthorized access to computers, whereby the intruder sends messages to a computer with an internet protocol (IP) address indicating that the message is from the encoded end-points are accessible from both the Internet as well as from the Amazon EC2 and it assures that the data is transmitted steadily within AWS and from sources outside of AWS [52].

5. **Backup:** The SaaS vendor desires to make sure that all amenable enterprise data is retreated consistently for elegant improvement of quick recovery in case of desolation. The users need to separately encode their data and backups so that it may not be retrieved by any unapproved users [48].
6. **Data breaches:** It is fact that the data from different users and organizations resides together in a cloud environment. However, the chances of data breach result in virtualization vulnerability [54].
7. **Data integrity:** Data integrity is one of the most solemn components in any system. Data integrity is easily attained in a discrete system with a single database. Data integrity in such a system is managed via database transactions. Most of the databases support atomicity, consistency, isolation and durability (ACID) transactions and can preserve data integrity. One method for confirming the integrity of a set of data is based on hash values. A hash value is retrieved by abbreviating a set of data into a single unique value by way of a pre-demarcated algorithm.

**Table2.** A comparison of PDP, POR and DIFC security Solutions for cloud computing.

Parameters→ Solutions Proposed↓	Year	Technique	Cost	Security	Speed	Advantage	Disadvantage	Remarks
Provable Data Possession(PDP)	2007	RSA-based homo-morphic authenticators.	Reduces I/O and storage costs.	Depends on spot checking and homo-morphic verifiable tags.	4.5 times as fast as MHT-SC.	Ensure possession of data files on un-trusted storage.	May leak user data information to the auditor when used directly.	Public audit ability demands the linear combination of sampled blocks which are exposed to the external auditor.
Proof of Retrievability (POR)	2007	Efficient audit protocol	Requires high resource cost.	The sentinels are generated independently of the bit string.	High transmission cost.	The archive needs to access only a small portion of the file unlike in the key-hash scheme.	Computationally cumbersome to encrypt data file especially when data to be encrypted is large.	Best suited for storing encrypted files.
Decentralized Information Flow Control (DIFC)	1997	Labels (owner set and reader set).	Considerable cost of ensuring that a program does not violate security.	Protects privacy much more directly than access control.	Minimal cost to overall performance.	Clear rules for the legal propagation of data through a program, and the ability to localize security policy decisions.	Excessive restrictive-ness and the computational overhead.	It is not a widely accepted technique

- 8. Web applications security:** SaaS application development may imply various types of software components and frameworks. These tools can lessen time-to-market and the cost of renovating a traditional software product or building
- E. Security Issues in PaaS: In PaaS, the application provider may facilitate the people to build applications on top of the platform. However, any security issue underneath the application level such as host and network invasion prevention will still be an anxiety for the application provider and the application provider has to provide strong assertions that the data rests inaccessible in-between the applications. Consequently, it inclines to be more extensible than SaaS at the cost of customer-ready features. This arrangement outspreads the security features and proficiencies especially where the innate capabilities are less complete. However, this arrangement is more flexible to provide additional security to different layers.

**Table 3.** Comparison of DES, AES, RSA, ECC, and BLOWFISH algorithms on the basis of different parameters

Algorithms→ Factors↓	DES	AES	RSA	ECC	BLOWFISH
Developed	1977	2000	1982	1985	1993
Contributor	IBM 75	Rijman, Joan	Rivest, Shamir 78	Neal Koblitz	Bruce Schneier Victor S. Miller
Key Length	56-bits	128,192, and 256	128,192, and 256	135 bits	32-448
Block Size	64-bits	128 bits	Variant	Variant	64
Security Rate	Proved Inadequate	Excellent	Good	Less	Considered Secure
Execution Time	Slow	More fast	Slowest	Fastest	Fast

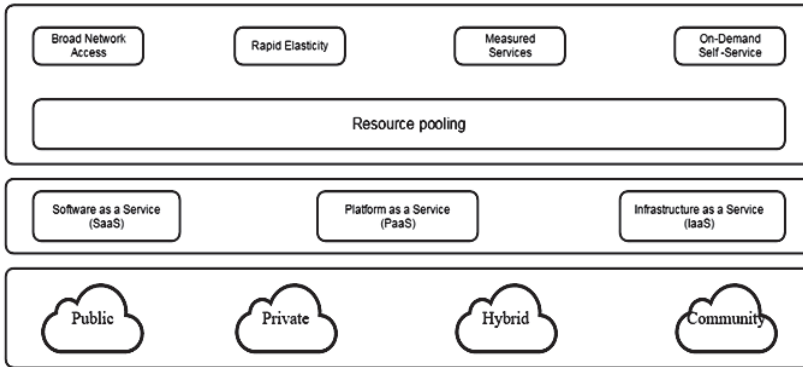
- F. Security Issues in IaaS: Although in theory virtual machines might be able to address these issues but in practice there are plenty of security problems. Further, in order to achieve extreme trust and security the cloud resources require application of numerous other techniques.

## II. Current Security Solutions

In Hash Message Authentication Code (HMAC) process, a secret key and hash algorithm such as secure hash algorithm (SHA) is used to generate the message authentication code. The HMAC function was firstly made available by Bellare et al. in 1996 and it comprises of analysis and a proof of the function's security. Further, in 2002 it is assimilated in "Federal of Information Processing Standards" (FIPS) and "National Institute of Standards and Technology" (NIST).

Fig. 3 shows a cloud framework as defined by the NIST. Moreover, any hash algorithm such as MD5, SHA-1, SHA-256 etc., can be used with HMAC. The table 1 shows the comparison of HMAC, TPA and SIMS security solutions for cloud computing.

**Fig.3.** NIST cloud definition frame work [7].



It eliminates the involvement of the client while the data is being stored in the cloud. In this method, the public adaptability is attained by using provable data possession (PDP) and it ensures possession of data files on non-trusted storages. The PDP technique utilizes the RSA-based authenticators for auditing the outsourced data and it recommends the random sampling of few blocks of the file. However, in this method the public audit-ability hassles the linear combination of sampled blocks exposed to the external auditor.

Further, this hash is stored along with the secret key. Thereafter, to verify the accuracy table 2 displays the comparison of PDP, POR and DIFC security solutions for Cloud Computing and table 3 compares the DES, AES, RSA, ECC, and BLOWFISH algorithms on the basis of different parameters.

## Conclusion

This paper reviewed the different approaches for cloud data security and also encompasses different techniques and algorithms pertaining to the domain of cloud computing. The proof of retrievable (POR) method uses a keyed hash function. In this method, before documenting the data file in cloud storage, the verifier calculates the cryptographic hash by means of keyed hash function. The network layer offers substantial fortification against the customary network security issues e.g., IP spoofing which is a technique used to gain unauthorized access to computers, whereby the intruder sends messages to a computer with an internet protocol (IP) address indicating that the message. Further, the application provider may facilitate the people to build applications on top of the platform.

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# ANALYSIS OF SOCIAL MEDIA AND ITS APPLICATION IN POLITICAL COMMUNICATION

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## Abstract

Social media enable individuals to share knowledge, experiences, opinions, and ideas among each other. With regard to political sector, social media can be an enabler for participation and democracy among citizens. Social Media and IT platforms have now developed a profound impact on the political process of nations as well as the world. They impact the process in different ways and open up new opportunities and threats for the established order. Social media have been instrumental in informing people about political issues, shaping their opinion, and guiding them towards change. The present research work tries to explore the social media and its implication in political communication. The study was based upon the data collected from the literature and from other multiple secondary sources of evidence. The study signifies that social media have the strong impact on political communication and also people in bringing desired / constructive change and at times the same tool is used for any undesirable changes. Political parties need to be consciously and explicitly managing the processes associated with the political communication through social media. The relevance of social media and its importance is of immediate concern to all stake holders. Some of the suggestion based on the study are also highlighted in the study.

