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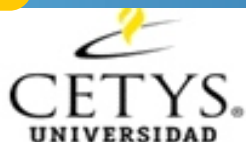
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## From the Editor's Desk

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This is the Second issue of Volume Nine of “ASM Business Review”, the referred research journal of the ASM group of Institutes.

ASM Group of Institutes is committed for qualitative research in academics. And this ASM Business Review is a product of its commitment. Audyogik Shikshan Mandal has been playing a pioneering role in the field of creative education ever since its inception in 1983. With a mission “Excellence in Management Education, Training, Consultancy and Research for success”, ASM is marching towards excellence having more than 65,000+ alumni working at all levels of management in all types of industries.

The ASM Business Review is a medium created by ASM to demonstrate the research skills of authors. It is a strong communication link between industry and academia and aims to work as a catalyst for knowledge sharing between various sections of society. ASM Business Review provides a platform for academic scholars and champions from industry to come together for common cause of developing innovative solutions to various problems faced by society and business entities. The present review is a medium to faculty members, research students and they like to present their research findings before the wider audience. The opportunity to publish their research results would provide ample motivation to this type of scholars. The previous issue of the Review received encouraging response from the academic and corporate community as well. Research articles accepted and printed herein are subject to objective editorial processing and are peer reviewed.

ASM Business Review looks forward as a strong link and partner for society and industry to develop workable solution for day to day problems. We believe our success is a team work of various contributions to this journal. ASM BUSINESS REVIEW is always committed to excel academic research and consultancy.

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### 3R - A SUSTAINABLE MODEL FOR MUNICIPAL SOLID WASTE MANAGEMENT

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#### **ABSTRACT :**

*Municipal Solid Waste (MSW) is increasingly becoming an exasperating and unmanageable problem for governments and citizens around the world. Greenhouse gas emissions, SO<sub>x</sub>, NO<sub>x</sub>, dioxins, other emissions to air, emissions to water like leachate, dis-amenities like odour and pathogens, health risk for those who come into contact with the MSW like workers, doctors, people living around the MSW disposal areas and landfills; the opportunity costs of sterilisation/alienation of land and increased costs of future land occupied by landfills when land becomes more and more scarce are just some of the unquantified costs or externalities of MSW disposal. When you add quantified private costs like costs of approval process, capital costs, costs of building and operating landfills, collection of MSW, costs of upkeep and costs of rehabilitation and after care, the costs of processing, costs hidden in taxes on the already tax burdened citizens, then it becomes very pertinent to first address the pre-treatment processes of MSW and reduce waste as far as possible. In the race to collect and transport MSW, many countries overlook the pre-treatment processes of MSW management. This generates unsustainable costs for governments, municipalities and citizens.*

*MSW management has two major parts to the process, pre-treatment and post treatment. If we target the pre-treatment process itself and the very generation of waste, much abatement is achieved and problems become manageable. The reduction, reuse and recycling of waste has created many success stories around the world in mitigating the generation of MSW, it has led to efficient sustainability and has reduced the stress on ecosystems and environments. This research article examines such cases empirically and outlines the policies that have been implemented. These can be replicated by governments world over to achieve success in municipal solid waste management.*

**Key words:** 3R - Reduce, Recycle, Reuse; Municipal Solid Waste Management (MSWM); Zero Waste, Sustainability, Global Warming, Climate Change

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**Word Count: 5,849**

## 1. Introduction

Globally, Municipal Solid Waste Management (MSWM) processes are permutations and combinations of technologies, be it Japan, Middle-East, Africa, Europe or the U.S. There are two sides of the fulcrum of MSW, one the reduction, reuse and recycling of waste (3Rs) before MSW treatment and two, post treatment technologies of incineration, composting, biomethanation, pyrolysis and sanitary landfills in developed and unsanitary landfills or dumpsites in the developing nations. Trash, an unimportant term of the past has taken mammoth proportions today. It is the focus of governments and international institutions world-wide, showing us how seemingly minor problems can take gigantic proportions. It has a 13% climate change risk and leads to global warming when left unattended. Hence the old adage, "A stitch in time saves nine".

Greenhouse gas emissions, SO<sub>x</sub>, NO<sub>x</sub>, dioxins, other emissions to air, emissions to water like leachate, dis-amenuities like odour and pathogens, health effects on those who come into contact with the MSW like workers, doctors, people living around the MSW disposal areas and landfills; the opportunity costs of sterilisation/alienation of land and increased costs of future land occupied by landfills when land becomes more and more scarce are just some of the unquantified costs or externalities of MSW disposal. When you add quantified private costs like costs of approval process, capital costs, costs of building and operating landfills, collection of MSW, costs of upkeep, costs of rehabilitation and after care, the costs of processing, costs that get hidden in taxes on already tax burdened citizens, then it becomes very pertinent to first address the pre-treatment processes of the fulcrum and reduce waste as far as possible. In the race to collect and transport MSW, many countries overlook the pre-treatment processes of MSW management, mainly the reduction in the generation of waste.

The following diagram illustrates the two sides of MSW treatment:



**Fig. 1. Flow chart showing the MSW process**

Source: Author's publication

Both sides of the fulcrum are equally important, yet pre-treatment can be termed the more important of the two. If we can arrest the generation of waste, more than half the problem of waste management is resolved. The lesser the quantities of waste the better, if we have to view sustainable ways of managing wastes. On the opposite side

of the fulcrum we have a range of waste processing technologies from the high end incineration and land intensive landfill use to the low cost composting and Refuse Derived Fuel (RDF) technologies. Again the same rule applies, what is sustainable? If we can have technologies that can do the least or no environmental harm, create organic products at a lesser cost, then of course, these are sustainable and should be ideally followed.

The first part of this paper links the 'zero waste' concept to the 3R policy. It then lays out the concepts of 3R. The indicators that can be used for the quantification of 3R are stated next. Lastly, successful case studies are recorded in terms of the reduction in generation of waste, showing how 3R is a successful path to sustainability.

## **2. Literature Review**

The paper (Kleindorfer et al.2005) reviews varied literature in sustainable management and pegs it as one of the top fifty issues in the operations and production management domain. Another model (Baldwin et al 2005) stresses on economic and environmental issues explaining tools like benchmarking, total cost, life cycle cost, eco-portfolio analysis, cleaner production, design for environment, to have sustainability in the manufacturing system. Effects of sustainable supply chain on people, planners and profit are studied by these authors (Markley and Davis, 2007). Social responsibility by companies is required for better sustainability says this author (Ansett, 2007) in the long run. In the field of sustainability (Seuring et.al, 2008) outline the literature review of sustainability and supply chain management. A model is suggested by (Pagell and Wu, 2009) focusing on managerial aspect of sustainability. Sustainability is a tool deployed to help organizations perform well, not only environmentally, but also, socially and economically (Houe et al., 2009). A significant number of publications and reports by organizations like the Ellen MacArthur Foundation (2013) use sustainable design strategies. The three most popular design strategies are eco-design guided by the Life Cycle Assessment (LCA) of a product, Nature Inspired Design Strategies (NIDS) such as bio-mimicry, where “nature is the mentor” (Benyus, 2002), and the cradle-to-cradle or “C2C” tenets which aim to inform about design. The three tenets are: waste equals food, use current solar income, and celebrate diversity (De Pauw et al., 2014, McDonough and Braungart, 2002, van der Wiel et al., 2012). In addition, an empirical study (De Pauw et al. 2014) revealed that NIDS encourage design students to include a greater range of diverse solutions in the product-system with a more functional approach. Both the 3R principles and Sustainable Design Strategies (SDS) can coexist, but they should be understood as having different functions working at two different levels. However, we view SDS as catalysers, because they are used as guidelines for designing eco-innovative goods and services which could be reintroduced to the system in the long term as biological or technical resources (Braungart et al., 2007,



De Pauw et al., 2014). Two authors, supporters of these principles (Wang et al. 2014) state that “a circular economy is based on the ‘reduction, reuse, recycle’ principle, consisting of the characteristics of low consumption, low emission and high efficiency”, while (Yong 2007) affirms that “the 3Rs principle is a good principle guiding to implement the circular economy in practice”. According to these authors (Yuan et al. 2008) and (Yang and Feng 2008), the 3R principles can be applied throughout the whole cycle of production, consumption and return of resources. The most common and frequently mentioned group of principles are the 3Rs (reduce, reuse and recycle), as cited by authors (Ghisellini et al., 2016, Haas et al., 2015, H. Yuan et al. 2008). Zero waste, a success in ward 40, Pune, India, (Mastakar et al., 2019) documents and proves the success of 3R by using LCA in achieving zero waste and a complete C2C model.

### 3. Methodology

A combination of primary and secondary research was used for the purposes of producing this research paper. Besides the primary research sourced from the author's article (Mastakar et al., 2019) on the 100% recycling success in a ward in Pune, India, voluminous secondary research was done to establish the success of 3R as one of the main tenets of the 'Cradle to Cradle' (C2C) model. 3R has been prevalent for more than three hundred years. However, its use and importance surfaced in the twentieth century, first with the sustainability approach and then with the C2C model. Three models have been developed on the basis of direct secondary data and its processing. The models developed prove the success of the three far eastern countries in the implementation of 3R and attaining near zero waste MSWM models so crucial for the 17 SDGs planned to be achieved in 2030 by the UN. Each country has used a different model but there is an underlying similarity in terms of changing consumer lifestyle, Extended Producers Responsibility and innovative Municipal Solid Waste Management (MSWM) practices.

The present research, has covered the literature of the twentieth century with respect to 3R and has documented the proven success of 3R in countries like Taiwan, Taipei, Japan and Korea. The methodology has been to study and analyse the secondary data generated by the respective governments and collating it for the purposes of showing how the simple tenet of 3R can, without excessive expenditure not only bring in the LCA model but also the C2C model of MSWM. This research thus remains mainly secondary, based in part on the primary research of the author on zero waste. Additionally, the authors evaluated the performance of the 3R policy for the purpose of quantifying it. The authors developed indicators based on the assessment of waste prevention, reuse, recycling, waste to energy (WtE), Refuse Derived Fuel (RDF), composting and waste taken to landfill. The indicators used were

- Recycling rate

- Conversion rate
- Landfill rate.

Numeric values can be given to these indicators to benchmark the performance of the 3R policy in each country. The changes in the values of such indicators help in overall assessment of MSWM and help determine the success of the 3R model.

#### **4. 3R Policy and Zero Waste**

The concept of "Zero waste" is a dream that has been actualised in many pockets of the world, mostly developed ones where there is no paucity of funds, however, it is in the developing nations that innovation due to the unavailability of funds has made it such a sustainable concept. Masaru Tanaka's article on "The Sustainable Society and Municipal Solid Waste Management," stresses on the necessity of the 3R policy, the three crises that are related in many ways to improper management of MSW and the need for a 'zero-waste' society (Pariatamby, A. & Tanaka, 2015). Due to the way our societies developed we now face the ecosystem crisis, the global warming crisis and the resource use crisis. The average global temperature has risen by 0.74oC over the past 100 years due to greenhouse gas and carbon emissions, this is predicted to rise by another 6.4oC in the next 100 years in the twenty-first century(Zakaria, Al-ansari, & Knutsson, 2013). Global warming is responsible for higher temperatures, rising sea levels and wide spread melting of snow and ice, resulting in heat wave related deaths and vector related infectious diseases. Waste incineration emits carbon dioxide and land filling generates greenhouses gases like methane, 21 times more lethal than carbon dioxide. Ecosystems, with their rich biodiversity and plant life have provided us with nature's free services, clean air, water, food and healthy environments to live in. The indiscriminate use of these services which have never been internalised in our pricing have lead to the Ecosystem crisis, we have polluted land, water and air, it is therefore important to revert to 'zero waste' and 'zero emissions' societies (Pariatam by, A. & Tanaka, 2015).

#### **5. Sustainability through the 3R Society**

A sustainable society uses the Reduce, Recycle, Reuse (3R) principle, where the environmental impact is limited to the environment's capacity to absorb waste, minimizes extraction of natural resources by reducing emissions of waste and promotes reuse and recycling of waste. Thus, in the words of Tanaka, we achieve a 'low-carbon', a 'sound material cycle society' and a 'society in harmony with nature' that preserves healthy ecosystems and brings about a healthy symbiosis between man and nature(Pariatam by, A. & Tanaka, 2015). Here healthy and flourishing ecosystems are maintained and preserved for future generations, the crux of a sustainable society. In waste management and all other activities, concerted efforts to achieve a 3R society that minimizes the extraction of natural resources and

redirects used resources back into the production cycle creates a circular flow. Such an economy, when created will be a circular model where there are no leakages or there is zero wastage of resources (Lee et al., 2017) .

The 3Rs Concept has become mandatory for sustainable development with the priorities placed on it by the World Summit on Sustainable Development. Their '10 Years Framework Programme on Sustainable Consumption and Production' has Para 22 of the Joint Plan of Implementation specifically endorsing the 3R policy approach to bring in sustainability in both consumption and production.

## 6. Quantification of 3R

How does one quantify the performance of the 3R policy? One can use the waste management indicators which can be the basis of assessment like waste prevention, reuse, recycling and landfill diversion targets (Resource, Policy, & Visvanathan, 2012). Numeric values can be given to the indicators to benchmark for comparisons between countries and also for the performance of individual countries. There are four basic areas namely:

- Per capita amount of municipal waste generated
- Quantum of waste sent to incineration plants
- Quantum of waste sent to and landfills
- Recycling rate

$$MSWT = MSWR + MSWC + MSWLF$$

Where, MSWT is total MSW generated, MSWR is part of MSW recycled, MSWC is part of MSW sent for conversion, say, energy, Refused Derived Fuel (RDF), compost etc., and MSWLF is the residual MSW (mainly neutrals) sent to landfills.

Thus we can determine or quantify indicators like Recycling Rate, Conversion Rate and Residual or Landfill Rate as follows:

$$\text{Recycling Rate (RR) \%} = (MSWR / MSWT) \times 100$$

$$\text{Conversion Rate (CR) \%} = (MSWC / MSWT) \times 100$$

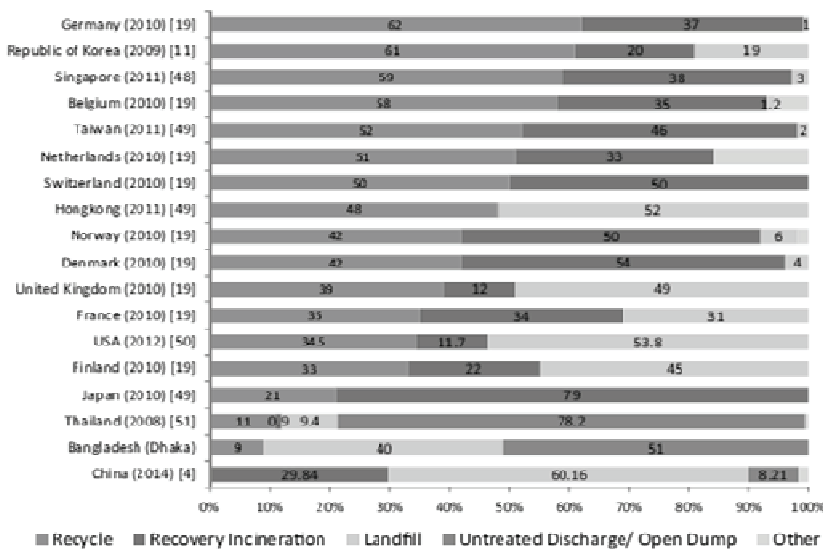
$$\text{Landfill Rate (LFR) \%} = (MSFLF / MSWT) \times 100$$

$$RR + CR + LFR = 100\%$$

Thus use of 3R model and its success can be ascertained by looking at above indicators that is, MSWT, RR, CR and LFR. In other words, reduction in MSWT, improved RR, improved CR and reduction in LFR implies better MSW management and success of 3R model.

### 7. 3R Hierarchy in different Countries:

Global 3R policy has been successful in establishing sustainability. Countries across Europe and Asia have achieved success and recorded it. Here we state some of the successes which have been quantified. The Fig 2, below shows the 3R hierarchy of 18 countries.



Source:(Cave, 2017)

**Fig. 2. MSWM hierarchy of different countries and their combination of technologies**

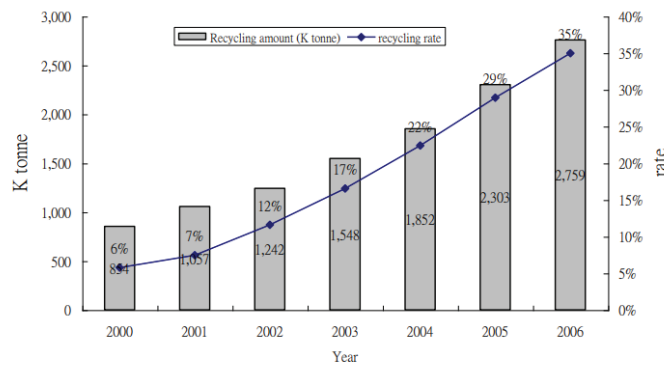
Fig.2 shows the hierarchy of different countries and their combination of technologies for MSWM. Germany tops the hierarchy with 62% of its waste being recycled, 37% being incinerated into energy and only 1% land filled. This is the most ideal situation in MSWM, except that, with the advent of 'zero waste' philosophy, incineration with its high contribution to GHGs being capital intensive, low employment scenario is discouraged. However, the recycling rate in Germany is very high, the best policy for reducing waste generation itself. Germany is followed by Korea and Singapore although land filling is as high as 19% in Korea, but is ideal in Singapore at 2%(Waste Management in Germany 2018, 2018).

At the bottom of this ladder sits China with almost 30% of incineration, to note here, with very low energy recovery and high GHGs and a very high 60.16 % going to landfills. It is however better than Bangladesh just above it because only 8.2% goes into untreated discharge and unsanitary open dumping. In Bangladesh, unsanitary open dumping is very high at 51% and can be very dangerous for local populations(Cave, 2017).

### 8. Asian Success Models in 3R

Case of Taiwan - Reduction in waste generation through recycling:

Taiwan started implementing Extended Producer's Responsibility (EPR) programs for consumer products in 1988 in accordance with the Waste Disposal Act (WDA) Amendments of 1988. In 1997, Taiwan Environmental Protection Agency (TEPA) initiated the so-called "Four-in-One Resource Recycling Program", which coordinated the efforts of the public, recycling businesses, municipalities and the recycling fund for a comprehensive recycling of items listed under the EPR programs (Newsense, 2018).



Source:(Ho, Lee, & Lai, 2006)

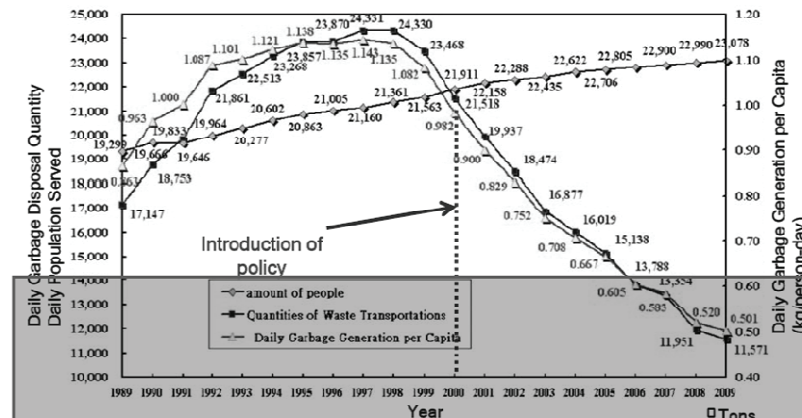
**Fig 3. Resource recycling amounts and rates of MSW from 2000 to 2006**

As can be seen in Fig 3, recycling in Taiwan rose up from 6% in 2000 to a whopping 35% in 2006. Taiwan used a combination of waste reduction policies to achieve their present success from 1.14kg per capita in 1998 to 0.5kg per capita as of 2009. These are stated here:

- recycling programmes,
- use of volume based fee to promote trash reduction,
- per bag trash collection fee in the year 2000,
- reduction in the use of plastic shopping bags and disposable tableware in July 2002,
- annual use of disposable plastic cutlery reduced by 2 billion pieces, reduction of 86%,
- restriction on excessive packaging in July 2006-7,
- annual use of plastic bags reduced by 2 billion pieces, reduction of 58%.

#### **Case of Taipei - waste reduction at source**

In Taipei, between the years of 1989 to 2009, garbage per capita reduced from its 1.13kgs in 1995 to 0.5kgs in 2009. This is shown in the following graph.



Source: (Ho et al., 2006)

**Fig. 4. Waste reduction at source in Taipei**

The above graph shows the spectacular progress of waste reduction in Taipei. As can be seen from the graph, daily garbage generation per capita went down from a high of 1.143kgs in 1997 to a 0.5kgs in 2009 an almost 56% reduction in per capita waste generation (Pariatamby, A. & Tanaka, 2015). When the generation of waste itself falls by more than half the stress on waste processing and the related costs would also fall in comparison. This contributes immensely to the reduction of financial costs of waste processing and also to the methane and carbon related cost reductions.

### Case of Korea - a classic success of 3R

Korea has seen much success in the use of 3R to reduce waste generation. Three policies on Waste Reduction are used in Korea, restriction on disposable products, volume based restrictions and waste to energy.

#### Restriction on Disposable Products:

The Korean government replaced 'returnable products' with disposable products for a 'healthier consumer culture'. Korea put a restriction on one-time-use products like disposable plates and chop sticks as far back as 1994 and extended it to industrial fields covering items like plastic/paper bags. Imposing a fine of 3,000,000 Korean won (equivalent to about 3,000 USD) on the industrial use of disposable products with rewards for reporting unlawful use of disposable products brought about a reduction in the usage of disposable products through the participation of citizens. To stop the overuse of packaging materials and to aid use of recyclable and reusable packaging materials, restrictions on packaging materials were implemented in Korea. Manufacturing refill products and avoiding the repackaging of goods brought down the amount of waste.

#### Management Measures

Strict regulations were implemented regarding management for preventing the manufacturer, importer or dealer of a product from producing packaging waste, these



were implemented by local governments. Inspection of the manufacturer, importer or dealer of a product was conducted annually. If the manufacturer did not conform to the prescribed packaging methods, a fine of 3,000,000 Korean won (equivalent to about 3,000 USD) was imposed on the manufacturer. These 'restriction' policies on disposable products like wooden chopsticks, styrofoam plates, disposable razors, toothbrushes, disposable shampoos and conditioners in the restaurant and hospitality industries brought about a reduction in the quantum of waste.

### **Volume-Based Rate System**

Applying the 'producer pays' in January 1995, to reduce the amount of waste generated, a charge was introduced which forces the person who discharges waste to pay the treatment cost according to the quantum of waste generated. To establish a 'frugal' lifestyle and change patterns of consumption and disposal to reduce waste from each stage of production, fees were levied according to the quantity of waste produced. To motivate people to reduce waste, the volume-based waste fee system was not applied to recyclable wastes so that waste was recycled as much as possible.

### **Principles for the Application of the Volume-Based Rate System**

The following principles were used to reduce the volume of waste:

- Polluter Pays Principle (3P's): Here the generator bears the costs of pollution.
- User Pays Principle: Benefiter of the use of a resource pays the price for the use of the resource.
- Prevention Principle: Prevention takes precedence over disposal, which shifts the direction of waste policy from supply-oriented to a demand control approach.
- Economic Incentive Principle: Waste discharging dues, fees, and taxes are charged based on the quantity and quality of waste discharged into the environment

In order to implement the Producer Pays principle, Operation of Volume-Based Rate System was implemented. The costs involved in collecting, transporting, and disposing of waste were included in the price of plastic garbage bags, discharge stickers had to be bought and attached to the waste while disposing the waste.

### **Results of Volume-Based Rate System**

With the efforts and cooperation of citizens, the amount of waste by the implementation of the volume-based rate system has been reduced to a level equivalent to the developed world, and the amount of recyclable waste collected doubled. The amount of waste produced per person reduced from 1.33 kg per day in 1994 to 0.96 kg per day in 2010. The recycling amount has also significantly increased to 29,753 tons per day in 2010 from 8,927 tons per day in 1994.

**Development of the Waste Recycling Industry and its Technology**

As the collection of recyclable wastes such as paper, cans, and plastics has increased, the supply of recycled materials has been increased abundantly. Hence, the number of companies that use recycled materials has increased and many technologies for the recycling of materials have developed. Manufacturing and distribution industries have also changed their production and sales systems in order to reduce waste by avoiding over-packaging. And packaging technology has developed to enable the recycling of packaging materials.

**Development of an Environmental Conscience**

Green consumption patterns were firmly fixed in the general public to select products that produce less waste such as refillable products and to use personal shopping. Also, recycling centres were established in a number of places to exchange used products and electronic products and furniture. A frugal lifestyle is now the norm in society in Korea.

**Policies on Waste Recycling**

Extended Producer Responsibility (EPR) was introduced to place responsibility of recycling on producers determining structures and materials, and choosing packaging materials. For the recycling of wastes from products or packaging materials on the manufacturer of the products, EPR imposed a quota on the manufacturer of products that use the packaging materials. If the quota is not complied with, a fine that is greater than the cost of implementing proper recycling is imposed on the manufacturer (Park 2009).

**Major Achievements of EPR System**

From the introduction of the EPR system in 2003, recycling product has been continuously increased. 6,069,000 tons of waste resources have been recycled over a 5-year period, from 2003 to 2007. With respect to the output of EPR items, the amount of the items recycled in 2007 increased by 32.3 % compared to the period before the EPR system was implemented.

It is estimated that 1 trillion 700 billion Korean won (equivalent to about 1 billion 700 million USD) of economic benefits and 3,200 new jobs have been created in the 4 years (2003–2006) by the implementation of the EPR system in 2003.

**Food Waste Recycling and Waste to Energy**

The Ministry of Environment has reduced the generation of food waste by implementing food waste management policies. At the same time, the Ministry of Environment has promoted recycling food waste as an organic resource. Promoting food waste-to-energy policy, the government required developers of building lots and tourist spots to install food waste-to-energy facilities by revising the

Enforcement Decree of the Promotion of Installation of Waste Disposal Facilities and Assistance Act in December 1997. Following measures were taken in 1998: reducing discharge of food waste by more than 10 % and recycling of discharged food waste as resources by more than 60 % until 2002. As a result of medium- and long-term measures including comprehensive measures of food wastes in 2004, 92.2 % of food wastes generated (14,452 tons/day) were recycled as livestock feed and compost as of 2007. In addition, the ocean dumping of recycled food wastewater will be converted to land-based disposal by 2012. Korea is the world's 10th largest energy consumer, and imports 97 % of its energy (Choi 2009). To reduce its energy dependency, Korea replaced fossil fuels such as oil and coal with renewable energy. Currently more than 76 % of new and renewable energy is generated from wastes, and the manufacturing cost of the renewable energy from wastes is only about 10 % of that of solar energy and 66 % of that of wind energy. Energy production from waste has emerged as the most cost-effective method to get new and renewable energy. In addition, the waste-to-energy reduces the release of methane from waste into air, it is an effective method to respond to climate change arising from the global warming potential (GWP) of methane, which has a heat-trapping effect in the atmosphere that is 21 times stronger than that of carbon dioxide.

### **Result of WtE Policy**

The total amount of new and renewable energy generated in 2006, was 5.23 million Ton of Oil Equivalent (TOE), of which waste-to-energy including waste gas accounted for about 4 million TOE. The amount of renewable energy from waste excluding waste gas was 2.44 million TOE, accounting for 1 % of primary energy and 61 % of new and renewable energy.

### **Low Carbon, Green Growth City Establishment**

Agricultural, fishery areas and small cities have large potential for waste-to energy generation using, combustible and organic waste, forest resources and farming by-products. However, energy utilization for those resources is very low since the resources are scattered by region or the amount of generated waste is limited. Advanced countries such as Germany and Japan have created independent bio-energy towns utilizing sewage sludge, food waste, livestock manure and forest, agricultural by-product. The following table shows the details of how the waste recovery through 3R increased from 2000 to 2011.