**Key words:** Social Media, Political communication, relevance of social media etc.

## Introduction

The political landscape has changed quite a bit in the last couple of decades. The internet has played a large role in this transformation. Social media, in particular, is now a serious factor in political campaigns and in the way people think about issues. Candidates and their supporters constantly post their views on Facebook and Twitter. Each party has its own pages, from which it broadcasts propoganda and requests for donations. Let's look at some of the leading ways the social media influences politics today.

Social Media describes websites that allow users to share content, media, etc. Common examples are the popular social networking sites like Friendster, Facebook, Whatsapp, MySpace, etc. Social media also includes YouTube, Photobucket, Instagram, Flickr, and other sites aimed at photo and video sharing. News aggregation and online reference sources, examples of which are Digg and Wikipedia are also counted in the social media bucket. With social media, it is not the details of the latest Facebook change that matter but rather its role in a broader trend. Social media is such a broad term that it covers a large range of websites. But the one common link between these websites is that one is able to

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interact with the website and interact with other visitors. Some of the social media websites are,

- **Social Bookmarking-** Relating to people by tagging websites and searching through websites bookmarked by other people.
- **Social News-** Interacting by voting for articles and commenting on them.
- **Social Networking-** Adding friends, commenting on profiles, joining groups and having discussions.
- **Social Photo and Video Sharing-** Interacting by sharing photos or videos and commenting on user submissions.
- **Wikis -** Adding articles and editing existing articles.
- **Blogs-** A type of website, usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video.

And these websites are not the only social media websites. Any website that invites you to interact with the site and relate with other visitors/users falls into the definition of social media.

Social media like other forms of media has its own importance and use. For example, a voter can view a politician's profile on their party's website or else he might read his blogs comment his views or ideas on the blog. This helps the voter understand what he is expecting from the future government and accordingly vote for the same this correlation is illogical. People have not yet identified the power of social media and how it can be used to reach out to millions of people at the same time.

## **Growth of Social media Users**

Social media networking has witnessed the phenomenal growth in the past one decade. Today, social networking sites (SNS) have grown from a niche to a mass online activity. The customer participation in social media is huge. Table below gives a picture of Social Media Network User Penetration Worldwide BY Country 2012-2017.

**Table 1:** Social Media Network User Penetration Worldwide BY Country 2012-2017 (Percentage of Population in each group)

Country	2012	2013	2014	2015	2016	2017	Growth Rate in percentage from 12-17
Netherlands	59.0	63.5	65.6	68.0	69.7	70.7	19.83051
Norway	58.7	63.3	66.8	69.2	71.3	73.1	24.53152
Sweden	52.7	56.4	59.7	61.9	64.0	65.7	24.66793
South Korea	50.8	56.4	57.0	59.0	60.6	62.0	22.04724
Denmark	49.1	54.4	56.8	59.8	60.6	62.0	26.27291
US	50.1	53.4	53.1	54.4	55.4	56.3	12.37525
Finland	47.0	51.3	54.6	57.5	60.2	62.5	32.97872
Canada	49.3	51.3	53.0	54.0	55.0	55.9	13.38742
UK	47.7	51.2	52.6	53.9	55.0	56.6	18.65828
Australia	45.3	51.2	52.3	55.6	58.9	61.4	35.54084
Russia	38.1	50.2	46.0	48.6	50.8	52.6	38.05774
Argentina	37.0	49.1	44.5	47.9	49.34	50.9	37.56757
Germany	36.7	42.4	43.7	46.1	48.1	49.8	35.69482
Mexico	25.6	30.6	35.2	39.2	42.9	46.5	81.64063
Indonesia	21.0	26.8	31.3	34.9	38.6	42.2	100.9524
China	22.9	25.8	28.1	30.2	32.3	34.5	50.65502
India	5.7	7.7	10.5	12./	15.1	17.2	201.7544
Worldwide	20.1	22.7	25.3	27.4	29.6	31.5	56.71642

We see that in India the penetration rate is highest as compared to other countries listed in the table 1 India is

**Table 2:** Number of social media users worldwide from 2010 to 2021 (in billions)

Years	Number of users in billions	Growth Rate
2010	.971	23.58393
2011	1.2	16.66667
2012	1.4	13.57143
2013	1.59	20.12579
2014	1.91	12.04188
2015	2.14	6.542056
2016	2.28	7.894737
2017	2.46	6.504065
2018	2.62	5.725191
*2019	2.77	4.693141
*2020	2.9	4.137931
*2021*	3.02	23.58393

The information presented in the table 2 depict the Number of social media users worldwide from 2010 to 2021. We observe that number of user has grown significantly from 2010-2017 and future projection is also very optimistic .

**Table 3.** Penetration of leading social networks in India Share of population

SI NO	Social Media	Share of population	Social Network sites Worldwide ranked by number of active users ( In Millions as on Jan2017)
1.	YouTube	33%	1500
2.	Facebook	33%	2061
3.	WhatsApp	28%	1300
4.	Twitter	24%	328
5.	Facebook Messenger	23%	1300
6.	Instagram	22%	700
7.	LinkedIn	21%	106
8.	Pinterest	15%	150
9.	WeChat	13%	846
10.	Snapchat	33%	255

These statistic provide information on the most popular networks worldwide as of September 2017, ranked by number of active accounts. Market leader Facebook was the first social network to surpass 1 billion registered accounts and currently sits at 2.06 billion monthly active users. Seventh-ranked photo-sharing app Instagram had over 700 million monthly active accounts. Meanwhile, blogging service Tumblr had more than 368 million active blog users on their site. The Philippines tops the ranking for time spent on social media amongst those countries, with Filipinos spending a full half-hour longer on social media each day than users in second-placed Brazil.

**Table 4:** Average Time spend on social media in Hours

SI No	Country	Average Time spend on social media in Hours
1.	Philippines	04.17
2.	Brazil	03.43
3.	Argentina	3.32
4.	Mexico	3.32
5.	UAE	3.24
6.	Malasia	3.19

SI No	Country	Average Time spend on social media in Hours
7.	Indonesia	3.16
8.	Egypt	3.10
9.	Turkey	3.01
10.	Soudi Arbia	2.55
11.	South Africa	2.54
12.	Thai land	2.48
13.	Vietnam	2.39
14.	India	2.36
15.	Russia	2.19
16.	Singapore	2.07
17.	USA	2.06
18.	Itley	2.00
19.	China	1.5
20.	UK	1.48
21.	Kanada	1.47
22.	Poland	1.45
23.	Hongkong	1.41
24.	Spain	1.41
25.	Australia	1.39
26.	France	1.23
27.	South Korea	1.11
28.	Germany	1.09
29.	Japan	.40

As a result, the growing relevance of communication in social media implies a fundamental change in traditional public communication, which has usually been exclusively initiated and managed by specific actors, e.g., politicians, companies as well as journalists (Chadwick 2006). This phenomenon is currently observed by numerous disciplines such as sociology, information communication studies, information systems, political science, and linguistics. Among other fields of interest, it is a common goal to better understand modes of communication such as agenda setting or opinion-making on social media.

### Justification of the study

Over the last few years the social media is being extensively used for the political communication in the society. Past studies have indicated that from the perspective of political institutions, there is a need to continuously collect, monitor, analyze, summarize, and visualize politically relevant information from social media. These activities are



considered difficult tasks due to a large numbers of different social media platforms and large amount as well as complexity of information and data. Systematic tracking and analysis approaches along with appropriate methods and techniques in political domain are still lacking. Hence there is need to develop a framework for social media and their application in political context. More specifically, the role of social media needs to be explored for different politically relevant analyses from the perspective of political institutions and according scientific methodologies that could be applied to analyze political communication in social media.

## **Objectives and Methodology**

Present research work tries to explore the social media and its implications in political communication. The study was conducted based upon the data collected from the literature and from other multiple secondary sources of evidences. The various secondary sources include; research papers, magazines, newspapers, web sources, etc. The collected information was systematically arranged, analysed, and the conclusions were properly drawn.

## **Social Media and Political communication**

Given the tremendous growth of social media, in particular Twitter and Facebook, social media are increasingly used in political context recently - both by citizens and political institutions (e.g., politicians, political parties, political foundations, think tanks etc.). From the perspective of political institutions, it is important to actively participate in the political communication based on the use of social media, especially during election campaigns. Social media thereby represents the ideal vehicle and information base to gauge public opinion on policies and political positions as well as to build community support for candidates running for public offices (Zeng et al. 2010). It has been observed that in a very short space of time, politicians in modern democracies across the world have eagerly adopted social media for engaging their constituents, entering into direct dialogues with citizens and enabling vivid political discussions (Hong and Nadler 2011). In this regard, U.S. politicians are said to have a leading role with the most prominent example of Barack Obama being able to successfully employ social media within his last election campaign (Wattal et al. 2010). On the other hand, social media are said to have the potential for increasing political participation and discussions among citizens. Twitter, Facebook, and others provide ideal platforms for users to spread not only information in general but also political opinions through their networks.

Social media has emerged as a vital tool of communication and has created new ways of mobilizing public opinion and encouraging participation in political and civic activities - ranging from joining online petition and social groups, posting short messages on Twitter, expressing supports through blogs and uploading videos on YouTube. The recent WikiLeaks disclosure online of US foreign policy clearly demonstrates the disruption caused by social media, which is now forcing the mainstream news media to turn to political blogs and citizen-users for materials. Such disruption has enabled citizens to discuss and share political information with friends and networked citizens, and critically monitor the actions of governments and corporate interests. This has also posed a profound challenge to the state about how to regulate social media and face user-generated challenges. At the same time, the uneven level of access of different social groups to new media, a

phenomenon known as digital divide, has raised concern about the limitations of its democratic potential.

Can social media be used for an effective political communication in India where access to Internet is still limited? To what extent political parties and candidates as well as oppositional politics are using social media for political campaign? Is it possible to reach to the non-internet users through social media? Before answering these questions it is important to look at some of the statistics about the internet penetration and social media uses in India. A report by the Internet and Mobile Association of India shows that as of June 2017, there were 137 million claimed Internet users: 99 million in urban cities and 38 million in rural villages. Of these 137 million Internet users, 111 million (80 million in urban cities and 31 million in rural villages) are active Internet users, i.e., they use the Internet at least once a month. In terms of percentage, only about 11.4% of India's population uses internet, which might not be considered significant.

Similarly, in their recent report entitled "Social Media in India - 2017", estimates the number of social media users in Urban India at 62 million as of December 2017. The report also reveals that the internet users are spreading fast in areas beyond the top eight Indian metros as one third of the social media users are residents of smaller towns with population of under 500,000, while a quarter of them are residents of towns with a population of less than 200,000. However, it is estimated that majority of the social media users use it for entertainment than for political activities, although we do not have data on the behaviour of internet users. The small percentage of the internet users and the users activities on social media, have led many political analysts to discount the capacity of the social media in having any significant impact on political communication. However, one needs to look at the recent uses of social media for political communication before ignoring its credibility.

## Two Cases of Effective Political Communication

In the recent assembly elections in Gujarat, the chief minister effectively used the social media to connect with online citizens. Besides being active on Twitter and Facebook, HE also went for a live chat on Google plus with netizens. The event was anchored by bollywood film star Ajay Devgan. By going online for live chat, he became the first Indian politician to do so. Through his social media campaign, he was able to capture the first time voters, the youth, who certainly are more attuned to digital culture. At the same time, the middle classes are also quite active on social media. It cannot be argued that the proactive presence on social media helped Modi win the assembly election. But it is evident that despite being a controversial figure, Modi has been projected as more forward-looking politician. He has also been able to connect with the youth because of his style of political campaigning and his social media skills.

Similarly, it is well known that Anna Hazare, in his agitation over the issue of the Jan Lokpal Bill, effectively used the social media to mobilize the youth and the middle classes. The effective use of social media not only brought the issue into cyber space and made it more global, but also garnered huge support for the anti-corruption campaign. Although the movement lost its vitality because of many factors including internal dissention among its core members, it showed the effectiveness of social media for political mobilization. In a statement, the then Law Minister Salman Khurshid said, 'We were caught unawares because Anna's movement was a remarkable combination of traditional politics and unconventional modern practices. We were at a disadvantage because we did not use the

social media as effectively as Anna's movement did.' Such a perception is not without reason, as a report released by Facebook revealed that Anna Hazare and the Jan Lokpal Bill were mentioned the most in status updates in 2011 in India. The general perception that people use the social media largely for entertainment does not hold true in this case. At the same time, using social media for entertainment doesn't stop one to use it for political activities. Politics has certainly entered social networking sites, which has opened up new avenues for conducting politics.

## **The Dialogue Between Social Media and Traditional Media**

What is important to recognize in these two cases is the capacity of the social media to influence traditional media. All newspapers and television now have reporters who continuously monitor Facebook and Twitter for getting breaking news. The way traditional and social media connect and converge with each other has a profound impact on modern day political communication. This connectivity and convergence between traditional and social media becomes imperative in the case of India and other developing countries where the reach of the internet is still limited. Social media, no doubt, is more democratic since anyone with access to the Internet can raise an issue in the public arena. Yet, it would not be possible for social media alone to reach beyond their core audience and influence wider sections of society unless they collaborate with traditional media. Similarly, in order for traditional media to reach out to a transnational audience, they need to take the help of social media. The Anna Hazare movement, which began through social media, got momentum after news channels started providing relentless coverage. Similarly, Modi would not have been successful had he depended exclusively on social media for political communication. It is important therefore to understand different roles played by traditional and social media in reaching to different segments of the population. However, the presence in social media has become imperative for politicians who want to connect with the youth and the middle classes and want to play a larger role in the national political arena.

The advent of social media has certainly had a democratizing effect on the functioning of newspapers and news channels. The earlier monopoly of newspapers and news channels over providing news and breaking stories has been dismantled with the coming and spread of social media. Newspapers and news channels are now operating under the fear of losing their credibility to the social media. It is now difficult for traditional news media to hide a story from the public because of the fear that such stories might get published in a blog or get circulated on social networks. This pressure of the social media has certainly democratized the existing public sphere and enhanced the accountability of public officials. The recent exposure in India of many scandals has become possible because of the social media. Once the issue was exposed on the social media, public pressure started building on traditional media to take up the issue. The exposure of the 2G scam is one such case where the social media played a leading role.

## **Social Media and the new ways of conducting politics**

Is there emergence of new ways of conducting politics with the coming of social media? In a recent study conducted by the IRIS Knowledge Foundation and the Internet and Mobile Association of India, claimed that results in over 150 parliamentary constituencies in the next general election could be decided by Facebook users, making them the newest vote-bank with the power to shape Indian politics.' One might as well question the validity of the

findings as majority of the people in India use social media for entertainment. But one needs to understand that political participation is not static. Some people regularly follow political events, whereas others become interested only during a crisis or an important political event, such as an election or social movement. Among Internet users, substantial numbers may not be interested in the politics of the country or eager to participate in politics through the internet, but they are drawn into politics because a major personality is involved or during a major crisis. The Anna Hazare's movement reflects that the online public, who used social networking sites for entertainment and to stay in touch with friends, learned to use these sites to engage with politics. Such a development is new in India, but has been ongoing in developed countries. Social media also played an important role in the Arab Spring.

Despite the low level of the internet penetration in India, social media has been able to reach beyond its core audience. This is because of the new space created on account of the interface between print, television and the internet, which can change the way the business of politics is conducted in India. All political parties now have their presence on social media, and maintain their party website detailing the activities and programs of the parties. Majority of politicians have their Twitter account or Facebook pages. We have seen that during major events such as budget sessions or parliamentary debates, politicians break the news by posting a message on Twitter. Social media literacy is fast becoming a sign of forward-looking and development oriented leaders, ready to take up the new challenges in a globalized India. The presence in social media has become imperative for candidates and political parties because of the changing expectation of the voters towards their elected representatives. Realizing the importance of social media, the Prime Minister Manmohan Singh opened his Twitter account last year to provide up-to-date information as well as to present the achievements of his government to the people.