**Table 1. Status in commercial waste treatment (unit: tonnes/day)**

	General wastes					Construction wastes				
	L.F. <sup>a</sup>	Inc. <sup>b</sup>	3R's	Others	Total	L.F.	Inc.	3R's	Others	Total
2000	18,962	8,034	67,514	–	101,453	10,021	2,071	66,685	–	78,777
2001	18,493	7,875	61,727	7,813	95,908	12,943	2,424	93,153	–	108,520
2002	15,455	7,094	67,451	9,505	99,505	17,462	2,462	100,209	8	120,141
2003	14,240	7,735	66,723	10,193	98,891	13,715	2,233	129,462	10	145,420
2004	13,616	7,044	73,189	11,139	105,108	10,976	2,949	134,557	7	148,489
2005	16,604	7,326	76,957	11,532	112,419	3,491	871	130,451	93	134,096
2006	8,897	7,709	74,761	9,732	101,099	3,935	1,179	163,871	–	168,985
2007	22,503	7,478	76,740	8,086	114,807	3,169	1,131	167,705	–	172,005
2008	24,285	6,937	92,615	6,940	130,777	2,914	1,423	172,110	–	176,447
2009	27,531	6,926	82,155	6,992	123,604	2,792	1,283	179,276	–	183,351
2010	23,309	7,983	99,627	6,956	137,875	2,200	919	175,001	–	178,120
2011	23,037	8,307	100,750	5,867	137,961	2,598	987	182,832	–	186,417

a L.F. Landfilling

b Inc.: Incineration

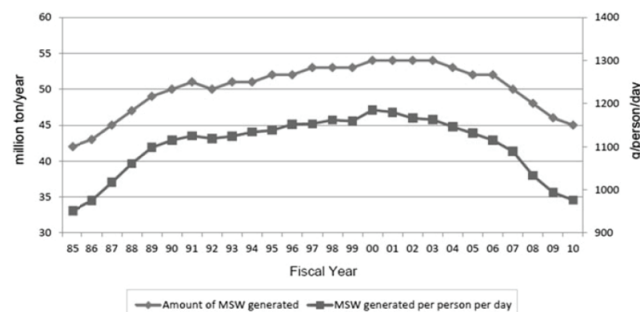
Ministry of Environment. Korea. 2012

The table above indicates the amount of waste arrested due to the 3R policy. There was a 50% increase in waste processed in the decade 2000-2011, this shows the reduction in waste going to landfills as waste was diverted away from landfill into recycling and processing. Waste going to incineration remained almost static, that is the rate of incineration fell relatively, a positive tenet for zero waste. Korea thus has been very successful in its 3R policy which reduced the quantum of waste going to incineration and landfills by reducing, recycling, and reuse.

### Case of Japan - a story of successful recycling

Japan has been very successful in recycling. Japan has been recycling 70% of plastics and more than 80% of aluminium cans. As can be seen from the graph below, after the 3R law was passed in 2001, there was a sharp fall in the generation of waste, bringing waste generation almost to the 1985 levels.

(Flow in million tonnes/year)



Source: Ministry of the Environment (2012), Japan

**Fig 5. Trend in MSW generation in Japan**

Segregation of waste into several categories at source is very popular, while ways of segregation depends on municipalities. More than half the municipalities request a generator for separating their waste into more than 10 kinds of items [Ministry of the Environment 2008]. Municipalities collect waste typically separated into eight bins: combustibles, non-combustibles and recyclable items such as paper, glass bottles, metal, PET bottle, etc. Part of such waste is further sorted at recycling facilities. In addition, part of MSW from businesses is also brought to intermediate treatment and recycling facilities run by municipal authorities.

Recycling in low income countries is more of a socio-economic phenomenon than an environmental concern. Presence of the informal sector is the typical characteristic of recycling in these countries. However, because of its informal, unorganized nature, their contributions are often undervalued. The case study of Katraj is a success story of zero waste along with waste-picker inclusion and institutionalisation (Mastakar et al., 2019).

### **9. Establishing a 3R Society**

MSW policy has shifted from proper treatment and disposal of MSW to developing MSW facilities for establishing a 3R society. The background of this movement is: increase in the amount of solid waste, difficulty in siting of final disposal (development of treatment by incineration), limited capacity of existing landfill sites, frequent illegal dumping of waste and public exposure to toxic substances such as dioxins arising in the course of waste management.

The policy shift brought such moves as (1) bringing valuable goods in waste to managed material flow, (2) pursuing waste discharger responsibility, (3) applying extended producer's responsibility for recycling and (4) collaboration of the central and local governments to involve stakeholders.

In order to establish a 3R Society, the Government of Japan intends, among other initiatives, to further develop laws and regulations for waste management and recycling; to promote a 'slower', less consumption-oriented lifestyle by enhancing environmental education and learning, by providing adequate information; and to accelerate the production of environmentally friendly goods and services through the incorporation of Design for the Environment (and systems for the lease or rental of items).

### **10. Conclusion**

This paper has attempted to highlight the importance of 3R in municipal solid waste management through empirical evidence collected of those countries that have had enormous success in waste reduction through this simple 3R policy. Each country followed a different path for this waste reduction. While Taiwan and Korea followed similar policies, Korea extended it further to WtE and Japan extended it to use LCA.

What remains common for all three though is a shift in consumers lifestyle to a more frugal one, this itself promotes the reduction in wasteful consumption resulting in the reduction of waste generation.

The 3R policy and zero waste concepts and policies are the most sustainable in the implementation of MSWM. The developed and richer countries like Germany and far-east countries like Singapore, Taiwan, Korea and Japan have implemented these very successfully. These policies therefore need to be replicated in the rest of the countries too. One can safely surmise that the contribution of both carbon and greenhouse gases to climate change due to MSWM would be the bare minimum if we can completely apply 3R and zero waste to the entire MSWM process, this remains a subject for further research. Of utmost importance is the mindset or the paradigm shift of governments, politicians, businessmen, scientists and citizens towards a lifestyle that is complementary to the sustenance and long life of the earth. We do have only one earth to live on.

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## A STUDY OF HALO EFFECTS INFLUENCES THE DECISIONS OF UBER CUSTOMERS

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### **ABSTRACT :**

*Uber is very reputed company which revolutionized traveling by using technology real data and making customer friendly App for travelers. The study includes halo effects which understanding consumer behavior. A “Halo” effect means selective perception that occurs due to image and reputation of particular company. Halo creates positive environment in the Uber company. Researcher focus on how certain news of media effects the perception and impression of the company.*

*Key Words: Halo Effects, Media, Sexual Harassment, Social impact*

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### **INTRODUCTION**

The word Uber is derived from German word which means super or topmost or above. Uber is transportationbased online network company<sup>1</sup> which relies on high speed internet. The Headquarter of this company is San Francisco, California, United states. It was founded on March 2009 by Travis Kalanick & Garrett Camp.

Uber is replacing the traditional market of the transportation service business by using disruptive innovation model<sup>2</sup>. With the launching of real time application based on internet, Uber has created good name in the market.<sup>3</sup> It captures more than 69 % market in United States. Their operations are more than 785 metropolitan areas worldwide. The range of services are -: peer to peer ridesharing, Taxi Cab hailing, food delivery and bicycle sharing system. The product of Uber is Mobile

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- 1 DavoodQorbani, Yokei Yamaguchi and Federico Cosenz - Analyzing Business Dynamics of Ride-Hailing Services A DPM Approach Applied to Uber Inc., The International Conference of the System Dynamics Society, Cambridge, Massachusetts, USA (2017)
  - 2 Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). What Is Disruptive Innovation? Harvard Business Review.
  - 3 Magnus Ofstad, The Rise of Ridesharing Platforms: an Uber-assessment of bits and atoms, 2017, pp 8, 130
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APP<sup>4</sup> and Website. Uber proves app for mobile to connect their driver or rental driver to carry customers from customer's convenient place to reach their desire place. It gives all the information to their customers as well as driver like location map, fare and dynamic price<sup>5</sup>, drivers' number, picking expected time. It means it believes on transparent system. This is why Uber is becoming popular due to three reasons are -: Convenience, price and service. The journey from Uber gives better experience like -:user use smart phone and request a ride, rider knows when the driver will arrive, passenger knows the route and cost.

The effect of Uber to revolutionize the transportation due to technological effect with keep in mind the convenience, cost and power of collaboration / backward collaboration<sup>6</sup>. It all happens due to collaboration with high speed internet service, big data stores, online workflow and mobile devices. It is why the traditional way of transportation becoming obsolete and their market share falls drastically. It gives good feeling to customer.

Uber gives the scope to user for assessing the facility given by the company like service of the driver which is totally different from traditional feedback system. It takes feedback from the user and acts fast. The Combined efforts of all stakeholders give more efficient and effective process which provide of lower cost and quicker response. This provides credible valuation report with different kinds of work compare to traditional approach.

### **Broker Price Opinions (BPO) & Alternative appraisals-:**

BPO is used traditionally in which certified appraisers are specialists' in valuation of price and giving ranking over all facility provided by company. It does not give usually first choice in the default in service sector

- (i) Higher Capacity Utilization
- (ii) Shared Economy<sup>7</sup> Efficiencies

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4 Chen, L., Mislove, A., & Wilson, C. (2015). Peeking beneath the hood of Uber. In Proceedings of the 2015 ACM Conference on Internet Measurement Conference (pp. 495-508). ACM.

5 Chen, M. K., & Sheldon, M. (2015). Dynamic pricing in a labor market: Surge pricing and flexible work on the Uber platform. Mimeo, UCLA.

6 Conger, K. (2016a, November 28). Uber begins background collection of rider location data. TechCrunch. Retrieved from <https://techcrunch.com/2016/11/28/uber-background-location-data-collection/>

7 Eisenmann, T. R. (2007). *Managing Proprietary and Shared Platforms: A Life-Cycle View*. Harvard Business School.

The new alternative appraisal system is used by Uber are gaining market share day by day. It is more efficient in terms of default and servicing space. This system takes the help of shared valuation process which leads to decrease the cost of valuation of product and complete it in shorter term times compare to Alternative appraisals.

Uber uses higher utilization capacity<sup>8</sup>. It provides a service to customer for vehicle hire with privacy<sup>9</sup>. It has more than 16000 employees worldwide.

## **1.2 Various HR practices in Uber**

### **1.3 Introduction of Halo effects**

Halo effect refers to immediate judgmental error or rational bias towards person or object where person makes initial assessment of a person, place, and object. The judgmental error occurs due to differences in social concept of individual person like -: individual preferences, prejudices, ideological gap, aspiration and perception. The first time the term halo was coined by Edward Thorndike<sup>10</sup> in his article “A Constant Error in psychological ratings”. This concept initially was used for the People only. Today ,this concept has been greatly extended and expanded in the domain – branding.

## **2. Literature Review**

The author – Sappenfield, Bert R.<sup>11</sup> views in this study by using test of Social desirability of individual Community. The researcher obtained in this research stereotypical perception and halo effect influence perception of self and others within group.

The author – Van, den Bos<sup>12</sup> presents in this article that juries has not specific knowledge and Information , in such a substance juries has difficult to forming

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8 Stone, B. (2017). THE UPSTARTS: How Uber, Airbnb and the killer companies of the new Silicon Valley are changing the world. New York: Random House.

9Tassi, K. (2015, May 28). An Update on Privacy at Uber. [Uber Newsroom]. Retrieved from <https://newsroom.uber.com/an-update-on-privacy-at-uber/>

10 Thorndike, E. L. (n.d.). Introduction. Educational Psychology: Briefer Course., 331-339. doi:10.1037/10608-021

11 Sappenfield, Bert R. “Social Desirability, the Halo Effect, and Stereotypical Perception in Person Perception and Self-Perception.” Perceptual and motor skills 33.3 (1971): 683-9. ProQuest. Web. 12 Apr. 2012

12 Van, den Bos. “On the Subjective Quality of Social Justice: The Role of Affect as Information in the Psychology of Justice Judgments.” Journal of personality and social psychology 85.3 (2003): 482-98. ProQuest. Web. 12 Apr. 2012

justice. In this background, Juries can be influenced by Halo effect. The article suggest that evaluates should refrain themselves from taking hasty decision.

In this book authors Berkowitz, Leonard<sup>13</sup> explain, discusses, how Halo effects occurs. It describes how people take wrong judgments on the basis of incomplete, inexact and wrong information. In this book author explain various social psychological theories. It highlights integrations.

The author – Breakwell, Glynis Marie et al<sup>14</sup> of this book takes help of field study and classroom testing which provide background of information of stereotyping thinking prejudices occurs. In this book authors present situation in which being successful speaker addressed huge audience with confidence in one time and on other time he being called non-successful, addressed the people with low tone and lacked standardization in his pronunciation.

The author – Cashmore<sup>15</sup> in this book presents brief guide theories and various connotation related sports .It gives how Halo effects influence the environment of sports

The Authors – DeLamater, John D. & Daniel J. Myers<sup>16</sup> says in this book Social Psychological which covers many topics-Socialization, attitude, social influence, communication, interpersonal attraction

The topic is discussed about Halo effect on stereotypes and prejudices. In this book authors suggest that people judge individual' several characteristics based on traits and associations.

The authors – Fiske, Susan T. Daniel T. Gilbert, Gardner Lindzey<sup>17</sup> in this 'Handbook of social psychology' covers various aspect of social psychology related to mind, perception, morality, social neuroscience and interpersonal relationship. In this author views that people make bias judgement because interpersonal relationship The authors note that halo effect usually has a compensation effect. An individual who is rated high because of one particular trait is usually rated low in other

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13 Berkowitz, Leonard. Advances in Experimental Social Psychology, Volume 7. Cheltenham : Academic Press, 1974

14 Breakwell, Glynis Marie et al. Doing Social Psychology: Laboratory and Field Exercises. New York: Cambridge University Press, 1988

15 Cashmore, Ernest. Sport psychology: the key concepts. West Sussex: Routledge, 2002

16 DeLamater, John D. & Daniel J. Myers. Social Psychology. Washington DC: Cengage Learning, 2010

17 Fiske, Susan T. Daniel T. Gilbert, Gardner Lindzey, Handbook of Social Psychology, Volume 2, London: John Wiley & Sons, 2010



situations because of a different low quality trait. This book is therefore vital for the study.

The author - Husain, Akbar<sup>18</sup> Husain, Akbar writes in 'Social Psychology' discussed a great length regarding Halo effect. In this book author analyzed various aspect of human interaction. The author pointed out that the evaluation made first time are persist even later information contradict it.

### **Methodology:**

The researcher has intended to know the effects of various influences of halo effects<sup>19</sup> in the decision making process of Uber. Further the way of working at Uber is studied. Effects of Uber due to Halo effects in terms of appraisal and trading,

The researcher has conducted Desk Research based on the descriptive information gathered from mostly secondary data sources.

### **Thrust statement:**

The Halo Effect model is at the centre of the business idea of the Uber which is fetching the main business at Uber.

### **Business Model**

Business Model of Uber is very excellent. It revolutionize the transportation business. The core Concern for Uber is to provide easy, affordable, Convenient transportation so thatto increase the volume of transportation business to just receive marginal income. The Company knows and execute excellent business Model whose key components are Key Parameters, Key Activities, Key Resources, Value proposition ,Customer relationship and customer Support which increase the volume of sales.

The key component parameters of Uber which give assistance to those who have cars , Cars with drivers, MAP and Investor . The company focuses its work -Product & Develop Management, Marketing & Customer, Hiring Drivers, Managing drivers Payout, Customer Support. Various resources like -Technological Platform & Skilled Drivers are provided by company to customer. Due to Technological platform the cost of fare became cheaper. The Company mainly spent on Technological Platform, Salaries to Permanent Employees, Launching Events Marketing Expenditure only. In this business Company hire cars & drivers and

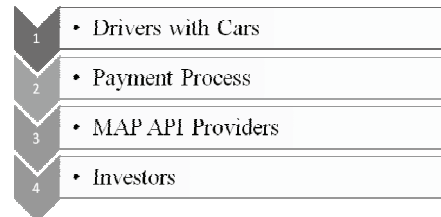
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18 Husain, Akbar. Social Psychology. New Delhi: Pearson Education India, 2011

19Lucker, Gerald, E. Beane, William, L. Helmreich, Robert, 1981/01/01, pp69 to 75, The Strength of the Halo Effect in Physical Attractiveness Research, Vol - 107, 10.1080/00223980.1981.9915206Journal of Psychology - J PSYCHOL

technological support by making efficient & effective APP to minimize the cost. This Model of business which works on two fold. In one hand it focuses to minimize the cost and on other hand it gives maximum satisfaction to customer by providing: Minimum Waiting Time, Prices Normal compare to other Drivers, Cashless Ride, Can see the track of the drivers. For creating aware about company and making brand company uses Social Media Customer Support, Review, Rating & Feed Back etc.

### Uber parameters of Business



### Key Activities



### Problems and Criticisms:

1. Struggle from taxi service industry
2. Problems of segmentation of the Service providers
3. Inadequate rewards to drivers
4. Strategy of dynamic pricing
5. Road traffic problems
6. Discouragement to Public Transports
7. Less availability of facilities for physically challenged passengers
8. Unsafe driving using cellular
9. Unrealistic claims about driver's earning in Uber Business association
10. Frequently changing drivers in business
11. Reluctance in rendering services to pet animals
12. Providing services while sticks
13. Marketing aggressiveness even with frequent commuters
14. Heavy cancellation charges

15. Non following the traffic rules and civic séance
16. Personal data privacy breach
17. Problems with safety and safe journey
18. Allegations of Sexual abuse and absence of the strong action by management
19. Hired cars for business instead of having own vehicles
20. Criticism by Media and other competitors

### **Sexual harassment: Some Cases**

Susan Fowler<sup>20</sup>, one of the previous Uber engineer revealed that one of her boss has done sexual harassment and threatened by showing possibility of dismissal of services in case she report the incident to higher authority. Authorities knew the harassment problem in Company but they have not done anything.

The director<sup>21</sup> has investigated some of the sextual harassment issues and concluded with it is a culture of multibillion Uber Company and it is a part of “Game – of – Thrones”. So nothing to investigate in deep and it is the mere because the competitions between the employees of Uber.

One of the Senior Vice President, Amit Singhal<sup>22</sup>, had to resign because of inability to prove himself clean from sexual abuse allegations made by junior colleague.

Recently in 2017 Uber has dismissed 20 employees<sup>23</sup> after finding them guilty in due investigation process.

### **Reputation at stake:**

The reputation has shaken due to the series of the allegations of sexual harassment cases flashed in media. The management has initially disowned the problem and then had to deal the individual case with proper investigations. Public has shocked even more with the dismissal of their employees for engaging in sexual harassment cases. The management has adopted secrecy policy now for such allegation and disclose only after finding guilt after investigation. So that women employees and customers may not get the feeling of deprived justice.

### **Model Halo effects In UBER:**

Uber is known for creating halo effect in the working Culture. Since Halo effects creates positive environment and Perception towards the Company .It is the effect

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<sup>20</sup> Kosoff, Maya (February 20, 2017). "Uber C.E.O. Orders "Urgent Investigation" into Sexual Harassment Allegations". Vanity Fair

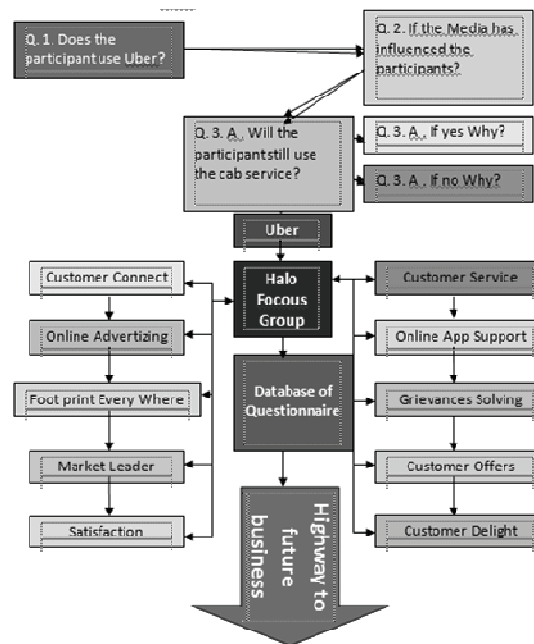
<sup>21</sup> Lee, David (February 25, 2017). "Uber's mess reaches beyond sexism – and Silicon Valley". BBC News.

<sup>22</sup> Isaac, Mike (February 27, 2017). "Amit Singhal, Uber Executive Linked to Old Harassment Claim, Resigns". The New York Times. (Subscription required (help)).

<sup>23</sup> Solon, Olivia (June 7, 2016). "Uber fires more than 20 employees after sexual harassment investigation". The Guardian. ISSN 0261-3077.

which change the perception to all stakeholders. It all happens due to UBER's workingsyle and using smart technology which focus to give comfort, Convenient and make a brand of Uber Company. Uber Company which creates positive impression by giving facilities: Comfort, Courtesy of drivers easy booking , quote attractive price, easy to address the customers problem, easy locate .Uber has changed the rule of the game by creating and using Halo Effect.

### Halo Effect model of Uber



### Model Halo effects In UBER:



### Uber Business Perspective with its unique Halo Effect to all stake holders:

Cost Structure	Value Proposition	Driver	Customer Relationship	Channels	Customer Segments	Driver	Revenue Streams
Technological Platform	Customer	Additional Sources	Social Media	Website	Those Whodunit own the Car	People Who own a Car & want to	Car Rides on Per Kilometer

Cost Structure	Value Proposition	Driver	Customer Relationship	Channels	Customer Segments	Driver	Revenue Streams
						earn Money	
Salaries to Permanent Employees	Minimum Waiting Time	Flexible working Schedule	Customer Support	Mobile APP for Android Mobile	Those who don't want to drive themselves in Party or Function	People Who love to drive	Surge Price Uber X,
Launching Events Marketing Expenditure	Prices Normal compare to other Drivers	Easy Payment Procedure	Review, Rating & Feed Back	APP for PC OS	People who want to be treated as VIP	Those Who wish to be called partner instead of driver	Uber Taxi,
	Cashless Ride	Driver Get to be paid online					Uber Black,
	Can see the track of the drivers						Uber SUV,
							Uber Rideshare
							Uber Cargo

### Negative effect of Halo Effect:

The Halo Effect can be used in positive environment to boost the strength of the relations between parties. But it may work as accelerator in negative environment. Uber has experienced the negative side of the halo effect in sexual abuse allegations. They included more aesthetical photos for their advertisements avoiding women models.



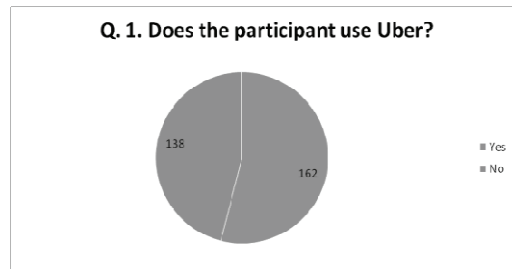
**Photo : Example of aesthetical advertisement**

**Court fight at London :**

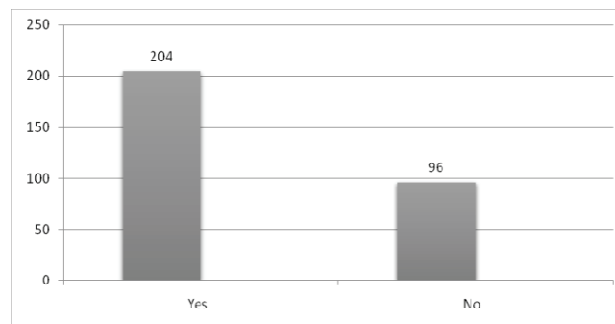
Uber officials along with their lawyers had to defend themselves for their survivals in London promising no scandals in future.

**Inference Statistics:**

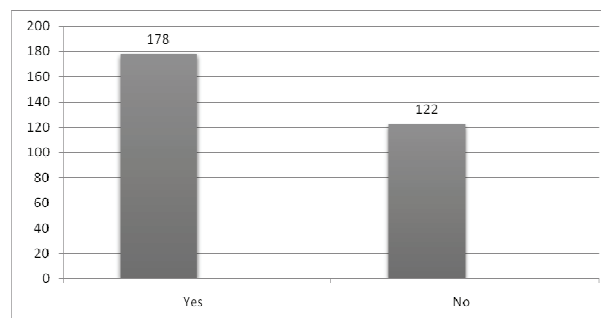
Question	Yes	No	Total
Q. 1. Does the participant use Uber?	162	138	300



Question	Yes	No	Total
Q. 2. If the Media has influenced the participants?	204	96	300



Question	If Yes	If No	Total
Q. 3. A. Will the participant still use the cab service?	178	122	300
Reasons	Convenience, No other option, Habit	Safety first, Available alternative, use of public transport in national interest, cost saving	





**Findings:**

Uber has 54% market share in UK as per the inference of the survey of convenient random sample of 300 respondents.

Impact of media on cab service user customers is of 68%. They consider the news as source of the information and for further rating of the service of cab providing agency like Uber.

178 respondents have firm opinion about the use of cab service in spite of the flashing news. The reasons are customer convenience, no other available option, and habit. 122 respondents do have impact of the news on them. They have reasons like safety first, use of available alternative, use of public transport in national interest and cost saving.

**Conclusion:**

Halo Effect is the one of the best boosting method to enhance the performance of the company only in positive environment. Vice a versa in negative environment the Halo Effect Model may accelerate the negative wave and hamper the existing image of company very fast. The flashing negative news about sexual harassment in Uber Company has spoiled the market lot. The Halo effect Model has worked even in reverse way when the news of management ignoring the matter is flashed. Even the management of Uber had to go in court of Law for their existence in London by assuring there will not be any more scandals. Halo effect of flashing everywhere, like two edged sword and the management should at most care in using the weapon.

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## **‘A STUDY OF AWARENESS ABOUT AYUSHYAMAN BHARAT YOJANA AMONG LOW INCOME URBAN FAMILIES.’- AN EXPLORATORY STUDY**

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### **ABSTRACT :**

*In India the rising average annual total medical expenditure is a major concern. According to the reports published by IRDA and WHO 75% of the population do not have any health insurance and 75% of the Indian spend their entire income on health care. Considering these facts, the government of India has launched AB-PMJAY scheme with mission, "To reduce the financial burden on poor and vulnerable groups arising out of catastrophic hospital episodes and ensure their access to quality health services". It is claimed by the government that through this scheme, more than 10.74 crore poor and vulnerable families (approximately 50 crore beneficiaries) will be benefited. Through NHA government of India has issued precise guidelines to SHA's for promotion of this scheme. However the awareness of this scheme among the beneficiaries is still questionable, especially in the urban area. Through this study researcher tried to find out the awareness level of the scheme and benefits offered by the scheme. Researcher also attempts to find out the possible hurdles in smooth implementation of this scheme.*

**Keywords:** AB-PMJAY, IRDA, NHA, SHA, , WHO,

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### **INTRODUCTION**

India is one of the fast developing countries in the world and the second in the world population wise having 1.3 billion populations, major of which i.e. 70% population lives in rural area. Currently, India is facing dual health problem majority of its population is suffering from contagious diseases as well as non contagious diseases which remain a threat to health and economic security. Many factors are responsible for this transition, urbanisation, modernisation in farming and change in demography of population are few which can be highlighted that are responsible for changes in social and economic determinants of health. Lack of access, timely access and poor quality of medical treatment are the major reasons of fatality in the deprived class.

According to India Consumer Economy 360 Survey, the average annual total medical expenditure of an Indian is about Rs.9,373. Average annual expenditure of household in towns on health is Rs 13,198/-, while it is Rs. 11,387/- and Rs. 6,371/-

for a Metros household and for an underdeveloped rural household respectively[5]. This report also revealed that due to financial constraints, the 30% of the rural population did not avail any medical treatment. And those who get the treatment, they pay the hospital bills either by taking loans or by selling their assets. WHO its health profile report released in 2014 pointed out that nearly 75% of the Indians spending their entire income on health care and purchasing drugs. IRDA in its report published in the year 2017 said that, 76% of the population do not have any health insurance that put financial burden to family that results in higher expenditure on health[6].

Considering above facts, the government of India approved the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) in March 2018 and was launched by honourable prime minister Shree Narendra Modi on 23rd September 2018 with mission “To reduce the financial burden on poor and vulnerable groups arising out of catastrophic hospital episodes and ensure their access to quality health services”. Government of India is claiming the program as a historic step towards achieving Universal Health Coverage (UHC) in India. AB-PMJAY has following two primary goals[7]:

1. To create a network of health and wellness infrastructure across the nation to deliver comprehensive primary healthcare services. And
2. To provide health insurance cover to at least 40% of India's population which is deprived of secondary and tertiary care services.