### **Media as an important institution of mediation**

Media, both traditional and social, have certainly emerged as an important institution of mediation in contemporary India as well as in other developing countries and has transformed today's political communication networks. Making one's presence felt in social media has become important for both political parties as well as for oppositional politics in order to ensure a wider validation for their cause. The oppositional politics, which often gets marginalized in the mainstream media, has been immensely benefitted with the coming of social media. It is not surprising that some of the most popular politicians on social media are from opposition including Narendra Modi, Mamata Banerjee, Akhilesh Yadav and Nitish Kumar. The incorporation of politics into social networking sites has made it impossible for political parties to ignore social media. Furthermore, given the changing expectation of the voters towards their elected representatives, social media might play a role disproportionate to its actual presence. Social media certainly has the power to influence the outcome of the next general election.

Studies have shown that from the perspective of political institutions and government agencies, there is a need to continuously gather, monitor, analyze, summarize, and visualize politically relevant information from online social media with the goal to improve communication with citizens and voters (e.g., Zeng et al. 2010; Kavanaugh et al. 2011; Paris and Wan 2011; Stieglitz et al.2012). For example, it is important to identify influential users or (political) opinion leaders, and follow the discussions taking place within

their peers, particularly during periods of election campaigns. Other relevant issues might concern the identification of emergent issues and trends as well as the ability to make prediction of potential rising topics. The final goal is then to get a compact and comprehensive summary (e.g., in regular reports or real-time dashboards) which aggregates and visualizes analysis results from different social media platforms.

All this growth has translated into yet another good year for the world's top social media platforms too, with most companies recording another year of impressive growth. Following numerous requests, we've decided to include YouTube in this A screenshot of incidents to emphasise the impact :

B.J.P. suddenly appearing as the largest political party with over 10 Cr. Members who gave missed calls to get their memberships enrolled. Other such campaigns with lesser success can be named.

In America F.B.I. is investigating incidents in which it is elledged that Russian agencies helped in the victory of Republican Donald Trump, their leaks helped Trump to defeat Democratic candidate Clinton.

The recent election of Mcron as the French President , who set up a political party of just One year standing and was able to defeat political parties of long standing history.

Many revolutions against the established regimes in the middle east are credited to the rise of use social media.

Governments are actively using social media to communicate with their citizens about their plans and achievements, and relief and action is being initiated in many incidents like Indian Railways, Ministry of Foreign affairs , Police and other agencies.

## **News Around the Clock**

One of the ways that social media has transformed politics is the sheer speed at which news, poll results and rumors are shared. Whereas in the pre-internet days, people had to wait for the next newspaper or TV news show to get the latest information, online news is a 24/7 phenomenon. Social media has taken this a step further. While you can access news on many websites at any hour, most people spend more time on sites such as Facebook and Twitter than they do on serious news or political websites. This means that you get all of the latest trending news stories and opinions shared by your friends whenever you log on.

## **The Impact of Polls**

Political polls are an important part of every campaign. They are often confusing, because you can often find multiple polls with contradictory results posted on the very same day. As with other types of political news, the internet has greatly increased the number of poll results we see each day. Social media has accelerated this even more. Not only do social media sites report the results of polls, you can actually participate in Facebook polls.

Polls results have a big influence on elections. This is true even if they are flawed. A poll can be a self-fulfilling prophecy. For example, if people think one candidate is far ahead in the race, they might conclude there's no point in voting for the underdog. When people are posting the latest poll results on social media throughout the day, there's a great deal of pressure on candidates to pull ahead of their opponents.

## Direct Interaction with Politicians

One of the positive effects that social media has on politics is the opportunity for voters to interact more easily with candidates and elected officials. Traditionally, if you wanted to meet a politician or candidate, you'd have to attend a live event. Not everyone is able to do this. With modern technology, it's now possible to attend virtual events where you can participate in live streaming events and interact with politicians and candidates.

## Demographics and Targeting

Targeting is used throughout the advertising industry to make sure that ads and messages reach the right audience. Politicians do this as well. In the age of social media, politicians and people running for office are able to target their campaigns.

If a candidate wants to address the concerns of women, college students, retired people, Latinos or any other group of voters, they can now tailor their messages. Just as advertisers on Facebook are able to use analytics and targeted advertising, so can candidates and politicians. Thus, if you notice that political messages seem to be talking to you personally, this is no accident.

## Opening space for new ideas and activism

Social media has provided platforms for new ideas socially, political and economic which earlier would have vanished due to established order. The platforms provide these ideas to get to see the limelight, but can also be pursued by activism, which at times could be challenging existing opinions and order, questioning them, adding fresh insight, and proposing alternative perspectives of seeing and solving problems which concern people.

It has given people a never before opportunity to raise their concerns, and communicate and associate with likeminded people, which adds to their power and ability. Their concerns get shared and aired with an ease that was possible never before. And hence this gives them the opportunity to set their own agenda and pursue them. Earlier they were largely mere spectators, and participants in the agendas set by the political parties.

## Easy International Exposure and opinion sharing

News and views can be shared globally with an ease that was never ever possible. This has led to more people to people contact between nations and within nations and societies, where they come across the concerns of each other, and their viewpoints, hence developing a better global picture. Which could even be skewed depending upon their individual preferences. This exposure leads to a change in their estimation of the situation, aspirations, standards and goals.

## Rumors, Fake News and Conspiracies and propaganda machinery

Political campaigns are now influenced by every story, whether true or not, that gets spread around social media. It's getting more and more difficult to separate actual news from fake news online. Social media makes this distinction especially confusing. The constant stream of memes, links and rumors about political leaders and candidates is a mixture of truth, lies, satire and speculation. Propaganda machinery that earlier used to be only war time affair are being consistently used between nations/ communities/ ideologies in conflict. Social Media emerging as a venue where the competing forces strive out 24X7 to influence and alter public opinion, at times with sinister designs.

There are now quite a few fake or satirical "news" sites that often post stories that sound authentic. The Onion is the best known of these, but there are now many others as well. Some fake news sites are not even amusing but simply exist to post clickbait stories or to troll readers who don't do their own research.

There are also sites with political biases or those peddling various unsubstantiated conspiracy theories. It's easy to be influenced by misinformation posted by your friends and followers, even if they don't intend to mislead you. It's therefore necessary to use a great deal of discernment before believing anything.

## **The Power of Confirmation Bias**

One of the hidden forces that operates on social media is confirmation bias. This is especially powerful when it comes to controversial topics, including politics. If you're like most people, the majority of your friends and followers on social media probably share your outlook. This means that the vast majority of tweets, Facebook posts, pins or other content you read on these sites tend to express the same point of view, one that you already hold. It's natural for people to surround themselves with others of like mind. This is true both online and offline. On social media sites, this can create the illusion that "everybody" thinks the same way. If you have a few hundred friends on Facebook, for example, and 90 percent of them agree on most political issues, the information you get will be filtered through this bias. People will post links to stories that confirm your existing bias. They'll repeat opinions you already hold. For this reason, social media may reinforce our opinions and make it more difficult to entertain alternative points of view. In politics, it can help to make people more opinionated and less tolerant of others. On the other hand, if you make an effort to connect with an assortment of people with diverse viewpoints, you can overcome confirmation bias and use social media to make you more open-minded.

## **Social Media and the Future of Politics**

Because social media is relatively new, we're just starting to see its impact on society. There are sure to be many political changes that come about due to social media. There are now proposals for internet voting, which could lead to more people participating in elections. This could make social media even more influential, as people could literally vote moments after reading the latest comments or links they found on Facebook or Twitter.

Other advancements will also change politics. Polling techniques on social media will become more common and, hopefully, more accurate. More virtual political rallies and town halls will take place. As social media becomes ever more popular, its impact on politics will only increase over time. It will be interesting to observe how this plays out.

## **Discussion**

The relevance of social media based online communities for political communication is steadily increasing in recent years. Especially, young voters spend more time online in social networks such as Facebook or MySpace than watching television or reading newspapers. As Web 2.0 tools are modern instruments of participation and collaboration, democratic systems may benefit from this development. Therefore, political actors are advised to take part in the communication at these virtual places. Findings from our survey show that politicians indeed have the need to stay updated about current political discussions and about their own reputation in social media as well as to detect new trends and identify influential users within different social networks. A major goal for future political

communication from the perspective of politicians is to increase the degree of "e-participation" by actively engaging in social media while being able to monitor the social web. This is, however, not a simple task due to time and financial constraints, and, in particular, a large numbers of different social media platforms and vast amount as well as complexity of information and unstructured data.

## **Conclusions**

As previous studies have shown, in the last few years social media have become an important political communication channel. It enables political institutions and voters to directly interact with each other. Therefore, political activities might gain more transparency and citizens might be more involved into political decision-making processes. However, until now the potentials of political discussions on social media involving political institutions could not be exploited sufficiently. One reason for that is a lack of knowledge of politicians about current topics and discourses on different social media platforms. Based on an extensive literature review, we could observe the increasing relevance of and the need for analyzing political discussions on different social media platforms such as Twitter, Face book, and weblogs.

As a main contribution, we proposed a framework for social media analytics in political context. More specifically, we outlined various approaches of data tracking and data analysis as well as analysis methods that might help gain a deeper insight into political discussions in social media. From the practical perspective, the framework should serve as a guideline for the development of toolsets aiming at collecting, storing, monitoring, analyzing, and summarizing politically relevant user-generated content from social media for political institutions. Even though our framework focuses on analyzing public data exclusively we suggest that political actors should also reflect on ethical issues which might become relevant when investigating communication in social media. From the research perspective, the framework is of high relevance for the academic discussion because, to our knowledge, it is the first comprehensive summary of different social media analytics approaches and analysis methods within the political sphere. Finally, we believe that this framework could also be adapted to other contexts such as business and marketing.



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# DIGITAL MARKETING: A TRANSFORMATION FROM TRADITIONAL MARKETING STRATEGY

## Abstract

With the advent of technology revolution the world has literally become a global village. The recent technological innovations and inventions has drastically change the traditional way of marketing. The ever increasing competition, costs and squeezed margins has compelled to think out of box in order to keep running the businesses. The advertisers are forced to adopt and adapt to the latest trends in marketing riding high on technology. The traditional approach to marketing strategy is being fast replaced by the emerging digital marketing strategy. The base for this change can be seen from the increasing subscriber base of mobile phone users, which has touched 1bn mark as per TRAI. This trend shows the ever increasing penetration of internet and hence the scope of digital marketing. This paper explores the various marketing tools available viz. PPC, Data Analytics etc. to the marketer and advertiser vis-à-vis its applicability in different digital media.

**Key Words:** Internet, Digital Marketing, PPC, Data Analytics

## Introduction

The world has moved from production era to marketing age. This phenomenal change has brought many challenges to the advertisers and marketers. Earlier the marketing strategy was based on the 4Ps where place and promotion played an important role in deciding the media and the geographical reach of that media and media vehicle. month. Dave Chaffey (2002) defines e-marketing as "application of digital technologies -online channels (web, e-mail, databases, plus mobile/wireless & digital TV) to contribute to marketing activities aimed at achieving profit acquisition and customers retention (within a multi-channel buying process and customer lifecycle) by improving customer knowledge (of their profiles, behavior, value and loyalty drivers) and further delivering integrated communications and online services that match customers' individual needs. The changing role of customers as co producers of value is becoming increasingly important (Prahalad and Ramaswamy, 2004).With the revolution and continuously updating information and communication technology, the advertisers and marketers have to redefine and reengineer their marketing strategy. Reinartz and Kumar (2003) found that the number of mailing efforts by the company is positively linked with company profitability over time. A major proportion of the population is hooked to one or other electronic / digital media, this implies that company need to follow their target customers on the internet. According to Gurau (2008), online marketing environment raises a series of opportunities and also challenges for social media marketing practitioners. With the dramatic expansion of social media the advent of digital marketing strategy became the new out of box

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innovation to make the reach of product effectively and efficiently. The digital marketing has overcome one of the traditional marketing strategy's shortcomings of not being able to precisely measure the advertising results. Main advantage of social media is that it can enable companies to increase reach and reduce costs (Watson et al. 2002; Sheth & Sharma 2005). Putting situational analysis at the start of the SOSTAC (Situation, Objectives, Strategy, Tactics, Actions and Control) process actually leverages key strengths of digital marketing, since 'listening tools' (social media, etc) now allow marketers to gain unprecedented insight into their customers. (PR Smith, 2014)

### **Objectives of the study and research methodology**

Present study's aim is to draw insight to the existing literature on digital marketing with the following objectives.

- a. To show the various elements of digital marketing
- b. To study the digital marketing and its growth
- c. To study the various channel of digital marketing services and analyse the role of digital marketing services

Methodology comes from systematic and theoretical analysis of the methods to evaluate suitability of one specific method to apply to a field of study. It typically encompasses concepts such as paradigm, theoretical model, phases and quantitative or qualitative techniques. This study is conducted based on secondary data sources. Secondary source is a source from where we collect data that has already been collected by someone. We have collected secondary data from the published sources like newspaper and articles research papers, books and other published data sources related to digital marketing system. The collected data and information has been organized, explained and analyzed for drawing inferences.

### **Digital Marketing**

"According to Wikipedia, digital marketing includes Internet marketing techniques, such as search engine optimization (SEO), search engine marketing (SEM) and social community management, paid social advertising (which continues to be how brands can reach their audience in social since organic reach is very limited in most social platforms. It also extends to non-Internet channels that provide digital media, such as mobile phones (both SMS and MMS), callback, social media marketing, display advertising, and any other form of digital media or digital channel."

Zero Moment of Truth (ZMOT) refers to the first exposure a user has to a product or service

through various social media networks. It is a term coined by Jim Lecinski at Google, defined as 'a decision-making moment that takes place a hundred million times a day on mobile phones, laptops and wired devices of all kinds. It's a moment where marketing happens, where information happens and where consumers make choices that affect the success and failure of nearly every brand in the world'. (Lecinski, J., 2011).

"According to the Digital Marketing Institute, Digital Marketing is the use of digital channels to promote or market products and services to consumers and businesses."

"Digital marketing is a term used to describe the integrated marketing services used to attract, engage and convert customers online. Digital marketing utilizes multiple channels such as content marketing, influencer marketing, SEO, social media and online advertising to help brands connect with customers and uncover performance of marketing programs in real-time."

According to Financial Times, Digital marketing extends beyond internet marketing to include channels that do not require the use of the internet. It includes mobile phones (both SMS and MMS), social media marketing, display advertising, search engine marketing and any other form of digital media.

The Digital marketing can be divided as:

1. Pull digital marketing (Digital inbound marketing)
2. Push digital marketing (Digital outbound marketing)

Pull digital marketing is characterized by consumers actively seeking marketing content.

Push digital marketing occurs when marketers send messages without that content being actively sought by the recipients.

Digital marketing, in simple words is an umbrella term used to describe online marketing strategies of any kind, regardless of whether they're inbound or outbound. But the inbound marketing is a methodology that uses digital marketing assets to attract, convert, close, and delight customers online.