Except organ transplantation all types of medical treatments will be provided for those eligible families under this scheme. Pre and post hospitalisation expenses will also be included and there will be no restriction on the size and age of the covered beneficiary family member. Following are the key features of the AB-PMJAY[7]:

- Provides hospitalisation cover of up to Rs. 5,00,000 per entitled family per year.
- More than 10.74 crore poor and vulnerable families (approximately 50 crore beneficiaries) covered across the country.
- No formal enrolment process is required.
- No cap on family size and age of members. All members of designated families get coverage; specifically, girl child and senior citizens.
- Covers secondary and tertiary care hospitalization.
- Free treatment available at all public and empanelled private hospitals.
- Cashless and paperless access to quality health care services.
- Benefits of national portability. Eligible beneficiaries can avail services across India.

- 1,350 medical packages covering surgery, medical and day care treatments, cost of medicines and diagnostics.
- All pre-existing diseases covered.

“Right to health” should be among the top of all fundamental rights offered by constitution of any country in the world. However, it is not even recognized as a fundamental right in our constitution[1]. It is evident from the history of post independent India that some efforts were taken by central and state governments to provide health care through countrywide network of three tier health-care institutions and various national health programs. Eradication of smallpox, regional elimination of leprosy, neonatal tetanus, controlling diseases such as malaria/other vector-borne diseases, and reduction in maternal/infant mortality are few of its achievements. However, the system is still struggling to provide quality curative and rehabilitative care to the masses, especially in remote areas. Many schemes to address health related issues were launched by previous state and central governments but they failed to achieve the desired goals. AB-PMJAY is yet another scheme and its success lies in the effective implementation and effective communication to all stakeholders.

Dr. Indu Bhushan, Chief Executive Officer, National Health Agency (NHA) said that, the success of PM-JAY, is critically dependent on effective communication that should reach the last mile beneficiary. Communicating only the features of the scheme will not suffice, but it is also important to communicate about who are the beneficiaries under this scheme, to keep beneficiaries updated on the processes involved in availing the benefits. He also felt the need of a strong community outreach at State level for ensuring effective implementation of PM-JAY.

To achieve this objective, the National Health Agency (NHA) had prepared ‘PM-JAY Information, Education and Communication (IEC) Guidebook for SHAs’ and the same is shared with all the State Health Agencies (SHAs).

Researcher was very much impressed when he learned about the features of the scheme and beneficiaries of the scheme. Prima face he was also impressed by the efforts put forth by central and state governments to make the beneficiaries aware about the scheme. While interacting with few likely to be beneficiaries of this scheme in urban area researcher’s impression turned into disappointment. He found that some of them have heard about the scheme but neither of them was aware about the kind of benefits the scheme offers to them. They were not even aware about inclusion/exclusion of their family in the list of beneficiaries of this scheme. To get deeper insights about the awareness of the scheme, the researcher decided to take up this topic for further research.

### **Objectives of Study:**

1. To study the awareness of AB-PMJAY scheme.



2. To study the awareness of benefits offered by AB-PMJAY scheme.
3. To identify the likely reasons that can be hurdles in implementation of scheme.

**Literature Review:**

Harsh Bakshi, Rashmi Sharma, and Pradeep Kumar in their article entitled, “Ayushman Bharat Initiative (2018): What we Stand to Gain or Lose!” discussed the efforts taken by central government to educate the beneficiaries of AB-PMJAY in rural India such as health education campaigns, community mobilization and identification/information collection of the beneficiaries through Gram Sabhas. They also discussed Critical Areas under Ayushman Bharat National Health Protection Scheme [1].

Rohit Dhaka, Ramesh Verma et al in their research article “Ayushman Bharat Yojana: a memorable health initiative for Indians”, revealed the average annual expenditure of Indians living in different parts of the country. They also discussed the various strategies to implement AB-PMJAY [2].

The article, “How Equitable Will Ayushman Bharat Be?”, authored by Manasee Mishra and Arnab Mandal, discusses the challenges in implementation of Ayushman Bharat scheme. According to them inequality across social groups could be the main hurdle in implementation of AB-PMJAY schemes. This article elaborates on three aspects of equity that determine access to healthcare in general, and hospitalisation in particular. The dimensions are: 1) differential access of members within a household; 2) differential access of social groups in a given population; and 3) geographical differentials in provisioning of healthcare services [3].

Angell BJ, Prinja S, Gupt A, Jha V, Jan S (2019), in their research work entitled, “The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana and the path to universal health coverage in India: Overcoming the challenges of stewardship and governance.” Proposes that There is a need for wide reforms across public and private providers of health care if India is to meet its stated aims of providing universal health coverage (UHC) for its population. The success of the program will rely on a reformed and adequately resourced public sector to lead implementation, delivery, and monitoring of the scheme. They also proposed that Implementation and ongoing operation of the program need to be carefully monitored to ensure that it is meeting its aims in a sustainable manner and that negative unintended consequences are avoided.

**Research Methodology:**

After knowing about the AB-PMJAY scheme, researcher obtained the detailed information about the scheme, such as key features of the scheme, benefits offered under this scheme and criteria for beneficiaries of this scheme. He then discussed

about the scheme with the housekeeping service providers in the area where researcher is residing and he was surprised to know that most of them have heard about the scheme but none of them were aware about other details of the scheme. To get more insights researcher tried to find the research work carried out by other research scholars about awareness of AB-PMJAY either in rural and in urban area. While going through the literature related to the subject under consideration, researcher observed the efforts are taken by central and state government to promote AB-PMJAY scheme in rural area. However similar efforts are not observed in the urban area, neither researcher found any of the research work dedicated to the awareness of AB-PMJAY scheme in urban area. Hence researcher decided to take up an explorative research to know more about the scheme, its awareness among urban beneficiaries and likely hurdles in the implementation of the scheme.

In order to study the awareness of AB-PMJAY scheme, a descriptive research including survey and fact finding enquiry was chosen. For the purpose of collection of data a well structured questionnaire was prepared. Initial draft of questionnaire is discussed with other research scholars and their feedback was recorded. On the basis of feedback, initial draft of questionnaire was modified and final draft was prepared. The education level of the respondents was low hence personal interviews method through structured questionnaire is used for collection of Primary data.

Researcher used convenience sampling method and interviewed 100 respondents. Researcher contacted house maids, constructions workers, class 4 employees such as sweeper, peons drivers of small organisations. To contact construction workers researcher visited 'Majoor Addas' and interviewed those who are ready to give information related to the subject under consideration. Frequency distribution and cross tabulation has been applied for the data analysis and to draw conclusions.

### **Limitations of the Study:**

The study has been carried out for deprived class residing in urban area especially in PCMC municipal corporation area. According to SECC an urban resident with any one of the 13 occupation categories are included in the deprived class out of those 13 categories only 9 categories of the occupation were included in the study. Due to limited resource of time and fund responses of only 100 respondents were recorded and conclusions are drawn.

This is a cross sectional study, and the result and conclusions obtained through this study are based on primary data collected in a specific period. As considerable efforts are taken by central government, state government and local authorities to increase the awareness of the AB-PMJAY scheme, the result of the study may be different if data is collected at different point of time. To study the awareness level and effectiveness of the scheme a longitudinal study need to be carried out.

### Data Analysis and Results:

To study the awareness of the AB-PMJAY scheme, the researcher included relevant questions such as 'Have you ever heard about AB-PMJAY scheme?', What are the benefits of the scheme? Who are the beneficiaries?, whether their family is included in the list of beneficiaries or not? and whether they have enrolled under RSBY scheme or not? The responses of these questions were recorded. Descriptive statistics of the responses is presented in table 1.

Table 1 reveals that 49% of the respondents have heard about AB-PMJAY scheme. The difference between the respondents who have heard and who do not heard about the scheme is not statistically significant. However the result shows that nearly half of the urban population is not aware about the scheme. Further investigation in the subject matter reveals that out of 49 respondents who have heard about the scheme none is aware about the benefits of the AB-PMJAY scheme. None of them even don't know about who are the beneficiaries of this scheme are and whether their family is included in the list of beneficiaries. From above discussion it can be concluded that, the efforts taken by central government, state government and local urban bodies are not aimed at the right direction and new campaign has to be launched that focuses personal interaction and counselling of people in urban area and belonging to deprived class.

After knowing about the awareness level of the respondents about the scheme, researcher himself decided to find out how many of them can be benefited out of this scheme. Researcher interviewed those respondents who meet the basic criteria laid down by the central government for inclusion of the families in urban area in the list of beneficiaries. However central government has also issued a set of criteria based on which a family has to be excluded from the list of beneficiaries even though it fulfils the criteria of inclusion. According to the IEG guidelines issued by National Health Authority (NHA) there are 14 different criteria on the basis of which a family is automatically excluded from the list of beneficiaries. Out of these 14 criteria the researcher has considered 8 criteria relating to the urban population. Following table represents the frequency of the respondents who fulfils one or more criteria that automatically exclude their family from the list of beneficiaries:

Table 2 reveals that 25 out of 100 families are not eligible beneficiaries on the basis of automatic exclusion criteria. To know more about the most prominent reason for exclusion of families from the list of beneficiaries, researcher asked all respondents whether they satisfy any one or more out of 8 criteria identified by the researcher. The frequency distribution of the respondents who fulfil and those who do not fulfil each of these 8 criteria is presented in table 3:

From table 3 it can be concluded that none of the respondent owns motorized 2/3/4 wheeler, hence no respondent is excluded from the list because of this reason.

Similarly no respondent is excluded from the list because of other reasons except any member of the family paying professional tax and family having refrigerator. 21 families out of 100 are excluded because of the reason of having family member who is liable to pay professional tax as per the rules laid down by state government of Maharashtra. 7 families out of 100 are having refrigerator at their home and hence these 7 families are also excluded from the list of beneficiaries. However these subsets are not exclusive, 3 families are excluded due to two reasons, firstly due to at least one family member is paying professional tax and secondly due to having refrigerator at home.

Table 3 reveals that, 'any member in the family paying professional tax' is the most prominent reason because of which the families belonging to the deprived class are excluded from the list of beneficiaries.

The outcomes of this analysis provoke researcher to look into the matter more deeply as researcher has included only those respondents in his sample who are any member of their family is not earning more than Rs. 10000/- per month. In spite of taking this care, researcher observed that 21% of the families that are likely to be deprived class are actually not included in the list of beneficiaries of AB-PMJAY scheme. Further investigation reveals that professional tax rates are not uniform in all states of India. Professional tax rates in Maharashtra are as follows[8]:

1. Person with monthly income below Rs. 7500/- is exempted.
2. Person with monthly income more than Rs. 7500/- but less than Rs. 10000/- has to pay Rs. 175/- per month towards professional tax.
3. Person with monthly income more than Rs. 10000/- has to pay Rs. 2500/- per annum towards professional tax.

This disparity in the professional tax excluded 21 out of 100 families from being benefited under the said scheme. On the basis of income criteria laid down by central government of India, person earning less than Rs. 10000/- per month is eligible to avail the benefits. However as per the professional tax act of state government of Maharashtra, revised in the year 2015, a person earning more than Rs. 7500/- per month has to pay professional tax and hence he is excluded from the list of beneficiaries, as person paying professional tax is automatically excluded from the list. On the other hand person or his family earning between Rs. 7500/- to Rs. 10000/- and residing in the states like Andhra Pradesh, Asam, Bihar, Goa, Jharkhand, Karnataka, Madhya Pradesh Odisha, Pudduchery, Punjab, Sikkim, Telangana, West bangal and some of the union territories where professional tax slab rates are different are exempted from paying professional tax and hence they are included in the list of beneficiaries. When researcher goes deeper and trying to investigate more, he found that the respondents who are excluded due to the criteria

‘professional tax’ are mostly belongs to 3 occupational categories as defined by NHA in IEG. Following table shows the frequency of the persons from different occupation groups who are excluded from the list of beneficiaries due to the reason

### **Professional Tax:**

From table 4 it can be inferred that out of total 21 families that are excluded due to the reason professional tax, 2 are home- based worker/ artisan/ handicrafts worker / tailor, 7 are Transport worker/ driver/ conductor/ helper to drivers and conductors/ cart puller/ rickshaw puller and 12 are Shop worker/ assistant/ peon in small establishment/ helper/ delivery assistant / attendant/ waiter. Most of these respondents were salaried persons and their monthly salaries ranges between Rs. 7500/- to Rs. 10000/-

### **Conclusions:**

The questions aimed at knowing about the awareness of the AB-PMJAY scheme reveals that around 50% of the respondents have heard about the scheme. However none of them were aware about the benefits offered by the scheme. Neither they are aware about their inclusion in the list of beneficiaries of this scheme. From this it can be concluded that the efforts taken by NHA and SHA to promote AB-PMJAY scheme are not aimed at the right direction especially in the urban area. The study further highlighted the need of new promotional campaign to increase the awareness of the scheme.

NHA in its IEC guidelines mentioned 14 different criteria by which a family may be excluded automatically from the list of beneficiaries. To know whether a family of respondents has been excluded or not, researcher identified 8 out of 14 criteria relevant to the urban population. The data analysis shows that 25 out of 100 families are excluded because of one or more criteria. Out of these 25 families 21 are excluded because one or more family members are paying professional tax. Thus ‘family member paying professional tax’ is the most prominent reason for exclusion of a family from the list of beneficiaries. The second most prominent reason is ‘family having refrigerator’ at their home, 7 out of 100 families owns refrigerator and hence they are excluded. There are 3 families who are excluded due to both the reasons mentioned above.

The study also highlighted the inequality of professional tax structures among different states and union territories. Due to this reason a family that may be eligible for getting benefits under this scheme may not be eligible in Maharashtra state. Any person earning Rs. 7500/- or more per month has to pay professional tax as per Maharashtra tax reforms 2015 and hence his family is excluded from the list of beneficiaries even though his monthly income is less than Rs 10000/- per month. However a person with same salary from other states such as Andhra Pradesh, Asam, Bihar, Goa, Jharkhand, Karnataka, Madhya Pradesh Odisha, Pudduchery, Punjab, Sikkim, Telangana, West bangal and some union territories is included in the list of beneficiaries as person with monthly income less than Rs. 10000/- do not have to pay professional tax.

**Implications of the study:**

This is an exploratory study and attempts to find out the awareness of AB-PMJAY scheme amongst those who are likely to be beneficiaries of this scheme. This study also attempts to find out the awareness of benefits offered by this scheme and also attempts to find out the hurdles in effective implementation of this scheme. Hence this study would be helpful to the central government and NHA to redesign promotion campaign of the scheme for creating awareness of the scheme amongst the beneficiaries. The study also reveals the disparity in the structure of professional tax among different state of the country and is one of the major hurdle in the implementation of this scheme. Hence this study would help NHA to redefine the list of criteria for automatic exclusion of beneficiaries. This study would also be helpful to the state governments to redefine their tax slab structure so that maximum people belonging to the deprived class would be benefited out of this scheme.

**LIST OF TABLES****Table 1****Awareness of AB-PMJAY Scheme.**

Question	Yes	No	NA	Total
Have you ever heard about AB-PMJAY scheme?	49	51	0	100
Do you know the benefits of AB-PMJAY scheme?	0	49	51	100
Do you know who the beneficiaries under this scheme are?	0	49	51	100
Are you aware about inclusion/exclusion of your family in the list of beneficiaries of this scheme?	0	49	51	100
Is your family enrolled under Rashtriya Swasthaya Bima Yojana (RSBY)?	0	100	0	100

Source: Primary Data

**Table 2****Frequency distribution of families fulfilling none, one or more criteria:**

Families fulfilling	Frequency
No Criteria	75
Only one Criteria	22
Two Criteria	3
Three or more Criteria	0
<b>Total</b>	<b>100</b>

Source: Primary Data

**Table 3****Frequency distribution of families fulfilling different criteria:**

<b>Criteria</b>	<b>Yes</b>	<b>No</b>	<b>Total</b>
Motorized 2/3/4 wheeler/fishing boat	0	100	100
Any member is a government employee	0	100	100
Any member in the family earning more than Rs. 10,000/- per month	0	100	100
Any Member Paying Income tax	0	100	100
Any Member Paying Professional tax	21	89	100
House with three or more rooms with pucca walls and roof	0	100	100
Refrigerator	7	93	100
Landline phone	0	100	100

Source: Primary Data

**Table 4 Frequency distribution of families of different occupation category and are excluded from the list of beneficiaries:**

<b>Sr. No.</b>	<b>Occupation Category</b>	<b>Freq.</b>
1	Beggar/ rag-picker	0
2	Domestic worker	0
3	Street vendor/ cobbler/hawker / other service provider working on streets	0
4	Construction worker/ plumber/ mason/ labor/ painter/ welder/ security guard/ coolie and other head-load worker	0
5	Electrician/ mechanic/ assembler/ repair worker Other work	0
6	No income from any source	0
7	Sweeper/ sanitation worker / mali	0
8	Home-based worker/ artisan/ handicrafts worker / tailor	2
9	Transport worker/ driver/ conductor/ helper to drivers and conductors/ cart puller/ rickshaw puller	7
10	Shop worker/ assistant/ peon in small establishment/ helper/ delivery assistant / attendant/ waiter	12
11	Washer-man/ chowkidar	0
12	Non-work (Pension/ Rent/ Interest, etc.)	0
	<b>Total</b>	<b>21</b>

Source: Primary Data



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## PROFESSIONAL STRESS AMONG INDIAN MILITARY INTELLIGENCE PERSONNEL

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### ABSTRACT :

*The present study focuses on the professional stress on work places among the Junior Commissioned Officers (JCOs), Non-Commissioned Officers (NCOs) and Other Ranks (ORs) of Military Intelligence of Indian Army. 384 samples of Military Intelligence personnel will be taken for this study. Sources of data is Primary data include a structured questionnaire. Data was collected through structured questionnaire and measure through Likert's scale, using Kaiser- Meyer-Olkin measure of sampling adequacy, Cronbach's alpha for checking internal consistency, Bartlett sphericity test for testing the null hypothesis and various factor analysis including Eigenvalues, Extract square Sum loading, variance percent and Accumulation percent values relative comparison and Correlation matrix will be used as tools to arrive at desired results and statistical interpretations.*

**Key Words:** *Indian Military Intelligence, Professional Stress, Junior Commissioned Officers (JCOs), Non-Commissioned Officers (NCOs) and Other Ranks (ORs)*

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### I. introduction

Job plays a major role in every person's life and the stress related to professional life is inevitable. Stress related to profession will co-relate with performance and to prove it there are enough of evidence supporting the effects of it over organizational and individual productivity. Stress has become a unavoidable factor in defence arena and culture and stress also become day to day issue for the organizations and as well to the personnel life. In human life, there are several kinds of stress; however the stress related to profession will be unique in nature and will turn out to be "the silent killer" if it's not managed properly.

Professional stress if not managed properly will cause psychological, physiological and behavioral symptoms which causes the human machine to collapse. To avoid this, organizations and personnel should know how to deal with the professional stress issues and act smartly to tackle it and stay productive. Individuals should have

sound knowledge regarding the causes so as to resolve professional stress on time. Professional stress happens mainly when an individual finds difference between the work and environment and when they are made to work under different sorts of pressures and concerns. When an individual continues to work under such environment, it may lead sudden bust out situation at work which might create a negative image of individual and also cause other symptoms of stress (Khodabakhsh Ahmadi and Kolivand Alireza, 2007).

Military Intelligence personnel has gathering information from various sources. After information gathering the same have been shared with other intelligence agencies i.e National Technical Research Organisation, R&AW, IB, DIA & Joint Cipher Bureau. They use this type of information to control the risks related to hypothetical command decisions. They use the gathered intelligence/ information through their specialization to resolved threats presented by an adversary and to provide gathered intelligence to operational commanders with a reduced risks of uncertainty. Hence, profession of Military Intelligence personnel is not a tiny one; they are playing with their life and against nature. Hence Professional stress among Indian Military Intelligence Personnel had been chosen (Singh, Jagdeep, 2009).

## **II. Literatures reviews**

### **A. P. Saravanan, Dr.N. Panchanatham and Dr. M. Jeyakumaran (2019)**

In the article, “Professional Stress among Junior Commissioned Officer and Non Commissioned Officer of Indian Military Intelligence Personnel”, the author find out and recommended that, Parameters such as Terrain (Geographical Differences), Tension & Anxiety (Combat conflicts) and Monotony (Unit perception) found to be important factors in stress building. The leadership style needs to consider them in reducing stress. Also, Incompetent officer, unfree to talk to officer and uncomfortable leadership under factor Job Pressure have made Non Commissioned Officer to take leaves, overstay on leave and also to think about next movement. They found to be moderately creating stress. Adopting lesser care on the leadership style and attitude leads to building higher the personnel stress has been observed. Furthermore, Training conflicts, Job pressure and Organizational Rules found to be the most stress impacted factors on Non Commissioned Officer. Streamlining of these factors could boost the morale of other employees to reduce stress and could enhance the efficiency and effectiveness of Military Intelligence personnel.

### **B. P. Saravanan, Dr.N. Panchanatham and Dr.M. Jeyakumaran (2019)**

In the article, “Emotional Intelligence and Job Performance among Indian Military Intelligence Personnel”, the author find out that a positive relationship was found between Emotional intelligence and job performance. Based on the findings, the authors were recommended that the Directorate of Military Intelligence should focus

not only on identifying the occupational stress factors affecting their personnel but also try to manage their emotional competences through the provision of conducive working environment for them. In this way they can deal with the problem of occupational stress and boost their job performance. Also, this could be done by employing the service of motivational interviewing counsellor, psychologist and counsellors from Defence Institute of Psychological Research to train the Military Intelligence personnel and made them as psychologically fit to handle their emotional intelligence in positive way.

**C. P. Saravanan, Dr.N. Panchanatham and Dr.M. Jeyakumaran (2019)**

In the article, “Work-Family Conflict and Professional Stress among Indian Military Intelligence Personnel”, the author had find out that Indian Military Intelligence Personnel’s work-family conflict perception increases the professional stress. Based on the findings, the author was recommended that the Directorate of Military Intelligence may building the existing knowledge base on dealing with dual-roles conflict in the workplace for strategic Human-Resource Management through strategies like Emotional Support, Instrumental Support and Role Modelling Behaviours.

**D. P. Saravanan, Dr.N. Panchanatham and Dr.M. Jeyakumaran (2019)**

In the article, “Professional Stress and Motivation among Indian Military Intelligence Personnel”, the author had to identified the professional stress and motivational factors in military intelligence professionals in India with sample of 300 different cadres of military intelligence department. The results of Chi-square analysis found that there is a significant difference exists between job stress and work motivations are concerned. The study revealed that Clerk Cadre Personnel feel more stress than FIOs and there is significant association exist between professional stress and personnel motivation and proposed some applicable recommendations to perk up overall job scenario in MI department.

**E. Sivasubramanian& K.V.R. Rajandran (2017)**

In the article, “Study of Stressors affecting Indian Air Force Personnel”, the author had mainly checked on stress breeding environment which in a way impacted in boosting morale of defence personnel and thus reducing the number of unnatural death due to fratricide, suicide and PTSD. Severity of unbalanced behavior of soldier due to excessive stress which would result in creating havoc among colleagues and thus causes cascading effect on defence establishment.

The questions were prepared based on the following factors : The ‘Q’ was distributed with group of 60 personnel which had 40 soldiers and 20 officers. The study was conducted at one of forward base of Indian Air Force establishment and selected group of people were asked about the top 10 stressors from the list of most

likely to promote stress among Indian Air Force personnel. The paper provides association of stress with working culture of Indian Air Force and existence of various stressors in their day today life. Also, in accordance it also suggested various unique measures, which promoted stress free work environment among Indian Air Force personnel.

**F. Dr. B. Vijaya Bhaskararao (2017)**

The article, “Job Stress: Influence of Socio Economical Factors on Employees of Indian Army”, written by Vijaya Bhaskararao was mainly aimed at examining the magnitude of stress experienced by Indian army soldiers with reference to various factors such as socio-economic groups of age, income and region, experience, destination. The study was conducted on 417 soldiers to find out the level of job stress in the area of organizational stressors, job stressors, individual stressors and group stressors and the same was used for finding the overall stress . When it came to designation level stress, JCO soldiers felt more stress working on too many jobs and the individuals had the feeling of spending less time with family. In conclusion to all the above, authors suggested that soldiers should be encouraged to share their problems with seniors and peer group.

**G. P. Saravanan and Dr.N. Panchanatham (2017)**

The authors in their article, “Impact of Motivation, Change the Stress Level of Personnel of Indian Army – An Empirical Study” focuses on the stress on work places among the Junior Commissioned Officers (JCOs), Non-Commissioned Officers (NCOs) & Other Ranks (ORs) of Indian Army. 15 questions are consisted in the questionnaire. Scrutiny of the results shows that stress level increased repeated postings to operational / Counter Insurgency areas (13 Nos), however family problems and separation from spouse are also have same Nos (15 each). The t values are found to be significant for ineffectual officer’s leadership (22.627) as 15 personnel are in Neutral statement. Apart, repeated postings to operational / CI areas (17.567), family problems (18.292) and separation from spouse (19.530) are indicates stress level has increased. On the basis of the results authors directed that the government should taken various measures to prevent such incidents, these include improvement in living and working conditions through provision of better infrastructure and facilities, additional family accommodation, liberalised leave policy, establishing grievance redressal mechanism, conduct of yoga and meditation as part of the unit routine.

**H. Maj Gen Mrinal Suman (2014)**

In an editorial named “Indian Army and Management of Stress” , written by Maj Gen Mrinal Suman states that long term deployment in an highly dangerous environments, long time separation from families, financial injustices, serving in isolated conditions, helplessness of not being with family during domestic

emergencies and also lack of liberty (as enjoyed by the citizens ) are few of the reasons for objectionable levels of stress felt by Indian soldiers. Also he gives three prolonged approaches such as command level initiation, organizational level reforms and psychological level measures.

**J. SurgCmde VSSR Ryali (2011)**

In an editorial, “Stress in the Indian Armed Forces: how true and what to do?”, he proposed to review the existing literature on the concepts of stress, assessment methodologies, epidemiological trends of stress related disorders among soldiers, manifestation of stress and as well the coping strategies. He also suggested measures to liberalize policies, enhance the interaction between officers and soldier’s, enhancement of hardship related allowances, etc to deal with combat stress.

The change of event or change in routine causes stress among soldiers. These factors does not cause stress in any mathematical measure. The individual’s character might make him to react to stressors. Different operational environment has been covered which relates to faces of satisfaction of job, living conditions which also includes recreation facilities, service conditions which includes pay and allowances, food, leave, promotion, posting and tenures in operational high altitude/difficult areas

**K. Col KC Dixit (2011)**

Col KC Dixit in an article, “Addressing Stress Related Issues in Army”, discuss the key causes of stress in Army which includes cases of suicides and fratricides, journal on stress related incidents, various action taken by the organization/ government to address the issue and finally recommended focus areas. The methodology adopted involved study of literature , Reports, journals , interacting with individuals, survey during field trips. The survey was done with two different questionnaires. The survey comprised of 100 officers, 100 JCOs and 300 other ranks. The analysis of factors in sample survey which were mainly related to operational and also domestic pressures which induces various levels of stress in Army personnel. The author suggested immediate need to carry out cadre review so as to ensure faster promotions to permanent commissioned officers must be identified and executed. Also, he highlighted that promotion policy must be transparent and designed to enhance the overall effectiveness of the Army.

**L. Brig JarkenGamlin (2010).**

The article, “Challenges of Man Management and Combat Stress in LIC Environment”, where the survey consisted of 568 officers, junior commissioned officers and other ranks randomly selected from units deployed in LIC. Different measures such as Personal Questionnaire, Carroll Rating Scale for Depression (CRSD), Michigan Alcoholism Screening Test (MAST), General Health Questionnaire (GHQ), State-Trait Anxiety Inventory (STAI), Perceived Stress

Questionnaire(PSQ), Impact of Events Scale (IES), Multidimensional Fatigue Inventory (MFI), Satisfaction with Life Scale (SWLS), The Hindi PEN Inventory (PEN) & Locus of Control (LOC) scale was used to measure the stress level. Mean and Standard Deviation used as a testing tool called Mann-Whitney U test. The author suggested several techniques such as Yoga, acupressure, massage, sound therapy, music therapy and Sudarshana Kriya to combat stress.

### **III. RESEARCH GAP**

Two Searches conducted using the keyword “Stress” and “Professional Stress”. Studies were conducted with subjects limited to human, English language and also mainly concentrating on Military intelligence personnel which yielded 77 articles for stress, 31 articles for professional stress and 12 articles for Professional stress related with army.

Apart from the literature’s review mentioned above, maximum literatures had focused on stress during less intensified conflict areas, job stress influencing socio economic factors and addressing stress related issues in the entire army and also suggested the implementation of yoga & Meditation classes to be carried out in Indian Army for reducing stress level among soldiers. Several other studies also suggested increasing of pay and allowances of officers and soldiers and also suggested to have officers-soldiers interactions and to share the problems with the seniors and peers.

In view of above, there wasn’t any dedicated study on professional stress, factors influencing professional stress and reasons of professional stress among Indian Military Intelligence Personnel was carried out.

### **IV. Research Objectives**

To assess the level of professional stress between Junior Commissioned Officers & Non Commissioned Officers along with Clerical Staffs and Field Intelligence Operators.

### **V. Research Hypothesis**

H0: There is no association between the JCOs and NCOs and professional stress among personnel of Indian Military Intelligence.

H1: There is an association between the JCOs and NCOs and professional stress among personnel of Indian Military Intelligence.

### **VI. Research Methodology**

This research is quantitative in nature. To study the correlation between professional stress and other factors, professional stress has been quantitatively measured. Several tools were developed to measure professional stress. The first hand data has been



collected by making use of structured questionnaires. 384 respondents from Junior Commissioned Officers & Non Commissioned Officers along with Clerical Staffs and Field Intelligence Operators have been taken into an account for survey. A total of 384 sample size was considered for the analysis purpose by splitting into three groups as Field Intelligence Operators, JCO and NCO to find correlation and Regression co-efficient.

Data was collected through structured questionnaire and measure through Likert's scale, using Kaiser-Meyer-Olkin measure of sampling adequacy, Cronbach's alpha for checking internal consistency, Bartlett sphericity test for testing the null hypothesis and various factor analysis including Eigenvalues, Extract square Sum loading, variance percent and accumulation percent values relative comparison and Correlation matrix and will be used as tools to arrive at desired results and statistical interpretations.

Among those tools, the Occupational Stress Indicator (OSI), developed by Cooper and Williams et al. [32], is one of the most frequently used to measure job stress. It covers six dimensions i.e., (i.e., the job itself, family-work conflict, geographical differences, combat conflict, disturbance factors, organization style, unit perception and Unit resource management. The questionnaire developed by Karasek [41] is used to measure job control level and the psychological demand, and this questionnaire is divided into four sections: mission control, decision control, resource control, and physical job environment control. Then, the collected data from valid questionnaires were analyzed to study the correlation between job stress and different cadre of Indian military intelligence personnel.

## **VII. Data Analysis and Result Discussions**

### **Reliability Test Analysis**

#### **A. Factor Analysis of the Scale**

The primary task of factor analysis is to extract and synthesize the overlapping parts of the original variables into factors. It requires a strong correlation between the original variables. Otherwise, if the original variables are independent of each other, the degree of correlation is very low. If there is information overlap, there is no common factor, and no factor analysis is needed. Therefore, before the factor analysis, KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) and Bartlett sphericity test method are used to analyze whether the original variables correlate, meaning whether it is suitable for factor analysis. The KMO method indicates that the higher the value of the measure, the more common factors between the variables. The KMO and Bartlett tests are performed on the recovered working pressure gauge. The KMO value is 0.86 (between 0.8 and 0.9), and the significant level of Bartlett

test is 0, indicating that the professional stress questionnaire is suitable for factor analysis. The results of factor analysis using SPSS are presented below: -

**Table 1: Factors for Field Intelligence Operators (FIOs) -Stress**

Initial Eigenvalues				Extracted Sum of square loadings		
Components	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	24.70	53.71	53.71	15.32	33.32	33.32
2	6.08	13.21	66.92	8.80	19.13	52.45
3	4.42	9.62	76.54	8.67	18.85	71.31
4	2.71	5.90	82.45	4.09	8.89	80.20
5	2.42	5.26	87.72	2.37	5.16	85.36
6	1.85	4.04	91.76	2.33	5.06	90.43
7	1.67	3.63	95.39	2.28	4.96	95.39
8	1.39	1.58	98.92	1.39	1.58	98.92

From the above Table 1, it is observed that the eigenvalues and sum of squared loading factors shown that the percent variance figures for the selected factors under Field Intelligence Operators found consistently on reduction. At the same time the cumulative figures are on the increasing trend.

The variance figures commenced with 53.71% to a lowest of 1.58% under Eigenvalues and the same is from 33.32% to the lower of 1.58% under sum of squared loading for eight iterating factors loading.

Similarly, cumulative figures ranging between 53.71% to 98.92 and 33.32 to 98.92% for Eigenvalues and Sum of square groups respectively, hence the reliability for the selected factors.

**Table 2: Cronbach's Alpha Value for Stress Factors-Field Intelligence Operators (FIOs)**

Variable	Cronbach's Alpha*	No. of Variables
Role factors	0.979	4
Social Isolation factors	0.978	4
Geographical factors	0.977	4
Fear factors	0.977	4
Morale and disciplinary factors	0.977	4
Disturbance Factors	0.976	6
Career worrisome factors	0.976	4
Work Overload factors	0.976	5
Leadership style	0.976	6
Organization Attitude	0.976	3

\*Highest Cronbach's value among respective factor variables

The internal consistency of the scale is validated through a test called Cronbach's Alpha co-efficient. The consistent reduction in the Cronbach's value for the factors selected being highest for role factors (0.979) to Organization attitude (0.976). However, their sub factors numbers vary with the main factors and their dependency decides the co-efficient value.

**Table 3: Correlation Matrix for Field Intelligence Operator (FIOs) - Stress Factors**

Factors Co-efficient *	Correlation	Sub-Factors
Social isolation factors	-1.75	Having a hard time bullying or Intermediation at work
Geographical factors	-0.10	Climatic conditions at work
Fear Factors	-0.04	Extreme Repeated & continued treat to personal safety
Fear Factors	-0.02	Gallant& heroic Deeds
Morale & Disciplinary	-0.06	Lack of Unit Cohesion and esprit
Disturbance factors	-0.47	Personnel in Continues operation
Disturbance factors	-0.23	Uncertainty
Disturbance factors	-0.22	Conflict
Career worrisome factors	-0.15	No Idea on what mental disorder mean to see a Psychiatrist
Work Overload	-0.15	Insufficient Co-Workers
Leadership style	-0.78	Unfree to talk about work/or home issues
Organization Attitude	-0.32	Lack of mutual Trust and supportive culture

The validity of the factors selected is given above (Table 3) along with the specific sub- factors impact with significance. The least negative significant value is depicted in the table indicating are the sub-factors highly significant in impacting on the main factor for a given unit of slight variation on mentioned sub-factors. Under 'Fear Factors' Gallant & Heroic deeds (-0.02) and Extreme repeated & continued treat to personal safety (-0.04) found highly significant than the rest of the other two sub factors. Similarly, under Morale & Disciplinary factors out of four sub-factors, Lack of Unit Cohesion and esprit found highly significant with value -0.06.

**Table 4: Total variance explained for Field Intelligence Operator (FIOs) – Non-Stress**

Initial Eigenvalues				Extracted Sum of square loadings		
Components	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	28.37	65.99	65.99	11.27	26.23	26.23
2	4.26	9.90	75.90	9.06	21.08	47.32
3	3.55	8.26	84.17	7.41	17.23	64.55
4	2.78	6.47	90.64	6.30	14.67	79.22
5	1.88	4.38	95.02	6.16	14.33	93.55
6	1.44	3.35	98.38	2.07	4.82	98.38

Now among the Non-stress factors for the same Field Intelligence Operators, the consistency observed (Table 4) for both Variance and the Cumulative components. Up to six factors iteration the values are calculated and variance ranges between 65.99% to the lower of 3.35% and 26.23% to 4.82% for both Eigen value and Sum of square respectively. In contrast, there is an increasing trend observed for both under cumulative components for reliability of the factors.

**Table 5: Correlation Matrix for Field Intelligence Operators (FIOs) –Non- Stress Factors**

Factors Co-efficient *	Correlation	Sub-Factors
Emotional factors	-0.07	Always know which emotion feeling with & why
Emotional factors	-0.02	Realize the links between feeling what they think, to do and say
Emotional factors	-0.12	They recognize how their feelings affect their performance
Emotional factors	-0.01	They have their guiding awareness of their values & goals
Self –confident factors	-0.04	Present themselves with assurance & presence
Trust Worthiness	-0.04	Consistently act ethically & considered to be above approach
Trust Worthiness	-0.09	Build trust by being reliable and authentic
Trust Worthiness	-0.03	Admit mistakes and confront unethical actions in others
Conscientiousness	-0.04	Meet commitment & keep promises
Conscientiousness	-0.003	Hold accountable for meeting objectives
Achievement drive	-0.09	Result oriented with hive drive to meet objectives & results

Factors Co-efficient *	Correlation	Sub-Factors
Commitment factors	-0.04	Willing to make personal & group scarifies to meet organization goal
Optimism factors	-0.004	Persistent in seeking goals despite obstacles & setbacks
Optimism factors	-0.01	Setbacks due to Manageable circumstances than personal flaw

Here, quite a few sub-factors found highly significant with least values such as Conscientiousness, Optimism factors, Commitment factor and emotional factors. The sub-factors from the above Table 5, indicates against the mentioned main factors are important ones to have an impact on the stress factors of Field intelligence operators., which ranging from a lowest of -0.003 to -0.12.

#### B. Non Commissioned Officer's (NCOs) Group.

**Table 6: Total Variance explained for NCO Factors – Stress Factors**

Initial Eigenvalues				Extracted Sum of square loadings		
Components	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	24.65	52.45	52.45	18.41	39.18	39.18
2	8.06	12.15	69.60	8.36	17.78	56.97
3	5.52	11.86	81.47	6.35	13.52	70.49
4	3.22	6.86	88.33	5.26	11.19	81.69
5	2.67	5.68	94.02	4.86	10.36	92.05
6	1.83	3.89	92.91	2.75	5.86	97.91

For the NCO group, it is observed from the results (Table 6) that, both variance and the cumulative factors have shown consistent reduction and improved percentiles. The cumulative value of sum of square has shown highest value close to 98% where as it is close to 93% under Eigenvalues for the existence of reliability among select factor.

**Table 7: Correlation Matrix for NCO - Stress Factors**

Factors	Correlation Co-efficient *	Sub-Factors
Role expectation	-0.01	Perpetual gap Between Task undertaken and Army initiatives
Role expectation	-0.02	Assignment of unexpected work
Social Isolation	-0.004	Having hard time with bullying or intermediation t work
Social isolation	-0.05 Hard to talk to others due to shyness and anxiety	

Factors	Correlation Co-efficient *	Sub-Factors
Social isolation	-0.08	Lacking of nearness & personal interactive support
Geography	-0.01	Climatic conditions at work
Geography	-0.05	Terrain undulation difficulties
Geography	-0.02	Living conditions at different places
Morale & Disciplinary	-0.02	Being inactivity
Morale & Disciplinary	0.01	Feeling Monotony
Disturbance	-0.04	The fear about next move
Disturbance	-0.02	The hurried pace at work
Career worrisome	-0.03	No Idea about mental disorder to consult Psychiatrist
Career worrisome	-0.05	Not ready to accept that need from external source

The significance of sub-factors found for majority such as social Isolation (-0.004), Morale & Disciplinary factors, Role expectation, Social isolation, geography, Disturbance and Career worrisome factors respective sub-factors have considerable impact on the select stress factors for any small deviation.

**Table 8: Cronbach's Alpha Value for NCO -Non Stress Factors**

Variable	Cronbach's Alpha	No. of Variables
Role expectation factors	0.975	4
Social factors	0.974	4
Geography	0.973	5
Fear Factors	0.973	4
Morale & Disciplinary factors	0.973	4
Disturbance factors	0.973	6
Work Overload factors	0.973	6
Leadership style	0.973	6
Job Pressure	0.973	5

The internal consistency of the scale is validated through a test called Cronbach's Alpha co-efficient. The Value from the above Table 8 shows that consistency achieved with 0.975 to 0.973 for Role expectation factors and Job Pressure. However, Number of variables (Sub-factors) varied with different numbers for variables.

**Table 9: Total variance explained for NCONonStress Factors**

Initial Eigenvalues				Extracted Sum of square loadings		
Components	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	21.85	50.82	50.82	11.55	26.88	26.88
2	6.38	14.85	65.67	8.72	20.28	47.16
3	5.70	13.26	78.93	8.59	19.98	67.15
4	3.60	8.38	87.32	5.70	13.26	80.41
5	3.03	7.04	94.37	4.33	10.07	90.49
6	1.72	4.00	98.37	3.39	7.88	98.37

For NCO non stress factors the inverse trend found for both variance and cumulative components under both Eigen values and Sum of square loadings. However, the values vary as the variance started with 50.82 % to 4.00 % under Eigen values where as it is much lower with 26.88% to 7.88%. The cumulative has achieved same percent of about 98.37% under both

**Table 10: Stress Factors for Junior CommissionedOfficers (JCO)Reliability test**

Stress Factors	Cronbach's Alpha	No. of Variables
Role Expectation Factors	0.97	4
Social Isolation Factors	0.96	4
Geographical Factors	0.95	5
Fear factors	0.95	4
Sleep Disturbance factors	0.95	6
Career Worrisome factors	0.95	4

The internal consistency of the scale is validated through a test called Cronbach's Alpha co-efficient. For the above six factors, the value shown a consistent reduction is achieved from 0.97 to 0.95.

**Table 10: Stress Factors for Junior Commissioned Officers (JCO)Reliability test**

Stress Factors	Cronbach's Alpha	No. of Variables
Role Expectation Factors	0.97	4
Social Isolation Factors	0.96	4
Geographical Factors	0.95	5
Fear factors	0.95	4
Sleep Disturbance factors	0.95	6
Career Worrisome factors	0.95	4



The internal consistency of the scale is validated through a test called Cronbach's Alpha co-efficient. For the above six factors, the value shown a consistent reduction is achieved from 0.97 to 0.95.

**Table 11: Correlation Matrix for JCOSTress Factors**

Factors	Correlation Co-efficient *	Sub-Factors
Social Isolation factors	-0.49	Lack of constant contact with Family
Geographical factors	-0.49	Terrain difficulties at work
Disturbance factors	-0.49	Personnel continues operation, fear about next move,
		Uncertainty, Conflicts, Noise & Hurried pace
Career worrisome factors	-0.17	No idea about mental disorder to meet Psychiatrist

\*At <0.5 significance

The sub-factors such as no idea about mental disorder to meet psychiatrist (-0.17), followed by lack of constant contact with family, Terrain difficulties at work and personnel continues operation (all: -0.49) correspond to the main factors such as Career worrisome factors, social Isolation, geography and Disturbance factors respectively. The mentioned sub-factors found significant enough for a slight variation to have impact on the given factors.

### C. Junior Commissioned Officer's (JCOs) Group.

**Table 12: Factors analysis for JCO Non Stress Factors**

Components	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	38.69	89.99	89.99	25.49	59.30	59.30
2	4.30	10.01	100.00	17.50	40.70	100.00

Interestingly, unlike in NCO, for JCONon Stress cumulative has achieved 100% under both Eigen values and Sum of square loading indicating considering all factors found potential.

**Table 13: Correlation Matrix for JCO Non Stress Factors**

Factors	Correlation Co-efficient *	Sub-Factors
Self- confident	0.28	Present themselves with assurance and presence
Innovativeness	-0.28	Seek fresh ideas from wide variety of sources
Achievement	-0.28	Result oriented high drive

Factors	Correlation Co-efficient *	Sub-Factors
drive		to meet objectives & standards
Adaptability	-0.45	Smoothly handle multiple demands, priorities and change
Conscientiousness	-0.45	Meet commitments and promises

\*At <0.5 significance

There were two significant values found under JCO – Non stress factors. -0.28 was the value found with three main factors namely self-confidence, Innovativeness and Achievement drive. Followed by Adaptability and Conscientiousness with correlation value of -0.45. The mentioned sub factors against the main factors found significant in influencing the factors for any given change.

#### **D. Regression Analysis – JCO Group**

Selected Variables for JCO group

Y = How to react your stress (consuming Liquor)

X1 = Emotional awareness (Recognizing ones emotion and effect (Realize about feeling what thinks, do and say)

X2 = Self –confidence (Decisive and able to make sound decisions despite uncertain and pressure)

X3 = Trust worthiness (Build trust by being reliable and authentic)

X4 = Conscientiousness (hold myself accountable for meeting objectives)

X5 = Adaptability (Flexible in how one see events)

X6 = Innovativeness (generate new ideas)

X7 = Achievement drive (Set Challenging goals and take calculated risk)

X8 = Commitment (the larger mission gives them a sense of purpose)

X9 = Initiative (pursue goals beyond what required or expected)

X10 = Optimism (Operate from hope of success rather than fear of failure)

X11 = Communication (Good at give and Take)

X12 = Leadership (Step Forward to lead as needed regardless of position)

X13 = conflict management (Stop potential conflicts and bring disagreements into open)

**Table 14: Results of regression co-efficient**

Model	R	RSquare	Adjusted R Square	Std. Error	Df	Sig. F value	Durbin-Watson Test
1	0.508	0.258	0.250	0.713	1	0.00	2.96
2	0.864	0.746	0.743	0.239	1	0.00	1.96
3	1.000	1.000	1.000	0.000	1	0.00	2.92
4	1.000	1.000	1.000	0.000	1	0.00	2.40

From the above table that the selected variables have passed the test of Durbin-Watson (Autocorrelation)

**Interpretation: -**

- A unit variation in Conscientiousness (Hold themselves accountable for meeting objectives) has resulted with R- square value of 0.258. That is a unit variation on this factor lead to a change in 25% of liquor consumption.
- Optimism: persistence in pursuing goals despite obstacles and setbacks (Operate from hope of success than fear or failure) resulted with 0.746 R-Square value (coefficient of Determination). That is 74 percent of variation can impact on Geographical indicator in case a variation of unit change in optimism.
- Similarly, for sleep disturbance factor (Hurried pace) R-square found to be 1.0, hence, here also same optimism shown that a unit change leads to 100% shift in Disturbance factor.
- Finally, for work overload dependent factor, both communication and optimism independent variable found to be influential. A unit change in both can lead to a change in work overload factor to great extent (1.00)

**E. Regression Analysis –NCO's Group**

The linear step-wise regression analysis for NCO is carried out with the same dependent and independent variables hence the results are below.

The dependent and independent variables remain same here as in case of NCO.

Model	R	R Square	Adjusted R	Std. Error	df	Sig. F value	Durbin-Watson test
1	0.587	0.345	0.342	1.031	1	0.00	1.624
2	0.912	0.832	0.831	0.523	1	0.00	1.624
3	0.975	0.950	0.950	0.284	1	0.00	1.624
4.	0.996	0.992	0.991	0.117	1	0.00	1.624

\*Significance<0.5

**Interpretation: -**

- (a) The Emotional factor – realizing the links between feelings and think, do and say has got an impact on Stress release factors to the extent of only 34 %.
- (b) Self –confidence – making decisive and sound decisions in uncertain and pressure show the  $R^2$  value to the tune of about 83%

The other two important factors such as Trust worthiness (build trust by being reliable and authentic) and conscientiousness (Hold accountable for meeting objectives) could influence to the extent of about 95% and 99% the highest. Hence, the above last three factors found influential factors on the stress management.

**VIII. CONCLUSION**

The Reliability validity and correlation matrix test were carried out in order to find the factors and their sub-factors as significant factors under stress and Non-stress groups. Under group FIO stress, the cumulative percent for both Eigen value and sum of squared loading found very close to 99% and the same for non-stress (FIO) was close to 98.40%. Hence, the selected factors of both stress and non-stress are relevant and close in having impact on each other.

Social factors, Geographical, Fear factors, Morale & Disciplinary, Disturbance, career worrisome, Work load, Leadership style and Organizational attitude are identified with corresponding sub-factors based on significant values as important stress factors for FIO group.

Emotional factors (4), Trust worthiness factors (3), conscientiousness and Optimism factors (each 2) and self-confidence, achievement drive and communication factors (each 1) with their sub-factors identified as significant factors under FIO.

Under group NCO, factors such as Social factors (3), geographical factors (3), Role expectation factors, Morale & Disciplinary factors, disturbance factors and career worrisome factors (Each 2) identified significant stress factors.

Under group JCO, social Isolation, Geographical factors, disturbance factors and Career worrisome factors (each 1) and their sub-factors found to be significant stress factors. Interestingly the cumulative percent value obtained is 100% under sum of squared loading factor indicating all factor selection under loading. The new factors loaded are self – Confidence, Innovativeness, Achievement drive, adaptability and conscientiousness.

A linear-step-wise regression analysis for group JCO shown that among the selected independent variable, the stress factor (4 dependent variables) are found with co-efficient of determination value ( $R^2$ ) 100%, 74% and 25% for the factors sleep disturbance factor (Hurried pace), Optimism: persistence in pursuing goals despite

obstacles and setbacks and Conscientiousness (Hold themselves accountable for meeting objectives) respectively.

Similarly, regression results for NCO have shown that the co-efficient of determination value found highest from 83% to 99% for self-confidence, Trust worthiness and Conscientiousness factors. Hence they are they found highly significant on stress factors.

Hence, it is found from the analysis that there exists no association between different level of cadres and professional stress and are independent.

### **IX. Recommendations**

Under Junior Commissioned Officer group, the sub factors such as communication (Good at Give and take) and Optimism (Operate from hope of success rather than fear of failure) are the two highly significant factors found influential. Hence the stress factor – How to react your stress (consuming Liquor?) depends mainly on communication and optimism factors. A unit change in these two could have an impact on the stress factor. Hence, to reduce stress factor, it is recommended (based on results obtained) that the two factors and their corresponding sub-factors to be kept at lower level possible so that the stress on the dependent factor is reduced.

While under Non Commissioned Officer group, trust worthiness (Build trust by being reliable and authentic) and Conscientiousness (Hold accountable for meeting objectives) found two highly potential factors to influence on the dependent variable – How to react your stress (Consuming Liquor?). In order to reduce the above stress among the NCO group, it is recommended to keep the above two independent variables and their corresponding sub-factors at possible lower pace. So that their influence on liquor consumption to reduce stress is minimized.

Fear factor (Gallant & Heroic deeds and extreme repeated & continued treat to personal safety) and morale & Disciplinary factors (lack of unit cohesion & Esprit) factors found highly significant (Correlation co-efficient). Hence among FIO alone, the above factors are having a direct relation with stress factors. Any change (Increase or decrease) factors numeric rating leads to high or low degree of correlation (Vice-versa).

Therefore, it is important to keep the above discussed all factors (Communication, Optimism, Trustworthiness, Conscientiousness, fear Factor and their corresponding sub-factors (Above discussed) to be on lower pace to have lesser stress impact on different cadres and groups of Military Intelligence.

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## IMPORTANCE OF GREEN HUMAN RESOURCE MANAGEMENT

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### **ABSTRACT :**

*Although th From last three decades till present time our country is continuously moving forward towards industrializations which supports for employment opportunities, exploring business by extracting different products by use of computer based technology and by adopting other practices like digitalization for sustainability. All these helps in development and progressing in areas like(1) Standard of living (2) Elimination of Environmental hazards by adoption of solar energy, paperless offices and atomization,*

*Failure of adoption and implementation of green practices, elimination of environmental hazards, ultimately results into threats to human being and sustainability. Considering the need of environment protection many organizations are coming forward and making efforts towards conversion of traditional human resource management into green human resource management. Developing a green human resource culture from bottom to top for any organization is not really a simple and easy task but at least making pro-environmental policies, rules regulations and implementation of it can be effective tool for gradual conversion of traditional human resource management into green human resource management. The focus of the researchers is towards the green human resource management and its importance, various green human resource practices and policies adopted and implemented by the organizations within India. As like human resource management green human resource management also has three important perspectives like personal, organizational and social but with extended focus which can support and help for sustainability of the ecosystem.*

**Keywords:** *Environmental hazards, paperless offices, pro-environmental policies, ecosystem*

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### **Introduction**

Due to the growth in the industrialization, the rate of environmental degradation is increasing day by day and is leading to global warming therefore, it is necessary for industrial organizations to create sense of awareness among their employees about need of an environment protection and maintaining international environmental

standards. To achieve this organization must adopt and implement environment friendly practices and international standards like “ISO-14000 and ISO-45000”. By adopting green concept majority of the organizations have transformed culture of human resource management into green human resource management.

Researchers have unique contribution to support and bring the awareness of Green HRM by pointing the importance to adoption and honest implementation of environmental practices with a specific purpose of organizational functioning with the significant strength of HRM practices. Green management is the exercise whereby organizations develop an environmental management strategies and proactive environmental management initiatives to protect the environment. It is universal truth that, no change is possible without employee's participation and involvement including change in human resource management to Green HRM, which has a positive impact on the character of environmentally responsible attitudes and behavior in employee's life.

### **Literature- Review**

Researches and introduction on Green HRM indicates the need of integration between human resource management and environmental management. Study of correlation between HRM and GHRM draw the results that, HRM imparts to intensify the quality and value of environmental performances, empathetically different green HRM practices can develop willingness among employees and inspires them for remaining committed by virtue of their contribution, efforts, suggestions and ideas to the greening of organization wherever they work.

People in society may have different perception for green. But for environmentalist or nature devotees green means an area or land that is surrounded with grass, herbs plants trees, natural resources i.e. something relating to nature. There is a growing awareness among employees of an organization which really has significance of green issues. According to them green workplace is environmentally sensitive, efficient and socially responsible resource.

Going green includes earth conservation, protection of natural resources and supporting to preservation of resources, which imparts implementation of determined lifestyle changes that will help individual to create and live in an eco-friendly environment. To do this every individual is duty bound to be aware about the environment and changing their behavior, attitude and lifestyle to minimize the practices or activities that cause the degradation of the environment. Any action that organization takes by focusing on sustainability of the resources it contributes a positive impact on the environment. Every small change by every individual in their life style makes a green work life and green environment for present and future generation.

For best reuse of the waste as a resource the entire waste which is generated is classified into various classes like-

- i) Industrial Waste: Urban, Industrial, Biomedical, E-waste
- ii) Municipal Corporation waste: Biodegradable, Recyclable, Inert etc.
- iii) Construction Waste: Construction waste, demolition waste etc.
- iv) Road Waste: Road waste, Excavation, Soil and rocks and others

### **Green practices in organizations**

It is essential to develop an organization ecological, economical and sustainable, to do this it is essential for that organization to adopt and implement green practices. Some of the green practices broadly adopted and implemented by various organizations in today's scenario are as mentioned below.

- 1. E-filing
- 2. Flexi work
- 3. Car pooling
- 4. Job sharing
- 5. Green payroll
- 6. Green printing
- 7. Public transport
- 8. Company transport
- 9. Energy efficient office
- 10. Online employee training
- 11. Reduction in carbon footprint
- 12. Use of sanitary vending machine
- 12. Development of vermin fertilizer
- 14. Proper disposal of solid and E-waste
- 15. Recycling of waste material i.e. scrap

### **Objectives**

The objectives of the research paper are

- 1. To understand the scope of Green Human Resource Management
- 2. To highlight the impact of environmental degradation on future generations

3. To find out measures available for development & expansion of Green Human Resource Management
4. To encourage practicing human resource managers for taking initiatives in conversion of human resource management to Green Human Resource Management

### **Benefits of GHRM**

1. GHRM develops eco-friendly habit among employees
2. GHRM builds brand image of an organization
3. GHRM helps in improving employee morale
4. GHRM attracts competitive employees
5. GHRM helps to retain talent

### **Applications of Green Human Resource Management**

#### **1. Green Human Resource Management Function & Processes**

The professionals working in human resource department plays a vital role in transforming the organization culture including implementation of green policy into practice and can create a green and sustainable culture within the organization. Therefore, such green practices help in fulfillment of green objectives and in achieving an organization goal throughout the HRM process from recruitment to retirement of an employee. Factors' coming in between recruitment to retirement contributes for developing and implementing green principles and practices.