## Elements of Digital Marketing

The digital marketing can be broadly categorised in to two major categories:

- a. Online Digital Marketing
- b. Offline Digital Marketing

### The Online Digital Marketing includes

- i. Search Engine Optimisation (SEO)
- ii. Search Engine Marketing (SEM)
- iii. Content Marketing
- iv. Social Media Marketing (SMM)
- v. Pay Per Click Marketing (PPC)
- vi. Affiliate Marketing
- vii. Email Marketing
- viii. Native Marketing

- ix. Online PR
- x. Marketing Automation
- xi. Online Behavioural Advertising
- xii. Influencer Marketing

### **The Offline Digital Marketing includes**

- i. Enhanced Offline Marketing
- ii. Radio Marketing
- iii. Television Marketing
- iv. Phone Marketing

## **Online Digital Marketing**

### **i. Search Engine Optimisation (SEO)**

The process of maximizing the number of visitors to a particular website by ensuring that the site appears high on the list of results returned by a search engine. SEO is a marketing discipline focused on growing visibility in organic (non-paid) search engine results. SEO encompasses both the technical and creative elements required to improve rankings, drive traffic, and increase awareness in search engines. The majority of traffic on the internet is driven by the search engines as Google, Bing, Yahoo etc. These search engines return the unique result for the queries looked for. Targeted traffic to a website can provide publicity, revenue, and exposure like no other channel of marketing.

### **ii. Search Engine Marketing (SEM)**

Search engine marketing (SEM) is a form of Internet marketing that involves the promotion of websites by increasing their visibility in search engine results pages (SERPs) primarily through paid advertising. Advertisers bid on keywords that users of services such as Google and Bing might enter when looking for certain products or services, which gives the advertiser the opportunity for their ads to appear alongside results for those search queries.

### **iii. Content Marketing**

A type of marketing that involves the creation and sharing of online material (such as videos, blogs, and social media posts) that does not explicitly promote a brand but is intended to stimulate interest in its products or services. Content marketing is the process of creating high-quality, valuable content to attract, inform, and engage an audience, while also promoting the brand itself. Buyers and consumers are already searching the web for answers that your brand is uniquely positioned to offer. Its benefits are three-fold as increased brand awareness, increased brand preference and greater reach at lower cost.

### **iv. Social Media Marketing (SMM)**

Social media marketing (SMM) is a form of Internet marketing that utilizes social networking websites as a marketing tool. The goal of SMM is to produce content that users will share with their social network to help a company increase brand exposure and broaden customer reach.

### **v. Pay Per Click Marketing (PPC)**

PPC stands for pay-per-click, a model of internet marketing in which advertisers pay a fee each time one of their ads is clicked. Essentially, it's a way of buying visits to your site, rather

than attempting to "earn" those visits organically. Search engine advertising is one of the most popular forms of PPC.

#### **vi. Affiliate Marketing**

Affiliate marketing is a type of performance-based marketing in which a business rewards one or more affiliates for each visitor or customer brought by the affiliate's own marketing efforts. In affiliate marketing, the cookies manage is to remember the link or ad the visitor to a website clicks on. Cookies can also store the date and time of the click, they can even be used to remember what kind of websites or content you like most.

#### **vii. Email Marketing**

Email marketing is a form of direct marketing that uses electronic mail as a means of communicating commercial or fundraising messages to an audience. In its broadest sense, every email sent to a potential or current customer could be considered email marketing.

#### **viii. Native Marketing**

Native advertising refers to advertisements that are primarily content-led and featured on a platform alongside other, non-paid content. eg. BuzzFeed sponsored posts, also facebook advertising and instagram advertising. By definition, it is any paid content that is "in-feed" and inherently non-disruptive. This includes promoted tweets on Twitter, suggested posts on Facebook, and editorial-based content recommendations, content discovery platforms like Outbrain.

#### **ix. Online PR**

Online PR is an incredibly cost-effective way to market your business and brand to a wide audience. PR is about influencing people and gaining their trust rather than selling them a particular service or product. Essentially it's the art of story-telling online using quality content. Online PR can be achieved through blogs, SEO (Search Engine Optimisation), Social Media and relevant websites.

#### **x. Marketing Automation**

Marketing automation refers to software platforms and technologies designed for marketing departments and organizations to more effectively market on multiple channels online (such as email, social media, websites, etc.) and automate repetitive tasks. Pardot is an easy-to-use marketing automation system built for small and mid-sized businesses. It helps sales and marketing work together to drive more qualified leads, improve ROI and boost businesses.

#### **xi. Online Behavioural Advertising**

Behavioral advertising is a technique used by online advertisers to present targeted ads to consumers by collecting information about their browsing behavior. The information is collected about a user's online activity over time, on a particular device and across different, unrelated websites, in order to deliver advertisements tailored to that user's interests and preferences.

#### **xii. Influencer Marketing**

Influencer marketing involves marketing products and services to those who have a sway over the things other people buy. This market influence typically stems from an individual's

expertise, popularity, or reputation. Marketing to an audience of influencers is similar to word of mouth marketing, but it doesn't rely strictly on explicit recommendations. It is possible to reach influencers via paid advertising, such as Facebook Advertising or Google Adwords campaigns, or through sophisticated sCRM (social customer relationship management) software, such as SAP C4C, Microsoft Dynamics, Sage CRM and Salesforce CRM.

## **Offline Digital Marketing**

### **i. Enhanced Offline Marketing**

The electronic billboards, electronic displays, the demonstration of any electronic product form enhanced offline marketing.

### **ii. Radio Marketing**

Radio is an offline digital marketing since Sound is stored in the memory more effectively than the written word. Sound, the spoken word offers emotion and encourages the listener's imagination to produce their own desirable image of a product. Radio is the theatre of the mind.

### **iii. Television Marketing**

A television advertisement also called a television commercial or TV ad is a span of television programming produced and paid for by an organization, which conveys a message, typically to market a product or service. Direct response television (DRTV) is any television advertising that asks consumers to respond directly to the company - usually either by calling a number or by visiting a web site. This is a form of direct response marketing.

### **iv. Phone Marketing**

Cold calling, text messaging of discounts, coupons etc falls under phone marketing.

Growth of Digital media

<b>Year</b>	<b>Digital Advertising spending (USD billion)</b>	<b>Internet Ad Spending (USD billion)</b>	<b>Total media ad spending (USD billion)</b>	<b>Growth of Digital media to total media spending</b>
2013	0.57	0.03	5.56	10.2518
2014	0.74	0.08	6.11	12.11129
2015	0.94	0.17	6.4	14.6875
2016	1.17	0.35	7.03	16.64296
2017	1.46	0.59	7.49	19.49266
2018	1.78	0.94	7.94	22.41814
2019	2.17	1.23	8.53	25.43962

Today, digital marketing industry in India is growing at a very fast rate. The figure presented in the above table indicates that digital advertising spending has increased from 0.57 Billion to 1.46 billion in 2017 and projected to 2.17 billion in 2019. Its contribution to total media spending has significantly grown from 10.2518% to 19.49% in 2017 and project to 25.43 in 2019. Moreover, the development in the digital marketing industry in India evident in the marketing shift from anonymity to identity. Interaction on the Internet now looks more physical as opposed to the anonymity of identity in the past. Also, marketing information's is moving along in the same line with entertainment. People of India needed an exciting spirit always. This targets their interest into the marketing information. According to a survey from people indicates the size of Digital Marketing industry in India indicates 34% of the companies already had an integrated digital marketing strategy in 2016. Survey reveals that 72% marketers believe that traditional model of marketing is no longer sufficient and this will make the company revenue to be increased by 30% by the end of 2017.

## Discussion

The Digital Marketing Strategy should be integrated with the organization's Marketing Strategy. This shall ensure the smooth transition from traditional to digital strategy. The organizations should define the online customer value proposition which may motivate existing and new customers to use the company's product and services and stay loyal. In contrast to PPC and e-mail clickthroughs, Social media ,Online PR and Affiliate marketing are perhaps the less easily graspable of the new stable of digital channels - certainly in terms of delivering tangible marketing outcomes. (Damian Ryan and Calvin Jones,2009). Google Analytics is a powerful tool that gives the quantification of visitors to the e-promotional campaign of the organization. The infographics, blogposts, short videos can be helpful initially to attract the audience. These days the mobile usage has increased several fold, therefore the companies should emphasise their digital marketing strategy towards mobile marketing. It is much easier and faster to calculate ROI (return on investment) for digital marketing as compared to traditional marketing strategy.