#### **2. Employer-Employee Participation in Adoption & Implementation of Green Human Resource Practices**

Characteristics and perspectives differ from individual to individual. therefore, when these people comes together by way of joining an organization, it becomes the mixture of employees with different attitude, characteristics & perspectives, naturally they adopt and follow different practices with different behavior in their everyday life causing different effects on the organization working, culture as well as environment. Some may follow the practices which results into degradation of environment or becoming environment friendly. Employees who are energetic, strategic, ethical, and involved themselves in understanding environmental management fundamentals can present more desirable, pleasant and effective environment in an organization.

For development of effective green management, that results into successful improvement in environmental management systems or in framing policies at the work place needs active participation in green initiatives. Employee participation is

crucially influenced by identifying values; awareness and actual reap recognized by the employees, society and stakeholders.

### **3. Government Initiatives**

Government has make stringent rules by amending the environment related laws, focusing on more tree plantation programs, taking steps ahead to convert non-agricultural land into agricultural land, banned on manufacturing of single use plastic products, save water, use of solar energy, paperless offices, conversion of diesel/petrol vehicles into electronics segregation of solid waste as “Ola Kachra and Sukha Kachra” etc. for its easy disposal and reuse.

India’s PM Hon. Narendra Modi said at the UN Climate Action Summit “We must accept that if we have to tackle the climate crisis, what we are doing today isn’t enough. What we need is a global behavioral change” He also urges world leaders to act immediately to protect the environment.

“Earth is issuing a chilling cry: Stop..Time is running out. But it is not too late.”

(UN secretary-general Antonio Guterres)

“How dare you. You have stolen my dreams and my childhood with your empty words. We will not let you get away with this. Right now is where we draw the line.”

(Greta Thunberg, 16 year old climate activist, to world leaders)

To protect environment Government of India had made applicable many laws to Industries and other sectors, some of the laws are as mentioned below:

1. The Water(Prevention & Control of Pollution)Act,1974 (As amended in 1978 & 1988)
2. The Air(Prevention & Control of Pollution)Act,1981(Amended in 1987)
3. The Environment (Protection) Act, 1986.
4. The National Environment Tribunal Act, 1995.
5. National Green Tribunal Act, 2010.

### **4. India Green manufacturing Challenge (IGMC) Initiatives**

Organizations which participate in green management competitions are assessed by the authorized agency “India Green manufacturing Challenge (IGMC)” which is an awarding platform for organizations. Renowned organizations in India had been honored at “India Green manufacturing Challenge (IGMC)”. This organization appeals industry for setting SMART goals in green initiatives which will raise awareness and inspire other industries to join activities relating to green initiatives, ultimately developing a GHRM.

Being “green” is great for the planet, it strengthens the organization's brand, makes an organization economical, motivates and inspires employees.

To make a continual progress it is essential for an organization to assess environmental impact and to identify areas for improvement viz; scope for wastage reduction, recycling of waste, water conservation, use of less energy etc.

### **Observations**

Researchers have shown that, adoption and implementation of green human resource management develops constructive relationship between organization, human resource management and environment.

Organizations have numerous reasons to adopt and implement green human resource management practices that will prove beneficial for an organization and their employees.

It is said by the entrepreneur that “take my factories, buildings and money etc. except the employees as with the help of people we will create the empire again”. This indicates employees are a valuable and important asset for an organization.

As like the human resource GHRM practices help in improving employee morale and resultantly to save environment that will be beneficial for both the organization and employees.

Organizations which are not aware about green human resource practices, its concept, and policies may lose their talent or innovative employees, just because of absence of motivation.

Organizations that have implemented green practices developed their brand as an eco-friendly organization and thus offering socially responsible incentives.

Most of the employees are aware about eco-friendly practices adopted by some organizations. Such organizations think about survival of future generations, due to this ethical reason only new employees are attracted towards such organizations. Employees those who can understand the importance of environment protection and its advantages like to work with organizations which are implementing green human resource management practices.

In the race of attracting most creative and innovative employees, organizations are trying to attract the talented and potential employees by providing environmental friendly culture and practices.

Many organizations converted themselves as energy efficient by use of technology, innovative practices like preferring energy efficient windows and doors which decreases heating and cooling costs, water conservation system, low flow toilet to reduce water usage etc.

Many organizations are recycling and using a long lasting green product which helps in reducing the amount of energy.

### **Conclusion**

From the above information and finding it can be concluded that

1. Environmental degradation if not controlled will have a negative impact on future generations
2. Lot many measures are available for development & expansion of Green Human Resource Management
3. Human resource managers should necessarily take initiatives in conversion of human resource management to Green Human Resource Management Organizations like Tata Steel, Akzonobel, Wipro, Veolia Water, Clapo India, RICOH, Microsoft, and Infosys are taking measure which has an impact on development of people and expansion in the area of green HRM.
4. Effective implementation of green HRM helps employees and employers to learn and enjoy many things either from work life or private life resultantly they well be attracted towards environment.
5. Green HRM practices if implemented rigorously, consistently and honestly would result in attracting individuals to an organization and reduction in environmental degradation.
6. Creation of green awareness among employees by implementing Green programme and practices can help in
  - i) Reducing environmental degradation.
  - ii) Retain the resources for future generation
  - iii) Motivate and inspire employees
7. Green HRM efforts results in increased efficiencies, sustainable use of resources, less wastage, improved attitude, work life, employee performance and retention

### **Recommendations**

1. Everyone should adopt the green practices as everybody's life including future generations is depended upon it.
2. Human Resource Department professionals should focus on greening the business considering it's a social responsibility.
3. Each employee in an organization shall commit to contribute their efforts and ideas to the deliverance of their organization.



4. By means of green HRM each member of the organization shall help management and human resource department to reduce employee carbon footprint.
5. Everyone shall make efforts for sustainable use of resources, less wastage, improved attitude and work life,

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## **“THE EFFECT OF HUMAN RESOURCE MANAGEMENT PRACTICES (HRM) ON JOB SATISFACTION IN PRIVATE HOSPITALS OF SATARA DISTRICT.”**

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### **ABSTRACT :**

*The health-care sector is always under pressure to operate more efficiently and has to face the challenges of increased market competition, changed legislation and providing best care to the patients. The most critical factor in taking up these challenges includes the human resources (Admin. staff, Doctors, Nurses and other supportive staff.) Working in health-care sector. The way employees are being managed, motivated and rewarded and the way in which they develop themselves can make the difference between a well performing organization and poor performing organization. Therefore, human Resource Management is a key management function in every health-care industry.*

*The objective of this study is to investigate the impact of HR practices such as (Compensation & Benefits, Performance appraisal, Training programs, employee involvement, and flexi working hours) on job satisfaction in respect of five large private hospitals in Satara district. A structured questionnaire was developed based on the five point Likert scale and distributed to 108 hospital employees comprising Doctors, Nurses and Administrative staff through personal visits by using convenient sampling technique. All employees responded properly. Statistical tools like analysis of variance, ANOVA in SPSS was used to assess the impact of HR practices on job satisfaction.*

*The study reveals that there is significant impact of HR practices on employee job satisfaction in Health-Care industry but that impact is not found to be positive as per satisfaction level of employees. Hospital employees are dissatisfied with the existing HR Practices and improvements in these practices is recommended.*

**Key words:** *Compensation & Benefits, performance appraisal, training programs, employee involvement, flexi working hours, HR practices, job satisfaction, private hospitals, Anova, Analysis of variance, Satara district.*

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## **2. Introduction.**

Human Resource Management helps in creating better rapport between the management and the subordinates. It helps subordinates to realize individual and

organizational goals. Human Resource Management is the backbone of every type of organization. The triumph of every organization depends upon the worth of persons it employs. Human Resource Management helps in spotting the exact individual for the precise job, suitability for the job and quality of work go hand in hand in determining the quality of any work force.

The hospital sector and more broadly the health-care sector is increasingly under pressure to operate more efficiently and has to respond to the challenges of increased market orientation, changed legislation and providing driven care. The most crucial factor in taking up these challenges involves the human resources (Doctors, Nurses, Administrative staff) Working in health-care sector. The way people are being managed, motivated and rewarded and the way in which they develop themselves can make the difference between a well performing organization and poor performing organization. Therefore, human Resource Management is a key management task in health-care industry and other service sectors, where diets experience that what employees experience or as Kabana, Orchard, Howard, Soriano and Leduc(2006) argued that “Since all health-care is ultimately delivered by people. Effective HRM will play a vital role in the success of health-care sector reform”. Although policy makers in health-care increasingly recognize that a well-motivated, appropriate skilled and deployed workforce is crucial for the success of health system delivery.

Hospital management have difficulties in meeting the needs of their patients if their own needs are not met therefore hospital managers have responsibilities for both staff and patients. Job satisfaction in health-care organizations is related to many factors like optimal work arrangement ,the possibility of actively participate in the decision making process ,effective communication among staff members and supervisors and to be able to express freely ones opinion, collective problem solving and attitude of management are important for employee satisfaction. Hence the study is undertaken to find out the impact of HRM practices on employee job satisfaction in health-care industry in Satara District. The compensation& Benefits, performance appraisal, Training programs, employee involvement, flexi working hours, has considered as HRM practices.

### **3. importance of employee satisfaction in health care Industry.**

Healthcare employees are facing the problems in fulfilling the needs of their patients as employees own needs are not satisfied; hence, health care authorities have responsibilities for both patients and their own staff. The job satisfaction in health care industry is related to various aspects, such as best salary and other benefits, frequent training programs, impartial performance appraisal policy, involvement in managerial decision making and flexible working hours. Also good relation between management and employees, team work, Management attitude results in employee

satisfaction. If the above facilities are provided to employees result in high level of job satisfaction.

#### **4. DEFINATION OF HRM PRACTICES AND JOB SATISFACTION.**

Human resource practices: is a management task that helps managers for Planning, Recruiting, Training and Development, Salary and other benefits and retain the employees for the organization.(k.Aswathappa).

Job satisfaction defined as employee's positive and negative feeling regarding their work. It can be known from the attitude of the employees towards his work. Job satisfaction is depends on motivational level of employees.

#### **5. Objectives of the Study.**

- (i) To understand the Human Resource Practices those are followed in selected private hospitals.
- (ii) To examine the relationship between Human Resource Practices and employees job satisfaction in selected private hospitals.
- (iii) To analyze the most effective practices that influence on employee's job satisfaction in selected Private hospitals.
- (iv) To suggest measures for improving HR Practices for employee's job satisfaction that may adopted by selected private hospitals.

#### **6. Literature Review.**

- **Kabane and Orchard (2006)** A study entitled "the importance of human resource management in healthcare: a global context" 'the aim of this study is to show the healthcare system in global context and importance of HRM to improve health outcome of patients in healthcare delivery. Study adopted secondary data sources for data collection. Study suggested that proper management of human resources is critical in providing quality of healthcare. A refocus on human resource management in healthcare and more research are needed to develop new policies.
- **Rahim Baghaei (2007)** done a study entitled "A Comparative Study of Human Resource Management Practices in Private and Public Hospitals of Iran with Special Reference to Job Satisfaction of Nurses"; the aim of this study was to identify the HRM practices, which affect job satisfaction and compare the level of job satisfaction of nurses in private and public hospitals in Tehran, Iran. For the study, a questionnaire was developed with 148 questions in 3 parts regarding to HRM facets, demographic data, and seven critical elements of job satisfaction for deeper investigation. The study was based on a sample 400 nurses, from 10 private and public medium size general hospitals in Tehran, which was chosen

randomly. The results showed that HRM practices in the all facets directly affected on the job satisfaction of nurses. The Pearson chi-square test was used for data analysis. Analysis found that HRM practices in public hospitals were better than private hospitals, the total job satisfaction and overall job satisfaction of nurses was the same in both public and private hospitals. Among the various components of job satisfaction, nurses of this study were most dissatisfied with their pay (79%). It was followed by promotion (57.3%), autonomy (47.8%), supervision (42%), and dissatisfaction with nature of work (28.3%), the total job satisfaction was very low in both hospitals, for instance 42% of nurses were dissatisfied, and 7% were satisfied. The study recommended that nurse managers and hospital administrators for planning and implementing effective health policies that will meet the needs of their staff and entities.

- **Aleemet el (2012)** with their study entitled “An empirical investigation of human resource practices: A study of autonomous medical institution employees in Punjab, Pakistan”. The aim of the study was to examine relationship between HR practices and perceived employees performance in the health sector of Pakistan. The HR practices discussed in this study are compensation, performance appraisal, employee relation, job security, promotion, employee participation, and Pension fund. In this study data was collected through questionnaires from 220 employees of the institutions/hospitals. This study has a great importance for the decision makers in the health sector of Pakistan. The result showed that Performance of health sector employees is affected by compensation, employee relations, job security, promotion and pension. However, the employee participation and performance appraisal have no significant impact on the employee performance.
- **Saif and Sartavi (2013)** conducted study on “Relationship between Human Resource management practices and perceived performance of employees in Jordanian hospitals”. The goal of this study is to quantify the effects of HRM practices on employee performance in a 5 hospitals of Jordan. The study design adopted was descriptive and analytical. Random sampling technique was used in this study. The study population included all healthcare providers in five central Jordanian public hospitals. A structured questionnaire was used to collect data from respondents; the Likert scale of 1 to 5 was used. The questionnaire was administered to 420 employees. A total of 362 questionnaire was returned, giving an 86% response rate. The findings suggested that HRM practices are related to hospital performance, That Jordanian Hospitals do not have effective HRM practices, and that compensation has the greatest impact on increasing an employee’s level of performance.

- **Dr. C. Dan Lakshmi (2014).** A study entitled “A study On E-HRM practices in kovai medical Centre and hospital, Coimbatore” The study aim is to test the current e-HRM practices of hospital and to find the further areas to include in e-HRM practices. Electronic human resource management system as web based solution that takes advantages of the latest web application technology to deliver online real time solution. For collection of data questionnaire was used and in total 2000 population, 150 samples were chosen. Convenience sampling technique was used to study. Weighted average mean, correlation and chi-square test were used in the present study for analysis. Study suggested that e-HRM technology has been modified and updated to make all the work efficient and effective result.

## 7. Research Methodology:-

A descriptive research design was used for the study. Convenient sampling method was administered to select the respondent. The sample size of 108 was selected. The study was conducted on the basis of both primary and secondary data from five large private hospitals in Satara District namely Meenakshimulti specialty hospital, Geetanjali multispecialty hospital, SGM multispecialty hospital, Sanjeevansuperspeciality hospital and Shree kamakshimulti specialty hospital. Primary data were based on a face to face interview and collected through structured questionnaire which was administered personally to the 108 hospital employees. All respondents were answered properly. The questionnaire consists of questions from the five aspects of HRM practices i.e. Compensation ,performance appraisal, training program, employeeinvolvement, and flexi working hours. The design of question airewas based on five point Likert Scale i.e. 1=stronglydisagreed, 2=Disagreed, 3=Neutral, 4=Agreed, 5=strongly agreed. The secondary sources was books, published research articles and web sites. In this study statistical tool like ANOVA-test, analysis of variance were used to analyze the employee’s satisfaction.

## 8. Hypothesis.

The following Hypothesis were used for the study.

Ho: There is no significant impact of current HR Practices on employee satisfaction in health-care industry.

Ha: There is significant impact of current HR Practices on employee satisfaction in health-care industry.

## 9. HYPOTHESIS TESTING.

Ho: There is no significant impact of current HR Practices on employee satisfaction in health-care industry.

Ha: There is significant impact of current HR Practices on employee satisfaction in health-care industry.

### Summary Statistics

Groups	Count	Sum	Average	Variance
Satisfaction regarding the compensation and benefit package offered by the organization.	108	235	2.17	1.32
Satisfaction regarding the performance appraisal system followed by organization.	108	274	2.53	1.80
Satisfaction regarding timely training help in better performance	108	326	3.01	1.45
Satisfaction regarding the present system of employee participation in managerial decisions.	108	270	2.5	1.05
Satisfaction regarding flexi hours working program currently offered	108	339	3.13	1.52

ANOVA showing the impact of current HR practices on employee satisfaction.

<i>Source of Variation</i>	<i>S.S.</i>	<i>d.f.</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F-critical</i>
<b>Between Groups</b>	68.24	4	17.06	<b>11.91</b>	<b>2.81E-09</b>	<b>2.388596</b>
<b>Within Groups</b>	766.38	535	1.43			
<b>Total</b>	834.63	539				

There is no significant impact of current HR practices on employee satisfaction in health-care industry. This hypothesis was put to test, using analysis of variance. This was based on impact of current HR practices on the employee satisfaction. The results obtained from the test are summarized in above two tables. ANOVA table also show that there is a significant impact of current HR practices on employee satisfaction in health-care industry ( $F = 11.91$  critical value = 2.38). Hence, the null hypothesis is rejected and alternate hypothesis is accepted.

Summary table reveals the effect of current HR practices on employee satisfaction. Summary statistics shows that all the averages of the scaled data revolve around 2 and 3 which indicate that most of the employees are either neutral or disagree and corresponding variances signifies this. But if we observe the percentage of employee who are neutral to this is very minimal equals to 23% whereas in all 52% of the



employees are either disagreeing or strongly disagree positive effect of the HR practices in health-care industry.

## **10. CONCLUSION.**

From the above analysis it is concluded that there is significant impact of HR practices on employee satisfaction in health-care industry but that impact is not found to be positive as per satisfaction level of employees is considered. Employees are not satisfied with the current HR practices in health-care industry and a radical change in these practices is recommended.

## **11. SUGGESTIONS.**

- (i) The private hospitals may provide attractive remuneration packages to attract, retain and motivate competent people.
- (ii) The private hospitals may provide frequent training programs for their staff for improving job knowledge and skills at all levels of the organization.
- (iii) The private hospitals may evolve effective policy for associating employees at every level in decision making process for better performance and high motivation.
- (iv) The private hospitals may introduce effective appraisal system to effect promotions, assess training needs and decisions about rise in pay.
- (v) The private hospitals may introduce system of flexi hours of working for greater employee productivity, higher organization profitability and to promote, facilitate work life balance.

## **12. LIMITATIONS.**

Small sample size was one of the major limitation of the present study. The study did not cover all the HR practices of the surveyed health-care industries.

## **13. SCOPE FOR FUTURE STUDY.**

Since the total number of respondents in the selected geographical area was limited hence further study can be conducted in some more areas for better results.

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## PRICING REAL ASSETS: TERMS AND CONDITIONS APPLY

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### **ABSTRACT :**

*This paper aims at contributing to the debate on asset pricing by addressing challenging issues that pertain to the real estate market, though their implications can go beyond its scope. Actually, the trend towards increasing globalization has made the trade-off between financial and real assets obsolete, just like the traditional focus on portfolios consisting of securities alone. As a result, a wider approach should be rather adopted, designed to cover total wealth management. Reverse mortgages, rent-to-buy formulas, 1€ houses, home lotteries and real estate auctions are just a few examples that a realistic, updated framework for analysis can draw upon, based on applicable terms and conditions.*

**Keywords:** *Financial assets, Pricing strategies, Real assets, Total wealth management.*

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### **Introduction:**

Asset pricing is usually referred to financial assets: they tend to be privileged as the main focus of portfolio theories and the role of institutional investors has been historically analyzed within the framework of the market segments populated by these assets; real estate seems to belong to a world apart, with specific rules to be followed for managerial purposes and decision making processes. No surprise that the trade-off between them and real assets is usually given and taken for granted.

Against this background, it must be acknowledged that the trend towards increasing globalization has made traditional keys of classification obsolete and the above mentioned trade-off can be hardly accepted anymore (Mori 2016); there it follows that real assets should be paid unprecedented attention while analyzing asset pricing strategies and – in more general terms – while addressing wealth management issues. The implications of re-orienting the approach to be better resorted to do not only involve institutional (and individual) investors but also need to be closely scrutinized by central banks and other supervisory authorities.

Supporting arguments abound: be it enough to mention the impact that real estate finance may have on financial stability and the relationship that has been widely

endorsed between developments in the real estate market and economic growth; the implications of the subprime crisis can only confirm the closer and closer interaction between the financial and the real spheres of the economy. To make the picture even more appealing, a wider array of contractual arrangements has been gradually generated, which allows – and requests – to model property prices even by applying unconventional terms and conditions on a case-by-case basis.

### **Evolutionary Trends in the Real Estate Market:**

Based on these thoughts, there is no choice but to acknowledge how relevant real assets are, especially in developed economies (Łaszek, Krzysztof and Sobiecki2018, 11): on one hand, residential real estate is mainly used to satisfy basic housing needs, usually by choosing between a buyer vs. seller relationship and a tenant vs. landlord relationship; on the other hand, commercial real estate is used in production chains, since it gives place for firms that create value added, and modern buildings located in metropolises tend to attract skilled workers who have better paid jobs. These people tend to ask for more comfortable living conditions and often buy their own home by being granted a mortgage loan, though homeownership rates differ significantly from country to country and behaviors tend to be modified quite rapidly in this market segment.

Not surprisingly, the real estate decision-making process has undergone significant changes in the last few years, as rights and duties on each party have been more and more often reshaped in an attempt at forging new types of contracts. As applicable legislation may affect terms and conditions of each of them, evolving schemes depend on – and gradually modify – the pertaining legal framework: therefore, a local viewpoint should be privileged, though the pros of an approach that would be based on a globalperspective could not be underestimated, in order to ideally combine local and global issues; to this end, Italy's legislation can be perceived as a source of useful insights due to contractual situations and negotiations that provide ground for international interest and that can be quite easily replicated beyond borders.

As a result of the introduction and dissemination of evolving schemes, significantly different prices might be bid and asked for a property – and finally agreed upon – based on terms and conditions that each type of contract imply. They are the main focus of this paper, in sight of shedding light on unprecedented challenges that stem from pricing real assets unconventionally: this is the case of contractual arrangements that do not fall within the scope of traditional schemes and anyway need to be taken into careful consideration, due to their growing relevance and pervasiveness; their increasing degree of financial sophistication too calls for attention, as it can be argued by overviewing the features of emerging subsets, including those that have to do with reverse mortgages, rent-to-buy formulas, 1€ house projects, home lotteries and real estate auctions.

**Reverse Mortgages:**

As recent trends in the real estate market allow to state, asset pricing strategies play a key role in the market segment consisting of unconventional types of loans such as reverse mortgages, that look like the opposite of the more widely used mortgage loans (Mori 2018): borrowers do not access funds to purchase a home but homeowners are allowed to borrow money against the equity in their homes; potential beneficiaries are old people who are willing to keep using their home as their primary residence and can get the money they need by being granted these loans secured by their home equity. As such, reverse mortgages may alleviate poverty that affects many homeowners in the later stages of their life cycle, thus contributing to fight financial – as well as social – exclusion.

However, it is all but easy to fully grasp the technicalities of the financial products under investigation, which leads to highlight the need to rely on professional – and possibly independent – advice. For instance, it must be clearly understood that interests and expenses are accounted for every year and should be paid to the lender no later than one year after the borrower dies, together with the amount of the loan; should this obligation remain unfulfilled, the underlying property could be sold at its market value, after having it professionally assessed, and what eventually remains after satisfying the lender's rights is transferred to the borrower's heirs.

Therefore, their choice may depend on the market value of the property at issue when the borrower dies, whereas the market value of the same asset upon signing a reverse mortgage contract is one of the factors that affect the amount that can be borrowed: needless to say, this market value can be hardly assessed in objective terms and may influence the timing of making a reverse mortgage agreement in line with the trends in the local real estate market; competing banks may be induced to endorse a generous evaluation, in order to preserve and even expand their market share in this subset of the financial industry, since reverse mortgages are designed to span over a supposedly long-term. They are also expected to undergo a more and more sophisticated product development, as financial institutions may be assumed to gradually exploit the potential of these loans even by securitizing them as any other type of loans, thus requesting compounded attention to be paid to consumer protection issues.

**Rent-to-Buy Formulas:**

The other side of the coin features contractual arrangements whereby people can finally own a home without having to buy it right away. These contracts are known as rent-to-buy formulas and are advertised as “a different way to buy property”: the potential target market includes those who do not have enough money to act as buyers as soon as they find a suitable property; since purchasing it is their ultimate goal, a long term lease would not be satisfactory because the ownership of the

underlying property could not be transferred, though this real asset could be used for a while.

As such, a rent-to-buy contract is the best alternative to purchasing a home and long-term renting it: two agreements are involved in this hybrid contract, allowing for a “revolutionary way to purchase your dream home”(Jupe 2017), which “involves both ownership and tenancy” (Rent to Buy 2016), with advantages and disadvantages for both parties (Siderin.d., Fachinat 2016, Il rent to buy 2018) ; a normal rental contract, at about twice the ordinary rental price – with payments that tend to be made on a monthly basis and to be only partially deducted from the amount to be finally received by the party finally acting as the seller –is combined with an option structured to give the tenant the exclusive right to purchase the house at the end of the lease period – usually, two to five years later a few years later (Rent to buy 2018), with a maximum of ten – at a price which is then locked-in for the term of the tenancy. The potential seller could retain the full amount paid by the potential buyer, if the latter is not interested any more in buying (or is unable to buy) the property when the above mentioned option expires and the current sale price may be much different (either higher or lower) from the pre-determined amount.

This is a contract that people can make recourse to when being granted a mortgage loan is beyond their reach, as it is often the case of foreigners who would like to buy a dream home in Italy: so, they can end up with owing it, even though they do not have enough money when they find it and could not borrow the amount they would need to buy it right away, provided that it is almost impossible to get a mortgage loan in this country if you are not Italian; by contrast, local people can take advantage of the formula under investigation in order to postpone the time when a mortgage loan would be applied for, in sight of satisfying the requirements for a positive evaluation by their bank, while making periodical payments higher than the rent that would otherwise be agreed upon. This type of contract is also appealing to people who have no idea whether it is better to rent or buy a property they would like to use and who are willing to pay for the above mentioned option allowing them to postpone their decision, though at the end of the buying process usually a higher amount is spent than the price to be alternatively paid by resorting to a traditional buying formula.

### **1€ Houses:**

By contrast, some properties can be bought for a nominal amount of money since newly introduced opportunities allow to become homeowners by spending only one euro, as it is the case of the project known as “Case a 1 euro” (or 1€ houses) in Italy: this is a prominent country in terms of cultural heritage, as shown by its more than fifty UNESCO World Heritage sites; relevant features also include the harmony between its cities and the landscape, not to mention the historical cultural values.

Another key ingredient is the “Italian model” of culture which sounds like an incentive to bring old properties in a state of abandonment to a new life by renovating them and to repopulate gorgeous villages impacted by evolutionary trends, with the young population leaving and the elderly slowly fading away.

Therefore, a widely shared approach implies that the management of the abandoned property, both private and public, should not be considered a burden, but rather a resource for cultural development: in other words, improvement and redevelopment projects tend to minimize transformative interventions meanwhile safeguarding the historical and cultural identity of this country; it does not need new constructions and overbuilding, according to a quite common view which supports a strategy designed to improve the existing housing environment. Along this pathway, Italy’s cultural identity is expected to be preserved by reviving small abandoned centres or redeveloping abandoned buildings, with a story that is this country’s history (1€ Housesn.d.).

Real assets that are suitable for 1€ house projects are often owned by private individuals (Agenzia del Demanion.d.) who want to get rid of them to stop paying taxes and levies, sometimes beyond owners’ reach; these properties tend to need major renovation works and to be given as donations to the municipalities that sell these houses by public procedure at the symbolic price of one euro. However, buyers must commit to fulfill some obligations such as submitting a renovation and re-evaluation project within a specified period (generally one year), which might cost 20-25 thousand euros and is usually eligible for tax relief for building and energy restructuring; once all permits have been granted, works must start within a short time, typically a maximum of two months.

### **Home Lotteries:**

Another way to cheaply become homeowners can be suggested by those who successfully participated in lottery programs, such as dream home lotteries, that are often run by – or on behalf of – not-for-profit and private organizations, including foundations, to help them fulfill charitable and humanitarian goals: for instance, tickets sold may make a life-changing difference to people living with neurological conditions, by contributing towards research into them and funding new high support accommodation and services facilities (Lotteries & Rafflesn.d.). Home lotteries may also be promoted in sight of raising funds to support local causes and – in more general terms – local communities.

In these cases, the home price is reportedly estimated “by direct comparison”, in order to define the number of tickets to be sold; however, several items tend to be included on a case-by-case basis, which makes it hard to understand how the property by itself has been priced. For instance, the winner may also get “free transfer of title” and “6 months security monitoring fees” (Lottery #423n.d.)or



“fridge, stove, dishwasher, washer, dryer on display in the dream home” though “all furnishings and decorations are excluded” from the grand prize (Dream Home Lottery n.d.), and must accept “ownership as of time and date of draw” meanwhile waiving “all rights to tax rebates on the home” (2019 Dream Home Lottery n.d.).

Similar initiatives have been recently promoted in Italy. A quite popular one falls within the framework of the program known as “Win for Life” and has just allowed to win 500.000,00 euros, with at least 300.000,00 to be used to find and buy (at least) a property within two years (Gioca 5 numeri 2019): if pricing implications are not affected by – and do not affect – this lottery, a different approach has been adopted by an Englishman who was unable to find a buyer for his fully restored traditional stone house in CarapelleCalvisio, near L’Aquila, in Central Italy, and decided to promote a lottery based on the estimated market value of this property, plus expenses to transfer its ownership rights, including two flights from any part of Europe, hotel accommodation for two nights and car rental for two days (“Win a House in Italy” 2019); needless to say, it is hard to predict the revenues from selling tickets as no guarantees can be provided towards successfully proposing them in these cases.

### **Real Estate Auctions:**

Pricing strategies can also play a key role to encourage real estate bargain-hunters to populate the market segment that features house auctions. To make the link between financial and real assets even more evident, the global crisis that started in 2007 has not only increased the number of properties that are available through this channel but also made it easier to get familiar with its buying process and to ultimately acquire them; furthermore, the foreclosure market needs to be scrutinized not to miss a way out envisaging an escape strategy accessible to homeowners who cannot afford their mortgage payments any longer.

Be it enough to stress that foreclosed homes can be virtually available in every real estate market, which provides opportunities for potential homeowners and investors alike (Buying a Foreclosed Home 2019). The process to buy these properties is often similar to the search of any other sort of home, though “sales of distressed homes usually comes in several forms” (Miller 2019): first of all, there are short sales or prefore closures, whereby owners who can no longer afford their properties try to work out a purchase, subject to the approval of their respective lenders; if it does not work, they may start foreclosure proceedings and the homes at issue are ultimately put up for sale at a public auction with the aim of getting the highest possible price so as to mitigate the losses that lenders suffer when borrowers default on their loans.

Bidders are looking for investment bargains and actually many homes available at foreclosure auctions end up with selling at something of a discount compared to similar properties traditionally sold. However, the pitfalls of buying a foreclosed house should not be underestimated (Fontinelle 2019): many of these homes are

badly maintained; even structural problems and violations of codes or other standards may have to be dealt with; these properties are often filled with garbage or personal items left behind by previous homeowners; vandalism too can be an issue, with items that can be resold (such as fixtures, appliances and windows) not occasionally taken by thieves or the prior owners; lenders may not be willing to fund the purchase of foreclosed homes, which helps explain why buying with all cash is a frequent occurrence.

### **Conclusions:**

To sum up, challenging issues need to be addressed as far as asset pricing, that fall within the scope of real estate analysis: the trend towards increasing globalization has made the trade-off between financial and real assets less and less persuading; a wider perspective sounds appropriate to better manage portfolios, based upon the concept of total wealth management, which does not only include financial assets. Supporting arguments have to do with the implications of real estate finance, that can affect financial stability, as shown by the global financial crisis, and that make real estate prices relevant even from central banks' point of view.

Further useful insights can be gained by analyzing the multi-faceted relationship between the real and the financial spheres of the economy, including the feedback between the real estate construction and economic growth. There it follows that both residential and commercial real estate pricing should be paid more attention, which leads to shed light on evolving contractual schemes, in sight of addressing challenging issues pertaining to asset pricing strategies: no wonder that the amount of money needed to purchase a property may vary depending on applicable terms and conditions, such as those that refer to rent-to-buy formulas and home lotteries; real state auctions, 1€ houses projects and reverse mortgages too provide ground for questioning the recourse to pricing models that do not account for the different contractual schemes to choose from on a case-by-case basis, when it comes to focus on trading real assets.

In a few words, new challenges in the real estate market encompass an unprecedented recourse to innovative contractual schemes that do not allow to endorse any more the trade-off between the seller-buyer relationship and the landlord-tenant relationship and that may justify significantly different prices for a property depending on applicable terms and conditions. Even the traditional trade-off between financial and real assets tends to become less and less attractive, thus calling for special attention to be paid to total wealth management; implications span from empirically pricing assets to theories centered on (both financial and real) asset prices, from the institutional investors' viewpoint to a central bank's perspective, from household finance to mortgage lending by banks, to evoke just a few areas of interest to be more closely monitored within a glocalframework.

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## EQUITY CROWD FUNDING: FOCUS ON ITALY'S FRAMEWORK

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### **ABSTRACT :**

*The aim of this paper is to analyse the characteristics and evolution of a form of financing for small businesses that has been spreading with high growth rates in recent years. The phenomenon of equity crowd funding allows small businesses and start-ups to acquire equity through a network of investors interested in financing these companies and receiving adequate remuneration. The research carried out allows us to verify how the diffusion of this new tool can contribute to solving, at least in part, the problem of financial constraints – with particular reference to the equity gap – that has always affected SMEs. The analysis has focused on the Italian framework, comparing it with other European countries and reporting some case studies of companies that have relied on crowd funding platforms to obtain equity.*

**Keywords :** crowd funding, equity crowd funding, equity gap, SMEs, financial constraints.

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### **1. Introduction**

Small and medium enterprises<sup>24</sup> (SMEs) play a key role in the economic and social growth of any country. They employ a high number of people and they are often seen as the engine of development and innovation.

SMEs offered a significant contribution to the economic recovery and subsequent expansion of the European Union (EU). In Italy, they account for over 99% of the total and contribute to the employment of over 78% of the workforce (Table 1). Between 2008 and 2017, the number of SMEs in the EU increased by around 14%, the value added grew by 14.3% and employment by 2.5%. These data testify to the economic recovery of small and medium firms following the crisis of

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<sup>24</sup> According to the Commission Recommendation of 6 May 2003, a microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million.

previous years. In particular, start-ups have benefited from the economic recovery, with specific reference to companies that have focused on innovative products. In fact, between 2014 and 2016, the number of companies with high growth rates increased by 24%.

**Table 1. SMEs in Italy e in the European Union<sup>25</sup>**

Class size	Number of enterprises			Number of employed			Value added		
	Italy		EU	Italy		EU	Italy		EU
	Number	Share	Share	Number	Share	Share	Billion	Share	Share
<i>Micro</i>	3.565.046	95.1%	93.1%	6.661.193	45.9%	29.4%	201.2	28.6%	20.7%
<i>Small</i>	162.598	4.3%	5.8%	2.921.184	20.1%	20.0%	144.9	20.6%	17.8%
<i>Medium</i>	18.465	0.5%	0.9%	1.808.802	12.5%	17.0%	125.3	17.8%	18.3%
<b><i>SMEs</i></b>	<b>3.746.109</b>	<b>99.9%</b>	<b>99.8%</b>	<b>11.391.179</b>	<b>78.5%</b>	<b>66.4%</b>	<b>471.5</b>	<b>67.1%</b>	<b>56.8%</b>
<i>Large</i>	3.221	0.1%	0.2%	3.125.454	21.5%	33.6%	231.7	32.9%	43.2%
<b><i>Total</i></b>	<b>3.749.330</b>	<b>100.0%</b>	<b>100.0%</b>	<b>14.516.633</b>	<b>100.0%</b>	<b>100.0%</b>	<b>703.1</b>	<b>100.0%</b>	<b>100.0%</b>

Source: *Scheda informativa SBA*, 2018, European Commission.

Despite the importance taken on by SMEs in the economic system of each country, they have always been subject to significant financial constraints that have been amplified during the crisis of recent years. The lack of liquidity (Allen *et al.*, 2007 e 2008) caused by the crisis in the global banking system and the deterioration of the bank-firm relationship (Signorini, 2012), have added to the already deep-rooted problems, typical of small businesses.

In fact, the equity gap and the resulting low level of capitalization have always affected European SMEs, especially the Italian ones. The simultaneous presence of difficulty in accessing credit (credit crunch) and difficulty in acquiring equity and internal resources raises the need to search for alternative ways of financing small firms.

The phenomenon of crowd funding is a new and important opportunity for the growth of small business and allows entrepreneurs to reach a large number of people – and so a large number of potential investors –, and to obtain the resources to finance investments. In particular, reference will be made to the concept of equity crowdfunding, that can be defined as “[...] a method of financing whereby an entrepreneur sells a specified amount of equity – or bond – like shares in a company to a group of (small) investors through an open call for funding on Internet-based platforms” (Ahlerst *et al.* 2015).

<sup>25</sup> Estimates for 2017 produced by DIW Econ, based on 2008-2015 figures from the Structural Business Statistics Database (Eurostat). The data cover the “non-financial business economy”, which includes industry, construction, trade, and services.

In the last few years this new financing channel has been the protagonist of rapid growth in all developed countries. Therefore, it is interesting to investigate the reasons for this success, its size and the role that it is destined to assume in the financial structure of companies. The following analysis will be carried out with reference to Italy, and subsequently a comparison will be made with those countries in which the phenomenon is already consolidated.

The research work is organized as follows. Section 2 identifies the determinants of financial constraints of SMEs and in particular the causes behind the equity gap; section 3 focuses on the characteristics of equity crowd funding and its evolution over the past few years, with special reference to the Italian market; paragraph 4 presents three case studies of Italian small firms that have resorted to equity crowd funding to finance their business; section 5 illustrates the main conclusions and outlines the issues for further discussion.

## 2. Financial constraints and equity gap

The literature recognizes and shares almost unanimously the presence of a significant relationship between the small size of the firm and difficulties in accessing financing channels (Ayyagari *et al.*, 2006; Beck *et al.* 2005; Beck and Demirgüç-Kunt, 2006; Berger *et al.* 1998; Bertoni, 1994; Bini, 1996). The financial constraints of SMEs can mainly be traced to the general phenomenon of the financial gap: small firms can't get all the financial resources they would need because of market imperfections and the presence of information asymmetries (Stiglitz and Weiss, 1981).

The issue of information asymmetries and the resulting costs are at the heart of the pecking order theory (Myers, 1984), which argued that small firms prefer financing their investments primarily through internal funds; if internal funds are insufficient, firms choose to resort to bank debts and only marginally resort to equity.

The bank-firm relationship<sup>26</sup> has always been affected by the problem of information asymmetry as well. Banks are interested in firm creditworthiness and they avoid lending to opaque companies without track records, high-quality collaterals and stable cash flows and revenues: such behaviour especially penalizes small firms and innovative small firms in the start-up and early growth phases of their life cycle. It

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<sup>26</sup> According to the prevailing literature, the bank-firm relationship can be traced back to two operating models: the *transaction lending*, that privilege contractual aspects of the financial transaction, giving rise to "standardised" financial relationships based on hard informations; *relationship lending*, in which the personal element prevails over the contractual one and loans are granted on the basis of soft informations. The bank-small firms relationship is often based on the relationship lending approach.



follows that a high number of profitable investment projects may not be financed or may not obtain funding at a reasonable cost (Berger e Udell, 2002).

The main limit associated with the financial management of SMEs is certainly the equity gap, which can be defined as the chronic lack of sources acquired with the full risk constraint by small companies.

Surveys on the topic have been carried out along three main lines, all analysed both in terms of quality and in quantitative terms: verification of the contribution of risk capital in companies, placing this variable in relation to the phases of the life cycle and proceeding with cross-country studies; analysis of the offer, evaluating problems and needs of operators in the sector; estimating the prospective risk capital needs expressed by companies and in particular by innovative companies (Gualandri and Schwizer, 2008).

There are several factors determining the equity gap: the corporate governance structure often associated with small business, based on a clear connection between ownership and control and entrepreneurs' fear of leaving, even in part, the helm of the organization by allowing other shareholders in; the objective difficulties encountered in accessing the direct financing channels, due to the lack of the essential requirements established for the listing on the stock exchange and the excessive related costs. With reference to the latter aspect, it is also necessary to underline the numerous empirical contributions that confirm the presence of a direct link between the degree of development and efficiency of the financial system – both nationally (Demirgüç-Kunt and Maksimovic, 1998), and in the local area (Rajan and Zingales, 1998) – and the growth of the entrepreneurial system.

The problem of the equity gap in small business – and especially in innovative small business – arises because of the presence of structural limits both on the side of the supply of capital, and on the demand side. Many financial systems reflect market failures that imply an incomplete and unqualified offer of financial instruments and services that meet the needs of SMEs. Furthermore, the absence of secondary markets in which to exchange shares for small business, creates a problem of investment liquidity.

Concerning demand, small entrepreneurs have objective difficulties in processing and communicating structured information in favour of potential financiers; sometimes this feature is combined with the reluctance of the entrepreneur to provide useful elements for the evaluation of investment projects, because of the fear of losing their control of the business, as mentioned above. These behaviours highlight the formation of a cultural gap.

### 3. Equity crowd funding: features and evolution

The presence of stringent financial constraints and strong information asymmetries has led small businesses to seek alternative forms of financing other than traditional ones, such as venture capital or business angels, but often the requirements for gaining access to these resources are very selective, thus excluding most companies.

In this context, an innovative form of resource collection was devised and developed through the equity crowd funding mechanism. It uses the already consolidated fundraising model for donations and charity campaigns, the ability of the Internet to reach a wide range of potential investors and combines remuneration for the investor commensurate with the risk of the business activity.

Equity crowd funding represents an important opportunity to reach a large number of external equity investors, reducing information asymmetries and relying on the “wisdom of crowds”: according to the wisdom-crowd paradigm, the crowd has on average a high capacity to correctly evaluate investment projects and is able to select the most profitable ones (Walthoff-Borm et al. 2018). In this light, equity crowd funding is a tool that can help make the financial market more democratic, facilitating the entry of subjects who are generally excluded or poorly interested in financial investments.

Two main players can be identified in this model: the financiers (the crowd) and the fundraiser, thus the figure of the bank as an intermediary is lost. The meeting between the two subjects takes place exclusively in an electronic way, by means of online platforms<sup>27</sup>, outside the logic of credit intermediation. The evaluation of the investment project takes place through company’s presentation of a detailed business plan.

The equity crowdfunding phenomenon has been protagonist of a rapid growth in recent years in many European countries.

**Table 2. The volume of equity crowdfunding in some European Countries (millions Euro) and rates of growth**

Country/Region <sup>1</sup>	2013	2014		2015		2016		2017	
	Vol.	Vol.	Growth	Vol.	Growth	Vol.	Growth	Vol.	Growth
<i>United Kingdom</i>	33	99	200%	291	194%	323	11%	395	22%
<i>Germany</i>	17,3	29,8	72%	23,7	-20%	47,4	100%	19,7	-58%
<i>France</i>	9,5	18,9	99%	75,1	297%	43,3	-42%	48,4	12%
<i>Italy</i>	n.a.	0,5	-	5,4	980%	1,7	-69%	4,8	182%
<i>The Nordics</i>	4	6	50%	13	117%	75	477%	86	15%
<i>Benelux</i>	n.a.	n.a.	-	8,3	-	15	81%	19	27%
<i>Iberia</i>	6,2	10,5	69%	5,3	-50%	10,1	91%	21,2	110%

<sup>27</sup> The Consob Regulation n. 18592/2013 defines “[...] «portal»: the online platform that has the exclusive purpose of facilitating the raising of capital by bidders”.

Source: processing of data from the Cambridge Center for Alternative Finance, <https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/>

Despite signs of a slowdown in some years and for some countries, the raising of capital through online platforms shows very high growth rates and the United Kingdom plays an absolute leading role in the equity crowdfunding market.

The updated data for Italy indicate a total collection of resources, from 2013 to 30 June 2019, for an amount equal to over 82 million euros, of which 49 million raised from June 2018 to June 2019 (in 2017 the amount of funds was 4,8 million, with a growth of over 900%). The strong growth of equity crowd funding is also demonstrated by other important figures: 35 authorized internet portals; 401 fundraising campaigns organized; 369 companies involved, of which 170 only from June 2018 to June 2019 (OsservatorioCrowdinvesting, 2019).

In Italy equity crowdfunding is regulated by legislative decree 179/2012, converted into law 221/2012: the objective of this legislation was to encourage the collection of capital by innovative start-ups, facilitating their set up and their development. In 2017, having assessed the instrument's enormous growth potential, the possibility of resorting to equity crowdfunding has been extended to all SMEs.

Currently, the sector still reveals reduced dimensions compared to total assets managed in Italy, but the observation of the phenomenon and its dynamics allow us to foresee a strong expansion for the near future<sup>28</sup>.

#### **4. Case studies**

As pointed out above, many small firms have been protagonists of the first phase of developing equity crowdfunding in Italy. This section presents the success stories of three companies that have collected equity through Internet platforms. The companies studied are all small Italian firms belonging to different economic sectors that have launched their fundraising campaigns through three different platforms among those authorized by the Consob.

The information reported for each company concerns: the mission; the internet platform used; the minimum level of capital to be collected; the capital raised; the number of investors; investment projects to be funded through acquired resources.

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<sup>28</sup>This statement is also supported by the presence of significant tax relief provided for in the 2019 financial law for investments in start-ups and innovative SMEs.

### Glass to Power

<i>Firm</i>	Innovative start-up, born from a spin-off of the University of Milano Bicocca
<i>Head office</i>	Rovereto, Trento (Italy)
<i>Mission</i>	Production of transparent photovoltaic panels that could be invisibly integrated into the architecture of modern buildings
<i>Internet platform</i>	Crowdfundme
<i>Target</i>	€ 500.000
<i>Raised</i>	€ 2.500.000
<i>Number of investors</i>	500
<i>Use of proceeds</i>	Purchase of patents; financing of a project for the construction of nano-particles; production of a plexiglass production line; enhancement of marketing

### EpicuraMed

<i>Firm</i>	Small firm
<i>Head office</i>	Torino (Italy)
<i>Mission</i>	Digital health platform that allows to book health and social assistance services simply and quickly
<i>Internet platform</i>	Mamacrowd
<i>Target</i>	€ 450.000
<i>Raised</i>	€ 1.079.000
<i>Number of investors</i>	229
<i>Use of proceeds</i>	Product development; reinforcement of customer service; marketing

### Azienda Agricola Montemonaco

<i>Firm</i>	Innovative start-up
<i>Head office</i>	Montemonaco, Ascoli Piceno (Italy)
<i>Mission</i>	Biological agriculture, harvesting and processing of legumes. Making pasta with legume flour
<i>Internet platform</i>	Nextequity
<i>Target</i>	€ 200.000
<i>Raised</i>	€ 600.000
<i>Number of investors</i>	25
<i>Use of proceeds</i>	Certification requests (ISO 22000; Kosher, Halal); participation in fairs and events; development and expansion of the product range; Research & Development

The most evident aspect that emerges from the information reported is the wide gap between the minimum goal of the fundraising campaign and the amount of capital actually collected. The company Glass to Power closed its fundraising campaign with an acquired capital of 450% of the planned capital; EpicuraMed presents a percentage of 240% while Azienda Agricola Montemonaco reaches a percentage of 300%.

## 5. Conclusions

The phenomenon of equity crowdfunding in Italy is still going through the embryonic phase of its development, but the speed with which it is growing leaves one to imagine that in the near future this market will take on a leading role in the financing of small businesses. The financial system is maturing, SMEs, and in particular the innovative start-ups, are becoming more structured, investors are more experienced and the regulatory environment is moving toward a strong incentive direction.

Investors have the opportunity to choose how to diversify their investments by evaluating in detail a number investment opportunities; on the corporate front, they have the possibility of accessing an efficient financing channel, increasing the level of equity and improving their rating, thus facilitating access to credit. It is therefore possible to state that equity crowdfunding can represent a valid and concrete solution to the problem of the equity gap that structurally afflicts small firms.

The sustained growth of equity allows us to hypothesize that in the near future research on the subject will be deepened and aimed at verifying the quantitative dimension of the phenomenon. Furthermore, the availability of more data will allow us to assess the extent to which the capital raised through internet platforms can replace other forms of financing and influence the balance of the financial structure of SMEs.

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## “A COMPARATIVE PERFORMANCE ANALYSIS OF SELECTIVE PUBLIC SECTOR AND PRIVATE SECTOR BANKS”

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### **ABSTRACT :**

*Performance of banking and finance sector is often considered as an effective measure of evaluating the soundness of economic activities of an economy. Public sector banks in India are always under the surveillance of the apex bank (RBI). They have to implement the economic policy decisions for the betterment of the society at large, keeping the profit maximisation motive at stake. They are expected to implement policies related to priority sector lending, financial inclusion etc.*

*The study is intended to understand the difference between the performances of the public sector banks in comparison with private sector banks. The objective of the study is to understand the effect of the controlled environment on public sector banks on their performance. A comparative analysis has been carried out using key performance variables. Secondary data for 5 years (2015-16 to 18-19) was collected from money control.com for 3 public sector banks and 3 private sector banks. Ratio analysis is used to evaluate the financial performance of these banks.*

**Key words:** Financial performance, Public sector banks, private sector banks, ratio analysis

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### **INTRODUCTION**

Performance evaluation of the banking and financial sector; acts as a litmus test for the performance evaluation of an economy. With the advent of information technology, the finance sector as like other sectors has undergone a sea change in their work culture. With this changing environment along with the implementation of policy decision, are the public sector bank capable to compete with their counterparts from private sector is the question in mind. In search of the answer for this question, a comparative analysis of private and public sector banks has been carried out.

This paper attempts to evaluate performance of three public and three private sector banks using “Ratio Analysis” as a tool of performance evaluation.



**Objective of the Study:**

To study the financial performance of three public sector banks in comparison with three private sector banks.

To evaluate performance of these banks; using Selective ratios.

**Literature Review:**

Dr. P. Sanjeevi and Mr. P. Manoj Babu Visakhapatnam, (2017), have stated that the operational performance of scheduled commercial banks was found to be better as compared to the non scheduled banks. However no remarkable difference has been observed in the financial performance of these two types. It has been observed that the commercial banks took higher risk as compared to the non commercial banks. M.S. Bhatt and Showkat Ahmad Bhat (2013): studied the performance of cooperative banks of Jammu and Kashmir based on different performance evaluation parameters. It has been observed that these banks had insufficient self generated funds leading to reliance heavily on debt funds. Ineffective management of loans and advances caused high NPA, which affects the performance efficiency of these banks.

Anil Kumar Soni, Abhay Kapre and Pandit Sunder Lal Sharma, (2012): It is a case study of DCCB Ranjangaon. A growth rate analysis was carried out to evaluate the performance of the bank. The bank showed positive growth rate with respect to 17 parameters used in the analysis. The bank has successfully implemented the inclusive growth policy in the process of loan disbursement and successfully served the rural masses. A Vaidyanathan, (2013): the study was intended to analyse different aspects of cooperative credit societies, using the data of a period of 20 years. The author has identified the training need of the employees of cooperative societies with respect to computerisation. The author has suggested to treat the well managed societies as role models for the others. Further the author has suggested forensic audit of loans and advances and impose penalties for gross negligence. Ranjan Kumar Nayak (2012): The study reveals that the Indian economic growth is not inclusive as considerable inequalities were found in the consumption pattern of the society; though the growth in GDP is followed by the growth in real GDP per head per annum. In the opinion of the author cooperative banks proved to be a better option as compared to commercial banks in the process of achieving inclusive growth. Indira R. (1993): The financial performance of cooperative banks of Tumkur district has been analysed using "CAMEL" analysis technique. The unprofessional approach and poor decision making were the two major weaknesses of these cooperative banks. Tihomir Hunjak and Drago Jakovich(2001) Through this study the author has tested the effectiveness of AHP model as a tool of performance evaluation of the banks. Sushendra Kumar Misra and Parvesh Kumar Aspal (2013):The author has used "CAMEL" model for evaluating performance of SBI and its 5 subsidiaries. No significant difference has been observed in the overall

performance of these banks though the CAMEL ratios differed from bank to bank. Golam Mohiuddin (2014): A comparative performance analysis of PCB and NCB banks of Bangladesh were carried out using “CAMEL” model. The author found both the banks financially viable and with sound management practices. Dr. Srinivasan (2016): Through this study a comparative performance analysis of 25 public sector banks, 18 private sector banks and 8 foreign banks was carried out using CAMEL analysis. ANOVA analysis has been used to find the significant difference in each of the 5 composite CAMEL ratios with respect to the three types of the banks. The author has concluded that there found to be significant difference within and between the three groups of banks.

**Problem Statement:** How far the performance of public sector banks differs from the performance of private sector banks?

### Research Methodology:

Present study is a descriptive research work.

- **Sampling:** The study is based on secondary data extracted from Moneycontrol.com for a period of 5 years for 6 banks (2015-16 to 2018-19)
- **Tool of data analysis:** Ratio Analysis is used to analyse the data and the ranks being given based on each individual ratio.

### Data Analysis and Discussion:

<b>1) Dividend Per Share [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	0	0	2.6	2.6	3.5	1.74	IV
BOB	0	0	1.2	0	3.2	0.88	V
IOB	0	0	0	0	0	0	VI
ICICI	1	1.5	2.5	5	5	3	III
HDFC	15	13	11	9.5	8	11.3	I
AXIS	1	--	5	5	4.6	3.9	II

**Comment:** The dividend per share distributed by HDFC bank was very high as compared to rest of the banks. The dividend distribution by all the three private sector banks found to be remarkably higher than that of public sector banks.

<b>2) Net Operating Profit Per Share (Rs. In Cr.) [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	272.13	247.07	220.13	211.26	204.13	230.944	II
BOB	188.9	164.6	183.15	191.22	194.2	184.42	III

<b>2) Net Operating Profit Per Share (Rs. In Cr.) [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
					7	8	
IOB	19.29	36.63	80.33	130.13	193.78	92.032	V
ICICI	98.35	85.51	92.98	90.7	84.68	90.444	VI
HDFC	363.43	309.2	270.46	238.2	193.38	274.934	I
AXIS	213.82	178.37	185.98	172.01	149.67	179.97	IV

Comment: Net Operating Profit per share did not vary based on the type of banks (public/private).

<b>3) Interest Spread [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	6.45	6.65	6.36	6.01	6.26	6.346	V
BOB	6.22	5.91	6.48	6.33	5.47	6.082	VI
IOB	7.89	8.02	7.65	7.41	6.91	7.576	II
ICICI	6.36	6.43	6.58	6.83	7.04	6.648	IV
HDFC	7.2	7.78	7.46	7.52	8.01	7.594	I
AXIS	6.37	5.9	6.84	6.81	7.34	6.652	III

Comment: This ratio did not show variations due to type of the bank. With low dividend per share and NOP per share, IOB had shown better spread compared to majority of the banks under study.

<b>4) Net Profit Margin [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	0.35	-2.96	5.97	6.06	8.59	3.602	IV
BOB	0.86	-5.57	3.27	-12.24	7.91	-1.154	V
IOB	-21.2	-35.16	-17.32	-12.31	-1.89	-17.576	VI
ICICI	5.3	12.33	18.09	18.44	22.76	15.384	II
HDFC	21.29	21.79	20.99	20.41	21.07	21.11	I
AXIS	8.5	0.6	8.26	20.06	20.73	11.63	III

Comment: Net Profit Margin of private sector banks was found to be higher as compared to public sector banks

<b>5) Return on Net Worth (%) [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	0.43	-3.37	6.69	6.89	10.2	4.168	IV
BOB	0.94	-5.6	3.43	-13.42	8.53	-1.224	V
IOB	-22.84	-47.45	-29.5	-21.85	-3.26	-24.98	VI
ICICI	3.19	6.63	10.11	11.19	13.89	9.002	III
HDFC	14.12	16.45	16.26	16.91	16.47	16.042	I
AXIS	7.01	0.43	6.59	15.46	16.46	9.19	II

Comment: Return on Net worth of all private sector banks found to be higher as compared to public sector banks. BOB and IOB showed negative returns on net worth.