## Concluding remarks and proposal

Digital channel in marketing has become essential part of strategy of many companies. Nowadays, even for small business owner there is a very cheap and efficient way to market his/her products or services. Digital marketing has no boundaries. Company can use any devices such as smartphones, tablets, laptops, televisions, game consoles, digital billboards, and media such as social media, SEO (search engine optimization), videos, content, e-mail and lot more to promote company itself and its products and services. Digital marketing may succeed more if it considers user needs as a top priority. Just like "Rome was not built in a day," so, digital marketing results won't also come without attempt, without trial (and error). The watchwords "test, learn and evolve" should be at the heart of all digital marketing initiatives. Companies should create innovative customer experiences and specific strategies for media to identify the best path for driving up digital marketing performance.



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## A NOTION ABOUT BRANDING OF GREEN PRODUCT AND GREEN MARKETING

### Abstract

The concept of green branding has emerged an important tools to help in protecting environment and also human beings as well as all the living creatures. The global warming is at the door steps, which has already been a serious cause of concern for the universe as a whole. Companies have to focus on building a brand in three dimensions namely, creating and communicating, managing and structuring the green brand. All this has been because of the result of excessive exploitation and mismanagement of the natural resources. Still, we all can do our bit to prevent catastrophe in waiting. The concept of green thinking should be followed in letter and spirit. The green product is a first step towards green thinking. Green lifestyle have led to diversification in consumer buying approach as ecological issues are getting bad to worse and consumer's concern about environment protection have increased. In order to accomplish its mission and vision, companies need to focus on increasing their competitive advantage, which requires them to resort to techniques like Green marketing and green product development so that it can gain consumer satisfaction. This study focuses on the concept of green marketing and green product development, different consumer consumption and finally inspecting the trouble, companies face when they have unsuccessfully implemented it

**Keywords:** Green marketing, green product development, Agility, consumption, environmental benefits, Green brand chartering, Green thinking, Green lifestyle.

### Introduction

Green marketing and green product development have various benefits to firms in terms of increasing the sustainable environmental benefits and to increase the awareness of brand image of the firm. Yeow Kar Yan and Dr. Rashad Yazdanifard. Green product is that product that which is environmentally friendly, conscious and which is addressing the environment, it can be herbal or organic or non organic. Green products are the ones produced without non-toxic chemicals or are recyclable, reusable, bio-degradable or having eco-friendly packaging and with low detrimental environmental impact at all stages of its life-cycle with the long term goal of preservation of natural environment. As per the Organisation for Economic Cooperation and Development (OECD) 2009.

The American Marketing Association (AMA) held the first workshop on ecological marketing in 1975. 1980 was the first time green marketing came into existence. AMA defines green marketing as the marketing of products that are presumed to be environmentally safe, it incorporates several activities such as product modification, changes to production processes, packaging, advertising strategies and also increases

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awareness on compliance marketing amongst industries. Business Dictionary defines green marketing as promotional activities aimed at taking advantage of changing consumer attitude towards a brand. These changes are increasingly being influenced by a firm's policies and practices that affect the quality of the environment and reflect the level of its concern for the community. It can also be seen as the promotion of environmentally safe or beneficial products.

Companies have sensed this and are leaving no stone unturned and only those companies with agility to develop action oriented ecological approaches can survive. Importance of green marketing and green product development has huge advantage for companies in the long run as companies have realized consumers concern about environmental protection issues. Having said all this company focus on Green Brand Image but fails to take appropriate steps to do what they say resulting in sooner or later. Hence not only will green marketing and green product development increase environmental benefits but also have a significant impact on its Brand Image. .

The success of business depends upon its ability and its market agility. The business agility is the "ability of a business system to rapidly respond to change by adapting its initial stable configuration". The agile enterprise is an extension of this concept, referring to an organization that uses key principles of complex adaptive systems and complexity science to achieve success. Aaron De Smet defines agility as the ability of an organization to renew itself, adapt, change quickly, and succeed in a rapidly changing, ambiguous, turbulent environment. In nutshell, one can say that business agility is the outcome of organizational intelligence. It's this stable backbone that becomes a springboard for the company, an anchor point that doesn't change while a whole bunch of other things are changing constantly.

## **Objectives and Methodology**

Present research work has been taken up with the aim to analyse the concept of green marketing and green product development and its sustainability while implementing it. In the present piece of work, researcher has chosen methodology to systematic and theoretical analysis of the concept and evaluate suitability of method to apply in this research. Research is based on secondary data encompasses concepts of green product, green marketing, its agility and perceived outcome. We have collected secondary data from the published sources like newspaper and articles research papers, books and other published data sources related to green product and green marketing system. The collected data and information has been organized, explained and analyzed for drawing inferences.

## Review of Related Literature

Earlier studies on green products market agility shows that Ottman (1998) some consumers do not buy “green” products because of their perceived inferiority, citing a study of observable and product specific information (e.g. use of biodegradable and recycling behaviour) by Roper Starch Worldwide (RSW). Alston and Prince Roberts (1999) found, in their research on environmental strategy and new product development, that there was a willingness to pay slightly more for environmental improvement. A short evolution of green product's definition is necessary. In 1975, Herberger Jr. defined green product as having ecology appeal: among the product's characteristics its viability with the environment is recognizable, understandable and marketable. Weber (1991) argued that green products are the ones claiming to be environmentally friendly and biodegradable. Mebratu (2001) claims that a green product possesses environmental procurement: systematically building environmental considerations into day-to-day procurement decision-making and operations. Recent definitions are also relevant. In a study of Pickett-Baker and Ozaki (2008), they sustain the idea that defining environmentally sustainable products is a complex process. In a strict sense, there is no such thing as a truly sustainable or green product, as all products bought, owned, used and discarded in everyday lives will have negative environmental impacts at some stage in their life cycles.

The relationship among Green Brand Positioning (GBP), Green Brand Knowledge (GBK), Attitude towards Green Brand (AGB) and Green Purchase Intension (GPI). GBP and GBK influence green brand attitudes separately, while GBK affects green brand attitudes. Meanwhile green brand attitude influence GPI. Yi-Chun Huang, Minli Yang, Yu-Chun Wang, (2014). Marketers have realized the importance of assessing consumer willingness to pay (WTP) before introducing green products across different target audience. There exists an influence of consumer's pro environmental behavior (PEB) and environmental locus of control (ELOC) on their WTP for green products. P Maheshwari, Shruti (2014) in his work on title “Consumer's Values/Beliefs, Attitudes towards Environmentally Friendly Products” found that more than three fourth of the respondents strongly agree that they would choose eco friendly brands. Respondents reacted positively about buying brands which are less damaging to environment (80 per cent). However, the expectation of the customer is not away from the effective functioning of green brands as that of non green products. (P Maheshwari, Shruti 2014; AIMA Journal of Management and research)

Since the industrial revolution, man has done irreparable damage to the environment. He has exploited natural resources beyond their regenerative capacity, altered ecosystems and extinguished entire species of plants and animals. Environmentalism has fast emerged as an important global phenomenon during the last decade owing to increase in environmental related concerns and ecological pressures derived from non-governmental organizations, local environmentalists and governmental agencies. Between 1980 and 1990, a trend in “green products” appeared, and this type of niche products occupied a distinct place in the market. But only at the beginning of the 21st century, marked with global warming and natural resource depletion, “green” started influencing the practices of product manufacturers. (Air Quality Sciences, 2010) Albino et al. (2009) agree with the fact that the green product is designed to minimize its environmental impacts during its whole life-cycle. In particular, non-renewable resource use is minimized, toxic materials are avoided and renewable resource use takes place in accordance with their rate of replenishment.