<b>6) Return on Assets Excluding Revaluations [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	219.91	217.69	196.53	185.85	172.04	198.404	III
BOB	173.66	163.64	174.92	174.46	180.13	173.362	IV
IOB	17.9	27.14	47.17	73.34	112.8	55.67	VI
ICICI	163.38	158.91	166.37	149.47	138.72	155.37	V
HDFC	547.89	409.6	349.12	287.47	247.39	368.294	I
AXIS	259.27	247.2	232.83	223.12	188.47	230.178	II

Comment: With negative Return on net worth, BOB showed good return on assets. Whereas ROA of ICICI found to be lower than most of the banks.

<b>7) Net Interest Income / Total Funds [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	2.49	2.45	2.46	2.6	2.86	2.572	IV
BOB	2.49	2.19	1.98	1.84	1.92	2.084	V
IOB	2.12	2.22	2.01	1.94	1.93	2.044	VI
ICICI	2.94	2.8	2.92	3.11	3.07	2.968	III
HDFC	4.18	4.16	4.21	4.25	4.14	4.188	I
AXIS	2.91	2.88	3.21	3.41	3.37	3.156	II

Comment: As like Net Profit Margin, the Interest income as % of total funds of private sector banks was found to be higher as compared to public sector banks.

<b>8) Interest Expended / Total Funds [The lower the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	4.36	4.77	4.52	4.85	5.07	4.714	V
BOB	4.17	3.98	4.2	4.52	4.33	4.24	I
IOB	4.96	5.05	5.62	6.52	6.66	5.762	VI
ICICI	3.96	3.88	4.36	4.62	4.84	4.332	II
HDFC	4.4	4.17	4.6	5.02	4.82	4.602	III
AXIS	4.46	4.2	4.69	4.89	5.03	4.654	IV

Comment: The Interest expenses of IOB were found to be higher than the rest of the banks resulting into negative profit margin. BOB showed the lowest interest expenses as compared to other banks.

<b>9) Operating Expense / Total Funds [The lower the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	1.88	1.87	1.76	1.82	1.92	1.85	IV
BOB	1.38	1.32	1.29	1.21	1.07	1.254	I
IOB	1.67	2.16	1.82	1.74	1.45	1.768	II
ICICI	1.88	1.81	1.88	1.76	1.75	1.816	III
HDFC	2.16	2.26	2.4	2.5	2.46	2.356	VI
AXIS	2.03	2.08	2.07	1.96	2.08	2.044	V

Comment: The type of the bank did not influence on the operating expenses of the bank. Private sector banks have shown higher operating expenses than two of the public sector banks.

<b>10) Net Profit / Total Funds [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	0.02	-0.21	0.42	0.45	0.68	0.272	IV
BOB	0.06	-0.34	0.2	-0.78	0.49	-0.074	V
IOB	-1.5	-2.56	-1.32	-1.04	-0.16	-1.316	VI
ICICI	0.37	0.82	1.32	1.43	1.8	1.148	II
HDFC	1.83	1.81	1.85	1.89	1.89	1.854	I
AXIS	0.63	0.04	0.65	1.67	1.74	0.946	III

Comment: Private sector banks performed better than their public sector counterparts for this component.

<b>11) Capital Adequacy Ratio [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	12.72	12.6	13.11	13.12	12.00	12.71	V

<b>11) Capital Adequacy Ratio [The higher the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
BOB	13.42	12.13	13.17	13.17	12.6	12.898	IV
IOB	10.21	9.25	10.5	9.66	10.11	9.946	VI
ICICI	16.89	18.42	17.39	16.64	17.02	17.272	I
HDFC	17.11	14.82	14.55	15.53	16.79	15.76	II
AXIS	15.84	16.57	14.95	15.29	15.09	15.548	III

Comment: Private sector banks performed far better than their public sector counterparts for this component.

<b>12) Total Debt to owners' funds Ratios [The lower the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	16.89	15.79	15.08	14.24	13.87	15.174	IV
BOB	15.37	15.07	15.69	15.11	16.39	15.526	V
IOB	13.98	17.03	19.64	18.99	18.97	17.722	VI
ICICI	7.77	7.28	6.58	6.86	6.64	7.026	I
HDFC	6.97	8.58	8.02	8.25	8	7.964	II
AXIS	10.52	9.48	9.31	8.6	9	9.382	III

Comment: Private sector banks performed far better than their public sector counterparts for this component.

<b>13) Financial Charges Coverage Ratio [The lower the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	1.38	1.43	1.47	1.42	1.42	1.424	IV
BOB	1.46	1.46	1.4	1.3	1.34	1.392	V
IOB	1.43	1.31	1.27	1.17	1.19	1.274	VI
ICICI	1.67	1.8	1.84	1.78	1.68	1.754	I
HDFC	1.81	1.84	1.73	1.68	1.69	1.750	II
AXIS	1.59	1.6	1.68	1.69	1.65	1.642	III

Comment: Private sector banks performed far better than their public sector counterparts for this component.

<b>14) Interest Expended / Interest Earned [The lower the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	63.62	66.05	64.76	65.12	63.90	64.69	IV
BOB	62.61	64.44	67.98	71.09	69.31	67.086	V
IOB	70.06	69.48	73.68	77.11	77.51	73.568	VI
ICICI	57.39	58.11	59.86	59.76	61.22	59.268	II
HDFC	51.26	50.03	52.18	54.18	53.79	52.288	I
AXIS	60.52	59.33	59.38	58.93	59.91	59.614	III

Comment: Private sector banks performed far better than their public sector counterparts for this component.

<b>15)Net NPA to Advances % [The lower the ratio the better it is]</b>							
<b>Bank/Year</b>	<b>Mar '19</b>	<b>Mar '18</b>	<b>Mar '17</b>	<b>Mar '16</b>	<b>Mar '15</b>	<b>Avg.</b>	<b>Rank</b>
SBI	3	6	4	4	2	3.8	IV
BOB	3	5	5	5	2	4	V
IOB	11	15	14	12	6	11.6	VI
ICICI	2	5	5	3	2	3.4	III
HDFC	0	0	0	0.28	0.25	0.11	I
AXIS	2	4	2	1	0	1.8	II

Comment: Private sector banks performed far better than their public sector counterparts for this component.

### **Conclusion:**

The private sector banks performed better than the public sector banks with respect to majority of the components of performance evaluation like their earning, financial risk management and return on assets. However for some of the parameters the type of bank did not influence the performance of the bank viz management of expenses: interest expenses as well operating expenses. As the public sector banks have to disburse funds to priority sector and also have to implement the policy decisions (inclusive growth) of the government, profit earning can not be their prime agenda in case of each disbursement, as it is for private banks. This leads to the differences in the performance of Private and public sector banks. A uniform policy has to be envisaged to have a healthy competition between private and public sector banks.

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## CONSUMERS PERCEPTION TOWARDS ORGANIC FOOD PRODUCTS

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### **ABSTRACT :**

*Changing food consumptions patterns of consumers seems to be one of the big threats for leading healthy life. Usage of chemicals and fertilizers ruins the environment and human being's health. As a result of organic agriculture started booming up in many world countries. Now consumers started using organic food as their daily intake. Hence, this research focuses on Consumer Behavior towards organic food products. Further it analyzes the consumer's willingness to pay premium for food articles.*

*. The study starts with the brief overview of the Organic farming, organic products used and specially organic product market and its future.*

*The major objectives of the study are "To study the awareness level of Organic Products", "To study the consumer perception about Organic Products", "To examine the consumer's willingness to pay for organic food products".*

*This study focuses on consumers of organic food products. It is analyzed from the view of their knowledge, perception, attitude and trust towards organic food products.*

*Adding to this, consumer's willingness to pay premium for organic food products were examined separately with the help of descriptive Research Consumers were asked how much percentage they are willing to pay extra for organic food.*

*In brief, it is concluded that both Indians are knowledgeable about organic food. It is found that Indians willingness is based on their trust and perception towards organic food.*

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### **Introduction**

"The Food you eat can be either the safest and most powerful form of medicine or the slowest and most lethal form of Poison."

**-ANN WIGMORE**

### **Organic Farming and Food (at glance) :**

According to the proposed Codex definition, "Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It

emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfill any specific function within the system."

### **World Scenario of Organic farming**

31 million ha organic wild harvest collection.

35 million agricultural land

1.4 million producers

Oceania, Europe and Latin America largest organic producing Continents.

Australia, Argentina and China are countries with largest area 22 m ha

grass land, 8.2 m ha arable land & permanent crops.

### **Global Organic Food Market**

50.9 billion US\$ (2008)

Doubled in 5 years (25 billion US\$ in 2003)

Demand mainly in North America and Europe (97%)

Asia, Latin America and Australia are main producers

### **Organic Farming in India at glance:**

Total organic area : 4.43 million ha

Total projects: 2099

No of Grower groups: 919

Total organic farmers: 548,045

Total certified production: 17.11 lakh tonnes

Number of processors: 427

Total export: 69,837 tonnes

Value of export in Rs.: 5254.9 million INR (112 million USD)

**Table: 1: Production of important Organic commodities:**

<b>Crop</b>	<b>Quantity produced in MT</b>
Cotton (seed cotton)	837293
Rice 17762	17762
Wheat	113570

Crop	Quantity produced in MT
Other cereals and millets	271042
Pulses	53227
Oil seeds and Soybean	315067
Tea/ Coffee	40614
Spices	168507
Fruits and Vegetables	889844
Herbal and Medicinal	189193
Other	24661

### Labeling and Certification of Organic food products

Organic allows selling, labeling, and representing the products as organic. There are various steps involved in getting certification for organic products. The steps are discussed below

- i. The organic step is developing an organic system plan is the foundation of the organic certification process. Hence developing an organic system plan is much important to get certification.
- ii. Executing by getting review from the certifying agents of state and private bodies which are recognized by NPOP (APEDA). These entity are called certifying agents and are located throughout India who are responsible for the guarantee that the organic food products meet up all organic standards.
- iii. The process of every location which is pertained to organic certification is first inspected by a certifying agent. This includes inspection soil conditions, fields, water systems, crop health, storage place and equipment's, feed rations, feed production and purchase records, and animal living conditions.
- iv. The findings of the certifying agency are presented. Further the inspector also analyses the potential hazards of the soil and make sure that the actions taken are adequate to prevent contamination.
- v. If the process fulfills the rules, then the organic certification is issued by the certifying agent with a list of products from that operation which could be sold as organic. This inspection should be done at least once in a year to hold the certification and an updating is required for a farm or facility if there is any modification in the practices.













There are different organic certifying agencies across the world and each country has their own logo for the organic product produced in their country. Some of the countries logos are presented in the below table.













**Table no- 2 : Countries and their organic product logo**

Country	Logo
France	
Australia	
Canada	
Japan	
USA	
Germany	

There are no tests to check the difference between organic and inorganic food. Hence certification is the only way to prove the product is organic. Thus the role of certifying agencies becomes imperative. There are different organic certifying agencies in India in order to ensure that the product sold is 'organic'. The authorized certifying agents are given below in the table

**Table No. 3 Various Indian certifying agencies and their logo**

Certifying agencies	Logo	Certifying agencies	Logo
Bureau Veritas Certification India		Control Union Certifications	
ECOCERT India Pvt. Ltd.,		Uttarakhand State Organic Certification Agency (USOCA)	
IMO Control Pvt. Ltd.		APOF Organic Certification Agency	
Indian Organic Certification Agency		Rajasthan Organic Certification Agency	
Lacon Quality Certification Pvt. Ltd.,		Vedic Organic Certification Agency	
OneCert Asia Agri Certification (P) Ltd		ISCOP (Indian Society for Certification of Organic Products)	

Certifying agencies	Logo	Certifying agencies	Logo
SGS India Pvt. Ltd.		Food Cert India Pvt. Ltd	
Aditi Organic Certifications Pvt. Ltd		Biocert India Pvt. Ltd	
Chhattisgarh Certification Society, India (CGCERT),		Export Agency(EIA) Inspection	
Tamil Nadu Organic Certification Department (TNOCD),		Odisha State Organic Certification Agency (OSOCA)	
Intertek India		Natural Organic Certification Agro Pvt. Ltd.	
Madhya Pradesh State Organic Certification		Fair Cert Certification	

There are totally 24 certifying agencies in India. If any of the product comes with the above mentioned logo indicates that the product is fulfilled with the organic standards and can be sold as organic.

### Scope of the study

Organic food promotes a balance of human, other living organisms and the nature. It also with rising concern of health issues and food safety, many consumers have turned their site to organic products. The increased consumers' interest in organic food has been attributed among others to the growing demand for food free from pesticides and chemical residues promotes no artificial preservatives and best maintain the originality of food. This prevents excess use harmful ingredients and thereby ensures health. This study attempted to gain knowledge about consumer attitude towards organic food product consumption and to see whether there is any potential this might have for changing their behavior.

The rationale for carrying out this study is that consideration for the environment could come only from well-informed citizens who are aware of, and fully committed to their rights to a quality health and environment. Nevertheless, before any behavior can be changed, it is necessary to evaluate the current state of consumers' awareness and knowledge. Therefore consumer's attitude, perception towards organic food products, willingness to pay for organic food product and intention to purchase organic food will be the main agenda of this study.

**Objectives:-**

- To study the awareness level of Organic Products.
- To understand the consumer's knowledge, perception and attitude towards organic products.
- To examine the consumer's willingness to pay for organic food products.
- To examine current trends, potential and growth of organic Products market in India.
- To know the reasons that may influence customers' intention of buying organic products.

**Limitation of the study:-**

- The responses given by the respondents have been taken as genuine no further verification is made.
- Time is a limiting factor in carrying out an extensive research work.

**Review of Literature**

- **Joanna Henryks, Ray Cooksey & Vic Wright (2014)**, emphasized on several key determinants that either facilitate or restrain the consumers from making the actual purchase of organic food at the final hurdle, i.e. the point of purchase. The key determinants that influence the final buyer behavior at the point of purchase are identified as consumer intention to purchase organic food while entering the retail outlet, habit, availability, false assumptions, visibility and access of organic food and price.
- **Mei-Fang Chen (2009)** conducted a study in Taiwan regarding the attitudes and health consciousness of consumers on organic food||. He found that consumer's health consciousness and concern for environment are the two main motives for organic food purchase. Further he has concluded that consumers attitude towards organic food depends upon their health consciousness and attitude towards environment.
- **Magnusson et al (2001)** conducted a study in Sweden on consumer's attitudes towards organic foods. 2000 respondents were mailed a questionnaire for the study. Results reveal that young and women respondents indicated a positive attitudes but the frequency of purchase was low. Organic foods were observed as healthier and expensive. Price was reported as a main obstacle in purchasing organic food products. It is suggested that only if perceived belief increase among consumers consumption of organic food shall increase.
- **Tarkiainen et al (2005)** conducted a study in Finland on subjective norms, attitudes and purchase intention among consumers regarding organic foods. This study tested the relationship between subjective norms, attitudes and intention to buy organic foods using the extension of the theory of planned behavior (TPB). The projected modified model of the TPB model fitted the data well than the



original model||. It is found that subjective norms influenced buying intention indirectly through attitude formation in buying organic foods||. From the results, it is understood that consumers' intentions can be predicted with their attitudes which can additionally be predicted by subjective norms|| in case of organic food purchase.

- **SomnathChakrabarti(2010)** examined the factors influencing organic food purchase in India. Findings of the study convey health motivation got the highest rating among all the other factors. Experts also rated the reputation of store, information associated with certification process; word of mouth and affective commitment are high in the process of consumer's purchase of organic food products.
- **Coulibaly (2011)** studied about Consumers' Perceptions and Willingness to Pay for Organically Grown Vegetables|| in UK. The study results indicate that most of the consumers were educated on the subject of the use of synthetic pesticides in the production process of vegetables. Consumers were ready to pay more premium price for organically grown vegetables provided if they are made available in the market. Their willingness to pay premium is stimulated by increase in awareness of health risks connected with the synthetic pesticides.
- **Hughner et al (2007)** made a study on why people purchase organic food|| from a compilation of review. Studies indicate there are several reasons under which consumers buy organic food products. Reasons consists that organic foods are healthier and has a better taste. Environmental and animal welfare and food safety concern also plays a role. It is further stated that the main reason among consumers for rejecting organic food is it is expensive, lack of availability, satisfaction with current products, and insufficient marketing are some among them.
- **Doorn et al (2011)** examined on consumers' willingness to pay for organic products in Netherlands||. This study explored the reasons after consumer's willingness to pay for organic food. Health perception, quality perception and environmental concerns were stated to be the main cause among consumers to pay premium for organic food products.
- **Mesias Diaz et al (2010)** conducted a study on consumer knowledge, consumption and willingness to pay for organic tomatoes in Spain. Data was collected from 361 Spanish consumers through personal interviews. Findings of the study reveal that consumers lack in knowledge and proliferation of labels creates confusion among consumers. Further the study observed that there is an association among organic food knowledge, consumption and willingness to pay premium in case of organic food products. Price acts as an impediment is buying organic foods.

**Research Methodology:-**

The methodology that was adopted for the study includes both primary source of data as well as the secondary source of data. The methodology of the study can be explained as follows:

**Type of research:** Descriptive research

**Sample Unit:** - Customer of organic product

Sample Size: - 120

**Sampling Method:** - Simple Random Sampling

**Collection of data:** - The data is collected through both primary data from customers and secondary data from company website

1. **Primary Data:** It is collected through interviews using questionnaire.
2. **Secondary Data:** It is collected from the company websites, Annual report etc.

**Sources of Information:****Sources of Primary data:-**

The primary data forms an important component of any research investigation. The study focuses on the preferences of Customers over purchase of Organic Product, Preferences of customers. The primary data was collected using a structured questionnaire encompassing a number of variables/parameters which could explain their behavior towards use of Organic Products.

**Sources of Secondary data:-**

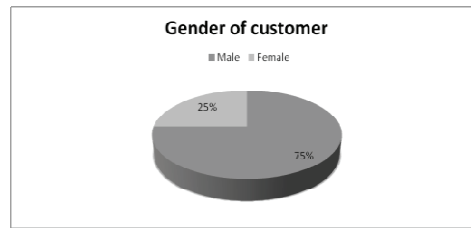
Secondary data was collected through various sources like company website, magazines, internet, company leaflet and other sources. Various reports and article from the internet provided the information regarding Organic Products.

**Instrument of Data Collection:**

Structured questionnaire were used for the collection of primary data. In survey Customer was free to answer and in multiple choice questions respondents were offered various options to choose.

**Data Analysis and Interpretation -**

**Q1) what is your gender?**

**Table No.1****Fig No. 1 Gender of customer**

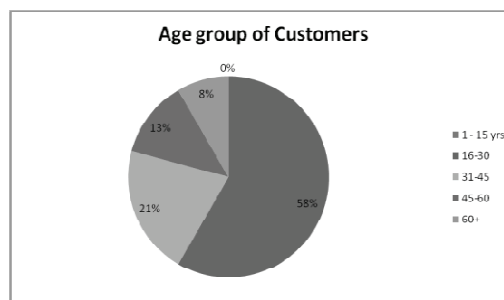
Sr. No.	Option	Response	Response in %
1	Male	90	75
2	Female	30	25

**Interpretation:** The above table no. 1 reveals that the 75 percent of Respondents were belonging to Male, remaining of the 25% of the respondents were Female. Majority of the male respondents were purchased organic products.

Q2) Age Group (Years)

**Table No.2**

Sr. No.	Option	Response	Response in %
1	1-15Yrs	0	0
2	16-30Yrs	70	58.33
3	31-45Yrs	25	20.83
4	45-60Yrs	15	12.5
5	60+ Yrs	10	8.33

**Fig No.2 Age group of Customers**

**Interpretation:** Table no.2 shows that 58 percent of the respondents are in the Age between 16-30 Years old, 21 percent of respondents are in age between 31-45 years, 13 percent of respondents are in between 45-60 years old age and remaining 8 percent of respondents are above 60 years old out of 120 Respondents. The ages between 16-30 years are well aware about organic products.

Q3) Annual Family Income

Table No.3

Sr. No.	Option	Response	Response in %
1	Up to 2.5 lakh	24	20
2	2.6 – 5 lakh	53	44.16
3	5- 10 lakh	25	20.83
4	Above 10 lakh	18	15

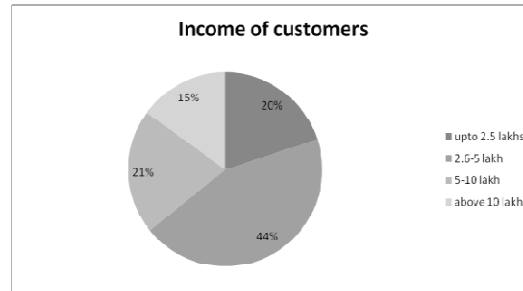


Fig No. 3 Income of customers

**Interpretation:** Table no. 3 shows that respondents getting monthly income with 2.6-5 lakh are more conscious about organic food followed by the respondents getting income between 5-10 lakh.

Q4) Education level of customer

Table No.4

Sr. No.	Option	Response	Response in %
1	Undergraduate	25	20.83
2	Graduate	31	25.83
3	Post graduate	35	29.16
4	Diploma	25	20.83
5	Other	4	3.33

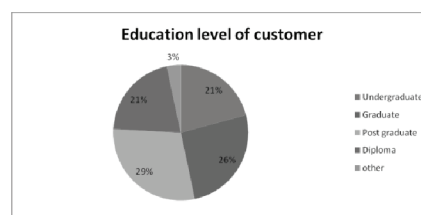


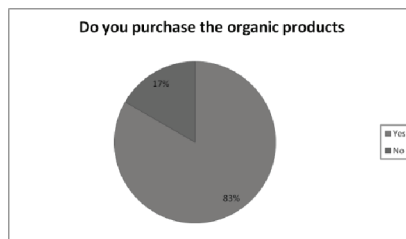
Fig No. 4 Education level of customer

**Interpretation:** Table no.4 shows that Post graduate are highly inclined towards organic food products followed by graduate students

Q5) Do you purchase the organic products?

**Table No.5**

Sr. No.	Option	Response	Response in %
1	Yes	100	80
2	No	20	20

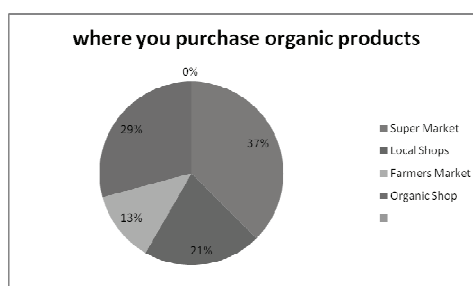
**Fig No. 5 Do you purchase the organic products**

**Interpretation:** Table no. 5 shows that 80% of respondents buy the organic products.

**Q6** From where you purchase organic products?

**Table No.6**

Sr. No.	Option	Response	Response in %
1	Super market	45	37.5
2	Local shops	25	20.83
3	Farmers market	15	12.5
4	Organic shops	35	29.16

**Fig No. 6 place of purchase organic products**

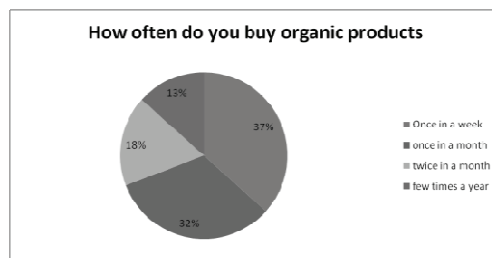
**Interpretation:** The table 6 clearly states that the maximum number (37 percent ) of the respondents were buy organic products through super market ,29 percent of the respondents were through organic shops, 21 percent of respondents were buy through local shop & 13 percent the of respondents were purchased in Farmers Market.

**Q7) How often do you buy organic products?**

**Table No.7**

Sr. No.	Option	Response	Response in %
1	Daily	44	36.66

Sr. No.	Option	Response	Response in %
2	Weekly once	39	32.5
3	Once in a Month	21	17.5
4	Few times a year	16	13.33



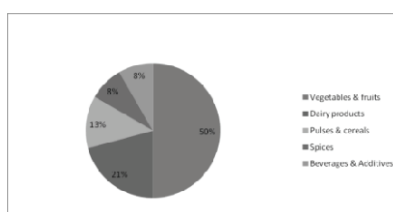
**Fig No. 7 how often do you buy organic products?**

**Interpretation:** Table no. 7 shows that the 37 percent of respondents are buying Daily Organic products, because most of the organic products are perishable in nature, 33 percent of Respondents are weekly once purchasing and remaining 18 & 13 percent of respondents once a month & Few times in a year purchasing of organic products out of 120 Respondents.

Q8) Which organic product do you buy?

**Table No.8**

Sr. No.	Option	Response	Response in %
1	Vegetables & fruits	60	50
2	Dairy products	25	20.8
3	Pulses & cereals	15	12.5
4	Spices	10	8.33
5	Beverages & Additives	10	8.33



**Fig No. 8 Type of organic product purchase by customers**

**Interpretation:** The table 8 clearly shows that the majority of the respondent( 50% )are usually purchase of fruits and vegetables because of the fruits and vegetables are perishable in nature, 21percent of people are using dairy products, and another 13 percent of people are purchasing pulses & cereals and remaining 18 percent of respondents are using Spices &Beverages & Additives.

Q9) Reasons for buying the organic products?

Table No.9

Sr. No.	Option	Response	Response in %
1	Healthy	60	50
2	Environment friendly	40	33.33
3	High quality	10	8.33
4	Prefer taste	05	4.16
5	Low price	05	4.16

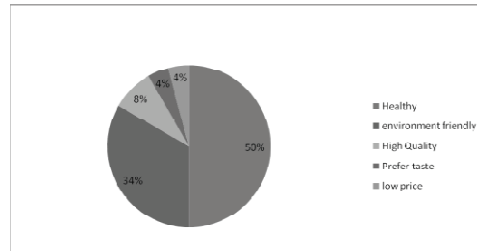


Fig No. 9 reasons for purchase of organic products

**Interpretation:** From Table No. 9, it is conclude that 50 percent of the respondents buy organic product because they are healthy followed by the reason environmental friendly.

Q10) Reasons for not purchasing the organic products

Table No.10:-

Sr. No.	Option	Response	Response in %
1	Too expensive	80	66.66
2	Not enough choices	10	8.33
3	Dislike taste	10	8.33
4	Non availability	10	8.33
5	Don't like packaging	10	8.33

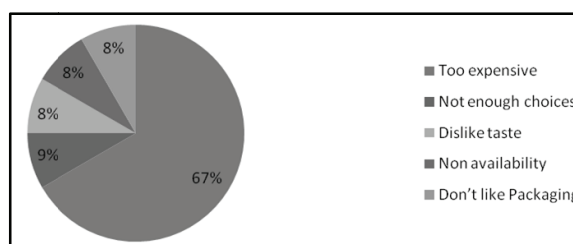


Fig No. 10 Reasons for not purchase of organic products

**Interpretation:** From the table no. 10, it is conclude that 67 percent from the 120 respondents do not buy the organic product as they are very expensive and they don't like the taste.

Q11) What is your opinion towards price of organic products?



Table No.11

Sr. No.	Option	Response	Response in %
1	Expensive	90	75
2	Too low	05	4.16
3	Moderate	15	12.5
4	Other	10	8.33

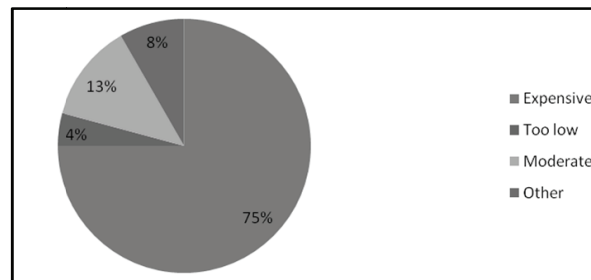


Fig No. 11 Customers opinion towards price of organic products

**Interpretation:** Table 11 indicates that the 75 percent of the respondents were opined that the organic products are very expensive because of inputs and procurement costs are more than conventional product ,13 percent of respondents were expressed as moderate and 5 percent opined that its very low compare to non-organic products.

Q12)How long you have been interested in organic products?