## **Green Brand Positioning (GBP)**

In studying green brand positioning, some researchers have focused on typologies of green positioning strategies and their effects on consumers (e.g., Fuchs & Diamantopoulos, 2010; Hartmann et al., 2005). Brand positioning is the act of designing a brand's offering and image to occupy a distinctive place in the target market's mind.

## **Green Brand Knowledge (GBK)**

The green brand knowledge is 'the ability for a buyer to recognize and to recall that a brand is environmental friendly' (Aaker, 1992). Knowledge of green brands has caused consumers to develop positive green marketing awareness and has bolstered their interest in fortifying the environment whilst preventing its degradation, unsuccessful green brand positioning is seen as an advantage for marketers that can be used to differentiate their products from the available competitors, giving the impression that their products are distinguishable, and thus creating more demand and generating increased intention to purchase more green product.

## **Attitude Toward Green Brand (AGB)**

Breckler proposed the most influential ABC model of attitude: (1) affective component is the reflection of consumer's likes or dislikes, (2) behavioral component refers to the past behaviors or experiences regarding an attitude object, and (3) cognitive component reflects the beliefs, thoughts, and attributes that we would associate with an object. Many studies use the ABC model to construct eco attitudes for predicting the eco behaviors. Eco attitude derives from one's self concept, one's focus on the environment, and one's self-consciousness of being part of the natural environment.

## **Green Purchase Intention (GPI)**

Green purchase intentions refer to an individual's readiness to perform green buying behavior, mainly reflecting the consideration of less pollution. It is assumed to be an immediate antecedent of behavior. Chen et al. defined green purchase intentions as the possibility that consumers would like to purchase environmentally friendly products. Roe et al. argued this meant consumers bought green products in order to protect or not destroy the environment.

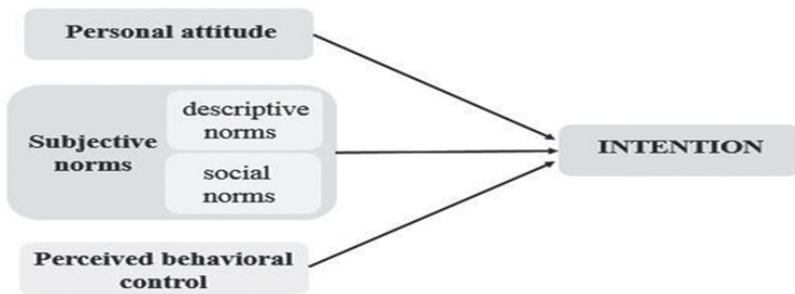
## **Willingness To Pay (WTP)**

Willingness (and ability) to pay is the foundation of the economic theory of value. The idea is, if something is worth having, then it is worth paying for. The idea extends to environmental resources like water quality and natural resources like trees. The key assumption is that environmental values are anthropogenic. Whatever people think the environment is worth is what it is worth. Economic methods can be used to attach estimates of willingness to pay to changes in the level of environmental quality and natural resource use.

## **Pro-Environmental Behaviours (PEB)**

Pro-environmental behaviours (PEBs), defined by Kollmuss & Agyeman (2002: 240) as "behavior that consciously seeks to minimize the negative impact of one's actions on the natural and built world", can be adopted in workplaces committed to effective workplace sustainability programs (WSPs). Also, the Reciprocal Determinism theory of Albert Bandura states that a person's behavior both influences and is influenced by personal factors and the social environment.

We all want economic prosperity—which we owe to the enormous success of business—to be compatible with environmental protection. But if we take a broader view and plot any measure of that prosperity against any measure of environmental degradation, we find that the two move, inexorably, in the same direction. After nearly a decade of fairly committed efforts on the part of business and economic communities to reduce their environmental impact, all we find is that the rate of acceleration of environmental degradation throughout the world is slowing down. Researchers have Linchpin to understand green brand positioning based on its types (Fuchs & Diamantopoulos, 2010; Hartmann et al., 2005). Companies offers depend upon its Brand positioning by which an image is absorbed and a unique representation is created in target market. For example, say a companies may intentionally or unintentionally make false claims regarding the environmental friendliness of their products, a process known as “greenwashing.” If consumers become aware that a company is engaging in greenwashing, the company may suffer harm to its credibility.



**Fig 1**

Allport, G. W. (1935). Defines Personal attitude as permanent mental or neural willingness gained from the experience, making the directive or dynamic influence on an individual's response to objects and situations that he comes into contact. subjective norms refer to the belief that an important person or group of people will approve and support a particular behavior. Subjective norms are determined by the perceived social pressure from others for an individual to behave in a certain manner and their motivation to comply with those people's views. Perceived behavioral control includes the perception of one's own abilities and sense of control over the situation and is defined as a combination of locus of control (belief about the amount of control that a person has over events and outcomes in his life) and self-efficacy (perceived ability to perform the task) (Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. As shown above the following three i.e. Personal attitude, Subjective norms and Perceived behavioral control all contribute to Intention, the fig 1 is given by Ajzen 2002. Researcher's opinion about understanding the practical importance of a green product model design conforms that technological innovation alone rarely leads to commercial success. Instead, they suggest that every product development effort should be paired with an appropriate business model design process, in order to define fitting strategies for value capturing and marketing.



## Discussion

The researcher in this paper aims to analyse how the concept of green marketing and green product development influences the purchasing approach of consumers. This research is important because the entire globe is presently facing with the devastation and the problem of pollution which are becoming worse day by day causing continuous deterioration of human lives and entire civilisation. Green marketing is a strategy that addresses the concern of promoting and preserving the natural environment which can benefit the firms, consumers and environment while the green product is developed. Today most of the firm have started to practice the concept of green marketing and green product development in their business operations. Companies intention is to produce eco-friendly products in order to satisfy the consumers' wants and needs. Beyond this, there is a shift in consumers' behavior towards a greener lifestyle; it is known as the "green consumer". The environmental sensitivity of the firm make a positive impression of consumer and build positive consumers' cognition which in turn help a lot in deriving customer satisfaction and consumer trust. These activities helps a lot in achieving long term profitability and environmental sustainability. As the environmental issues have worsened, most of the national and international firms have started to use the marketing mix concept in green marketing which can achieve the firm's mission and vision in short periods. The firms have to identify the customers' environmental needs and develop green products which exceed the quality expectations of customers. Most firms used green advertisement as a promotional strategy which can educate consumers about the way of protecting the environment and it also can establish the eco-centric image of the firm.

Presently the firms tries to reduce the environmental impacts while distributing and transporting the raw materials or finished goods. The eco -labels specially has become most important issue within green product development. Various studies confirms that consumers are ready to pay extra premium for the green products. Ethical issues associated with green product marketing are also important as there are firms that implement green marketing and green product developments inappropriately and it leads to the occurrence of problems that may burden the firm in the future. Say for example, the low perceived credibility of ecological claims in green advertisement may cause the consumers to have negative attitude towards the firm when they go to purchase a similar product in the future. Therefore, the firm and marketers must develop their business policies and should structure their green marketing strategy with great care and precision so that they can keep consumers retention; as well as minimizing environmental impacts in order to achieve long term profitability and growth.

## Conclusion

It has been observed that there has been a sudden eruption of awareness about environmental concern, companies have changed their marketing styles quickly . India is a huge market potential companies need to understand the green brand chartering. The brand image building or confidence building in the mind of consumer from Green product shall be substantiated with actual product benefits and product attributes perceived and experienced by the consumer. The ECB consumers who are high on ELOC tend be more loyal comparatively. The notion of Green brand has to harvested and inculcated in such a fashion that it should ultimately be a part of WOM (worth of mouth ) communication, which is considered to be the epitome of marketing efforts. The loyalty towards the Green

products is on the higher side for the consumers rated on the higher side of EPI. The PCB is directly proportional to the trust building measures and level of confidence in the Green products. The challenge remains especially in Indian consumers towards the green product, is the product is gauged on price and quantity scales. The Indian consumer looks for all the benefits namely good quality and good quantity from a product within the competitive price range.

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