Table No.12

Sr. No.	Option	Response	Response in %
1	1 Year or less	60	50
2	Between 1 – 2 Years	25	20.83
3	Between 2 – 3 Years	15	12.5
4	More than 3 years	20	16.66

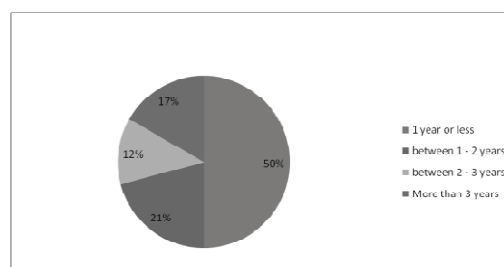


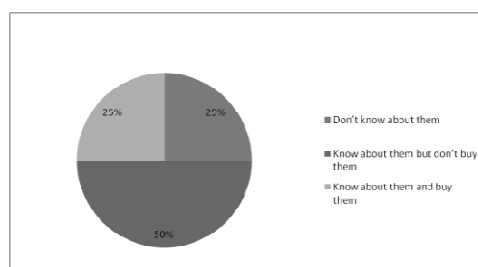
Fig No. 12 Numbers of year's customers interested in purchase of organic products

**Interpretation:** Table No. 12 shows the 50 percent of the respondents are purchasing organic products since one year, 20 percent of respondents are using more from 2 years, 12 percent of respondents are using from 3 years and remaining 17 percent of respondents are using organic products more than 3 years.

Q13) Awareness level about Organic Products?

**Table No.13**

Sr. No.	Option	Response	Response in %
1	Don't know about them	30	25
2	Know about them but don't buy them	60	50
3	Know about them and buy them	30	25



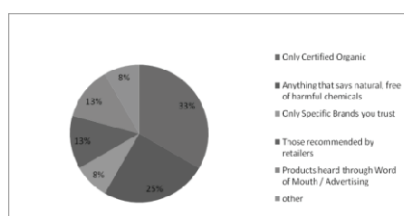
**Fig No. 13 Awareness level of customer about organic product**

**Interpretation:** From Table no. 13, it is conclude that 50 percent of respondents know about organic product but don't buy them and 25 percent of respondents know about Organic Products and buy them.

Q14)What kind of Organic & Natural food products do you buy?

**Table No.14**

Sr. No.	Option	Response	Response in %
1	Only certified organic	40	33.33
2	Anything that says natural, free of harmful chemicals and organic	30	25
3	Only specific brands you trust	10	8.33
4	Those recommended by retailers	15	12.5
5	Products heard through Word of Mouth / Advertising	15	12.5
6	Other	10	8.33



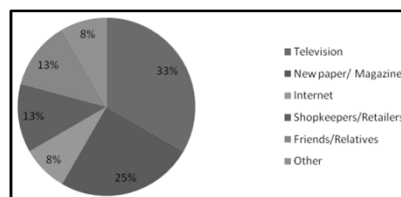
**Fig No. 14 Criteria for buying of Organic Product.**

**Interpretation:** From table no. 14, it is conclude that 34 percent of people buy only certified organic and 25 percent of respondents buys the product anything which is free from chemicals.

Q15)What are your main sources of information about Organic Products?

**Table no.15**

Sr. No.	Option	Response	Response in %
1	Television	40	33.33
2	New paper/ Magazine	30	25
3	Internet	10	8.33
4	Shopkeepers/Retailers	15	12.5
5	Friends/Relatives	15	12.5
6	Other	10	8.33



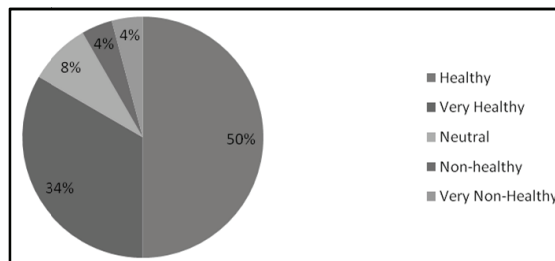
**Fig No 15 Source of information for customers**

**Interpretation:** From table no.15, it is conclude that the source of information for most of the respondents is internet, television & shopkeepers/Retailers.

Q16) Organic and natural food user's perceptions and usage patterns?

**Table No.16**

Sr. No.	Option	Response	Response in %
1	Healthy	60	50
2	Very Healthy	40	33.33
3	Neutral	10	8.33
4	Non-healthy	05	4.16
5	Very non healthy	05	4.16



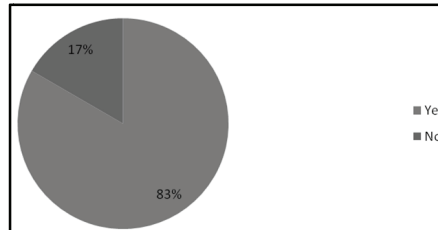
**Fig No 16 Customer perception toward organic products**

**Interpretation:** From table no. 16 we conclude the respondents' perception towards the organic product. 50 percent of respondents think that organic products are very healthy.

Q17) would you like to buy more organic products if they are less expensive?

**Table No.17**

Sr. No.	Option	Response	Response in %
1	Yes	100	83.33
2	No	20	16.66



**Fig No.17 customers opinion towards the price of organic products**

**Interpretation:** Table No.17 shows that 84 percent of the respondents respond that they will buy the organic products if they are less expensive.

### Findings

The study reveals that a lot of problems are faced by respondents while purchasing the organic products in the markets. The Findings of the study are as follows.

- The main problems of organic consumers are irregular availability of organic products. Sometimes, the organic consumer buys non organic products along with organic products.
- The organic products are too expensive than non-organic products. Therefore, that the organic consumers are not buying more quantity of Organic Products.
- The varieties of organic products which are available in the market are limited.
- There is a lack of awareness about organic products to consumers.
- The organic products are not properly certified from any organic certified agency or authority.
- The organic products shops are limited in the city.
- The consumers are convinced about higher price of organic products.
- The more number of organic products consumer are aged between 16-30.
- Most of the respondents are Post-Graduates followed by Graduate respondents.
- Most of the respondents buy the organic products daily.
- Most of the respondents expressed their opinion towards price that the organic products are expensive than the non-organic product.
- Education background of the consumers is one of the important variables which influence the purchase of the organic products. The result shows that there are no illiteracy among the respondent and majority of the consumers are post-graduate.

### Suggestions

The following are the suggestions made based on the results of the study.

- There is a need to open organic products marketing shops every extension areas.
- The Creation of awareness of organic products is necessary among consumers.
- Sustained improvement in product features would lead to increase in consumption of organic food products.
- The increase frequency of viewing the advertisement of organic food products and better taste would influence the purchase organic food products. The influence of advertisement of organic food products with an increase in education found particularly among consumers.

### Conclusion

Today in the modern era environmental sustainability is growing in faster pace. Where the terms like sustainability, organic, green created buzz in the society. As India is always an agricultural hub so organic farming is much crucial for India today. Where the society very excitedly welcomes these concepts and people are in a path to change their lifestyle, food habit. Still it is pity to know that where one group of people rushing up to change their whole lifestyle to organic there we can note that there is no pint-sized sift in their food habit for the other group. People still lack basic knowledge about organic food, clothing and so on. No doubt researcher has received some what a positive feedback from our sample respondents through questionnaire. But, from the discussion with salesperson & customer could show some horrified picture. Just at last after a keen survey upon organic food products researcher could find that lack of authenticated labeling creates distrust among the customer. High pricing for some organic product is out of reach of common man. Least variety creates dissatisfaction among the customer. Customer ignorance about its availability. Last but not least lack of awareness of the organic products. So, it is prime time to buzz the alarm and make every one alert about the upcoming danger of health issues and walk forward to create a healthy tomorrow for one & all.

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## BUYING BEHAVIOUR OF CONSUMERS WITH DIFFERENT INCOME GROUPS: AN EMPIRICAL STUDY IN THE SHOPPING MALLS OF AHMEDABAD CITY

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### **ABSTRACT :**

*As we know that people are mostly engaged with the activity like shopping now a days. And they prefer the place from where they can get most of the things so that they don't need to go for different shops, and this place is famous as shopping malls. Shopping malls takeover the traditional markets, as malls provides most of all the facilities and services to their customers. Shopping malls attract customers, providing enough time to make choices as well as a recreational means of shopping. With new and different types of shopping malls entering into the Indian market, the choices available to the customers have enlarged.*

*The following is paper on a survey conducted to study, analyze and compare the buying behaviour of men & women with regard to shopping malls. The analysis was carried out in Ahmedabad, Gujarat. Customer's purchasing power is the main factor, which decides their buying behaviour in shopping mall. The research has been conducted taking into consideration the factors like gender, income, age etc. The following research paper presents the analysis and interpretation of the data. The article also presents the findings and recommendations of the study which may be useful for shoppers of mall. This study may also be helpful to the retailers to understand the dimensions reflecting the buying behavior of consumers with income groups in shopping mall.*

**Keywords :** Shopping mall, buying behavior, daily footfalls, customers and retailers..

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### **INTRODUCTION**

The last decade has witnessed dynamism in Indian retail sector. Various urban areas have been at the centre of attraction with emergence of different kinds of organized retail formats gaining momentum. It is largely due to rising income, increasing purchasing power, credit facilities, changing pattern of consumer behavior and increased consumer awareness.



Buying Behavior is the decision processes and acts of people involved in buying and using products. The Retail sector is vibrant with growth happening in all related areas - be they malls, hypermarkets or single brand luxury stores, they have dotted the commercial landscape of the metros, and have even percolated to the Tier II and Tier III cities. Development of mega malls in India is adding new dimensions to the booming retail sector. Shopping experience in the nation of shopkeepers is changing and changing very fast. Malls are fast becoming sought-after entertainment hotspots.

The study of consumer behavior has its roots in examining people for the sake of understanding and going insight. Consumers are like finger prints, no two consumers are same in their behavior. Consumers are shaped to some extent by the environment in which they live they in turn affect environment through their behavior. The buying behavior of consumer in respect of shopping in particular shopping malls may change as per their income level. If their income level is going up then their purchasing power is also going up, so maybe they demand for more branded products and vice versa. The fundamental goals of every business are to achieve full profit potential out of target consumer with various needs and taste there are many similarities also among them.

**Need to understand:**

- Why consumers make the purchases that they make?
- What factors influence consumer purchases?
- The changing factors in our society.

**PROBLEM STATEMENT :****Problem Statement of this research paper is as under :**

“Different buying pattern of consumers with different income groups in shopping malls of Ahmedabad City.”

**OBJECTIVES OF THE STUDY :**

Following are the main objectives of the study :

**Primary Objectives :-**

1. To study the buying behaviour of consumers in shopping mall with reference to their income.
2. To compare the buying behaviour of consumers with different income groups in shopping mall.

**Secondary Objectives :-**

1. To know the demographic profile of customers patronizing shopping malls in Ahmedabad.

2. To examine the impact of income levels of customers on factors like prices, quality, location and variety
3. To study the relationship between income of consumers and type of product consumer purchase.
4. To study the perception of consumers in respect of various malls of Ahmedabad city

#### LITERATURE REVIEW:-

- Shouvik Sanyal, Mohammed Wamique HisamInfluence(January 2018 ) in the article of **“Income On The Shopping Habits Of Consumers With Respect To Shopping Malls In Kolkata City”**, Increasing disposable incomes, exposure to international brands, rising aspirations and westernization of lifestyles have seen shopping malls become the preferred shopping destination for all age groups as malls have come to represent “one stop shop” for shopping and entertainment.
- Dr. Archana Chanuvai Narahari & Dhiman Kuvad (Vol-3 Issue-2 ,2017) in their research paper of **“Customer Behavior towards Shopping Malls – A Study in Bhavnagar (Gujarat State, India) ,** it studies the end-consumer of the small town i.e., either upper class, middle class, businessmen, employee groups will have better spending capacity with higher disposable cash compare to city end-users, as the cost of living in cities are absolutely high. Hence, luring the small town masses is always a fetching strategy to the retailers.
- Yudhvir Singh\*, Meenakshi Saxena, Babita Rani Tyagi, in International Journal of Information Technology and Management | IT & Management(August 2016) in their research paper **“Consumer Behaviour and Attitude towards Shopping Malls in Delhi NCR”** , it focuses on Consumer's product consumption relies upon various traits like Price, Quality, Brand name, Brand devotion and Labeling. Every one of these qualities presently turn into another pattern in the market. As of now, individuals are falling to quality, branded and shabby evaluated products. Early day's cost was the main factor in the mentality of individuals. However at this point, every one of these variables have a noteworthy job in ruling the market.
- Bikramjit Rishi &Harvinder Singh (1 October 2012) , **“Determinants of supermarket shopping behavior in an emerging market”** Study finds out that, physical factors (discounts, quality, local brands, display and visual appeal) (2) social factors include (salesmen behaviour and choice of children)
  - (3) temporal factors (open space) should be considered by the super marketers while designing marketing strategy for Indian consumers as these factors are having influence upon the number of visits and amount spent in the supermarket.

- **Jayasankara, P. (2010)** found that customer's age, monthly household income, family size, distance travelled to store, gender, education and occupation have been the significant predictors of store choice behaviour.
- **Howard (2007) [6, 15]** in his article on “**New Shopping Centers: Is Leisure the Answer?**” believes shopping to be a free time search and with the fast development of organized retail formats, retailers are trying to make it more of a pleasure activity.
- **Kakiza Clara W. (2015) [7]** in his study on Tanzanian consumers found income level to be one of the key factors influencing purchases in shopping malls, along with price, advertisements and attitudes of consumers.. Income level of families is considered as an important factor affecting the choice of store wherein high family income levels are usually expected to lead to higher consumption levels, which in turn would suggest higher aggregate shopping and more time spent in the store.

#### RESEARCH METHODOLOGY :-

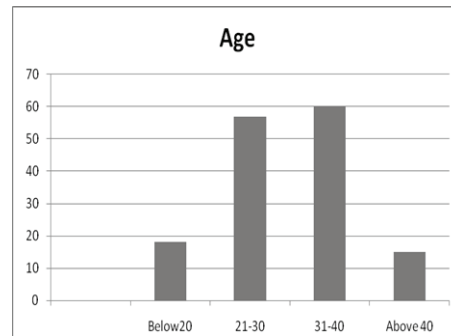
Research Design	Descriptive Research Design
Sources of Data	Primary Data
Data Collection Tool	Questionnaire
Mode Of Data Collection	Survey Method
Targeted Population	Consumers of Ahmedabad City
Sample Size	150 Consumers of malls of Ahmadabad City.
Sampling Method	Convenient Sampling
Presentation Tool	Pie Chart & Bar Chart

#### DATA ANALYSIS AND INTERPRETATION:

##### 1. Personal Information

##### AGE

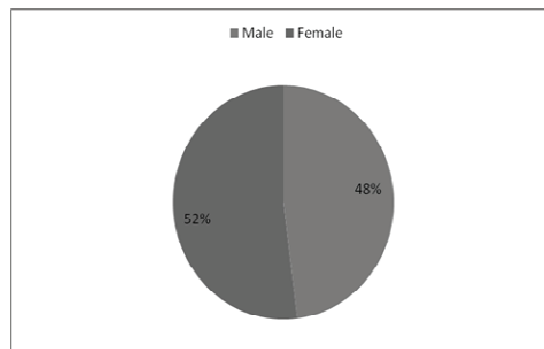
Particulars	No. Of Respondents	% Of Respondents
Below20	18	12%
21-30	57	38%
31-40	60	40%
Above 40	15	10%

**Interpretation:-**

From the chart it can conclude that out of total respondents 18 respondents are below 20, 57 respondents are between 21-30, 60 are between 31-40 and remaining 15 are above 40

**GENDER**

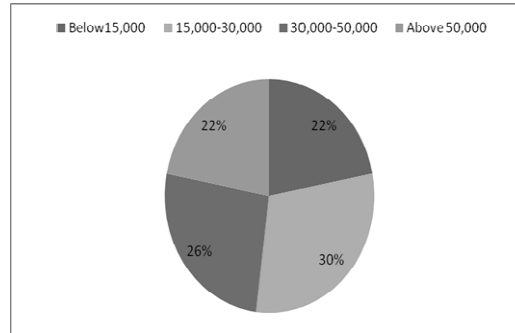
Particulars	No. Of Respondents	% Of Respondents
Male	72	48%
Female	78	52%

**Interpretation:-**

From the chart it can conclude that out of total respondents 72 respondents are male and remaining 78 are female because majority female visit the mall because of all products under one roof.

**INCOME**

Particulars	No. Of Respondents	% Of Respondents
Below 15,000	33	22%
15,000-30,000	45	30%
30,000-50,000	39	26%
Above 50,000	33	22%

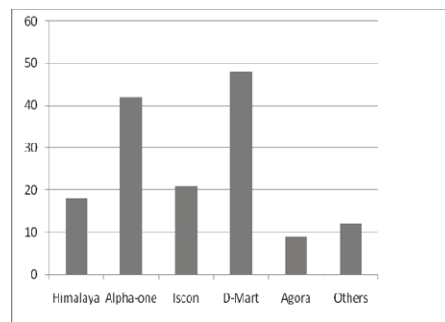


### Interpretation:-

From the chart it can conclude that out of total respondents 33 comes under the income less than 15,000, 45 respondents are comes under the income level of 15000-30000, 39 respondents comes under the income level of 30,000-50,000 and remaining are in above 50,000 income group.

### 2. What is your Preferred Place to make purchase when it comes to make shopping from the malls in Ahmadabad?

Particulars	No. Of Respondents	% Of Respondents
Himalaya	18	12 %
Alpha-one	42	28%
Iscon	21	14 %
D-Mart	48	32 %
Agora	09	06 %
Others	12	08 %



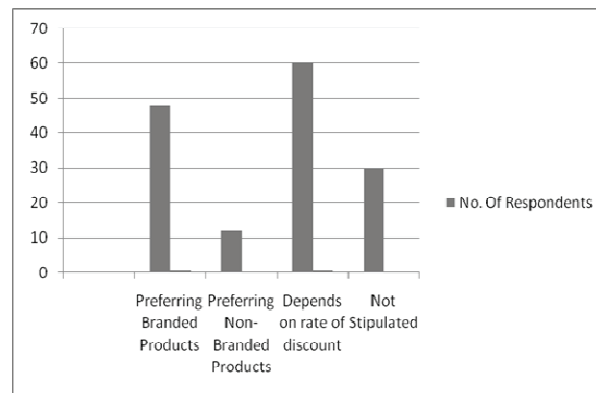
### Interpretation:-

Majority of respondents visit the Alpha one and Iscon. The reason behind Alpha one, its additional services and D-Mart for major discounts in various products.

### 3. What are your preferred choices with respect to the purchase you make?

Particulars	No. Of Respondents	% Of Respondents
Preferring Branded Products	48	32%
Preferring Non-Branded Products	12	08%

Particulars	No. Of Respondents	% Of Respondents
Depends on rate of discount	60	40%
Not Stipulated	30	20%

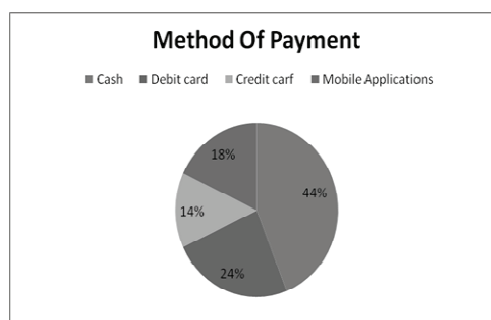


#### Interpretation:-

Majority of respondents i.e.60 consumers purchase the products which are depends on discount and then 48 consumers will purchase the branded products, remaining are go with non branded products.

#### 4. What is method of Payment Adopted by you at the time of purchasing from mall ?

Particulars	No. Of Respondents	% Of Respondents
Cash	66	44%
Debit card	36	24%
Credit card	21	14 %
Mobile Applications	27	18 %

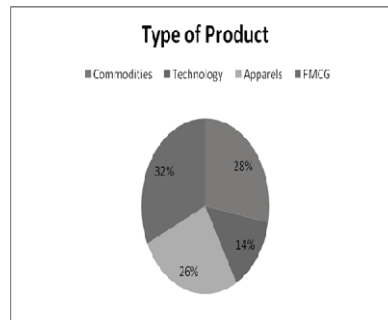


#### Interpretation:-

Overall 44% of consumers use cash as a payment mode ,24% use debit card, 14% use credit card and remaining 18% go with mobile application as their payment mode.

**5. What are the majorly demanded products while making purchase from shopping malls ?**

Particulars	No. Of Respondents	% Of Respondents
Commodities	42	28%
Technology	21	14%
Apparels	39	26%
FMCG	48	32%

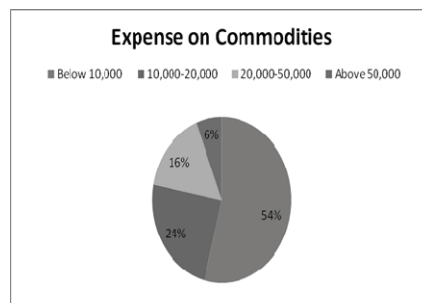


**Interpretation:-**

About 32% of consumers demand FMCG products because this goods are used as on day to day basis, About 28% purchase the various commodities from the malls and remaining go with technology and apparels.

**6. What is your extent of expenses on Commodities in malls?**

Particulars	No. Of Respondents	% Of Respondents
Below 10,000	81	54%
10,000-20,000	36	24%
20,000-50,000	24	16%
Above 50,000	09	06%



**Interpretation:-**

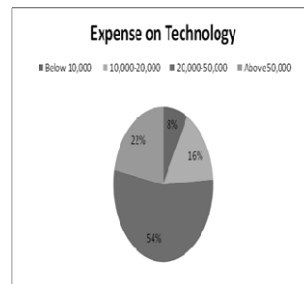
Majority of Consumers spend 10,000 or lesser amount in commodities. There are around 24% of consumers who spend in commodities only 6 % of consumers spend



around 50,000 behind commodities and remaining portion spends 20,000-50,000 rupees around 10,000-20,000

**7. What is your extent of expenses on Technology in malls?**

Particulars	No. Of Respondents	% Of Respondents
Below 10,000	12	08%
10,000-20,000	24	16%
20,000-50,000	81	54%
Above 50,000	33	22%

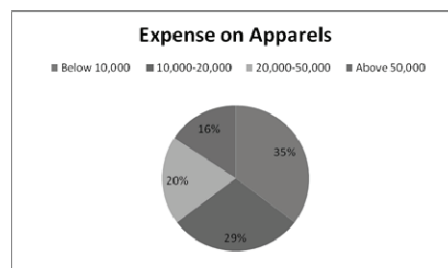


**Interpretation:-**

Technology is such a expensive thing which requires more amount to spend. So, around 54% of customers spend 20,000-50,000 behind technology, 08% of customers spend 10,000 or lesser amount behind technology , around 16% of customers spend 10,000-20,000 and remaining customers spend more than 50,000 in technology.

**8. What is your extent of Expenses on Apparels in malls?**

Particulars	No. Of Respondents	% Of Respondents
Below 10,000	54	36%
10,000-20,000	45	30%
20,000-50,000	30	20%
Above 50,000	24	16%

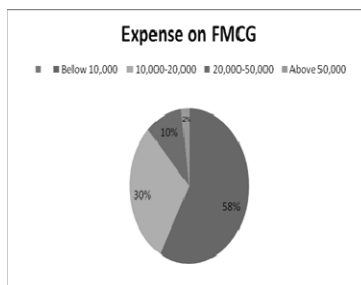


**Interpretation:-**

The majority extent of expense on apparels is below 10,000 i.e. about 36% of people spend this amount , 30% of customers spend 10,000-20,000 in Apparels , 20% of customers spend 20,000-50,000 amount in Apparels and remaining 16 % spend more than 50,000 in Apparels.

**9. What is your extent of Expenses on FMCG in malls?**

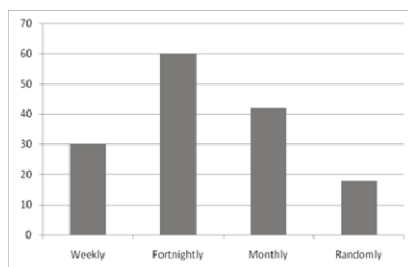
Particulars	No. Of Respondents	% Of Respondents
Below 10,000	87	58%
10,000-20,000	45	30%
20,000-50,000	15	10%
Above 50,000	03	02%

**Interpretation:-**

FMCG is day to day basis or routine base goods. About 58% customers i.e. 87 customers spend 10,000 or lesser behind FMCG, Around 30% customers spend 10,000-20,000, Around 10% customers spend 20,000-50,000, 2% customers spend 50,000 or more behind FMCG.

**10. How frequently you make purchase from the preferred mall?**

Particulars	No. Of Respondents	% Of Respondents
Weekly	30	20%
Fortnightly	60	40%
Monthly	42	28%
Randomly	18	12%

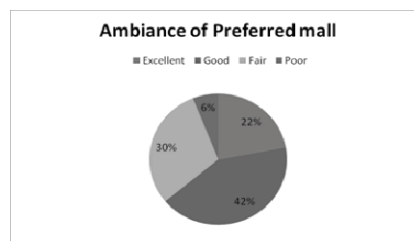


**Interpretation:-**

Around 20% customers visits the mall weekly, 40% customers visits the mall fortnightly, 28% customers visits the mall monthly, 12% customers visits the mall Randomly.

**11. Rate the ambience of Your preferred mall from the below :**

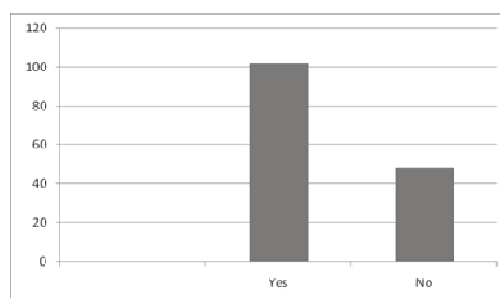
Particulars	No. Of Respondents	% Of Respondents
Excellent	33	22%
Good	63	42%
Fair	45	30%
Poor	09	06%

**Interpretation:-**

As per rating of ambience of mall, 22% rate as excellent, 42% rate as good, 30% rate as fair, 6% rate as poor.

**12. Does the mall provide you with any additional services except making Purchase?**

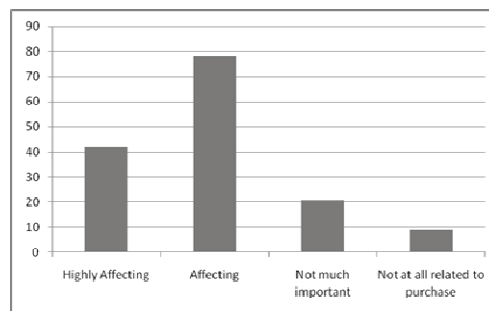
Particulars	No. Of Respondents	% Of Respondents
Yes	102	68%
No	48	32%

**Interpretation:-**

About 68% of consumers replies positively in respect of additional services while remaining replies negatively for additional services.

### 13. What is the extent of Interior, Marketing of the mall on your purchasing decision ?

Particulars	No. Of Respondents	% Of Respondents
Highly Affecting	42	28%
Affecting	78	52%
Not much Affecting	21	14%
Not at all important	09	06%



#### Interpretation:-

As per interior and marketing point of view, 28% people highly affect in respect of purchasing decision, 52% affect to the purchase in respect of purchasing decision, 14% not much affecting and remaining 6% not at all important.

#### FINDINGS:-

The above research work shows the data and result collected from the Customers of Ahmedabad city. The research work highlights the compare the relationship between buying behavior of consumers with different income groups.

- The consumers of the higher income group are more brand conscious than that of with lower income.
- The consumers with the income below Rs.10,000 have more interest in buying apparel whereas the higher income group people give priority to technological products.
- Discount affects more to the consumers with low income as compared to the higher income group.
- According to age factor majority of youth and adult i.e. about 78% visits the shopping malls because they find all the things of their necessity with entertainment under one roof.
- From the collected data it is found that majority of consumers mostly prefer products which are discount oriented(60%) and branded products(32%).

- It is found from the study that in terms of payment mode 66% use cash as medium of payment and remaining uses the debit card, credit card and mobile applications.
- As per most demanded products in shopping malls about 32% consumers demand FMCG products, 28% demand for commodities and remaining consumers demand Technology and Apparels.
- As per extent of expense on commodities in shopping mall majority customers i.e. about 54% spend Rs. 10,000 or lesser amount behind commodities.
- As per extent of expense on Technology in shopping mall majority customers i.e. about 54% spend Rs. 20,000 - 50,000 behind Technology.
- As per extent of expense on Apparels in shopping mall majority customers i.e. about 36% spend Rs. 10,000 or lesser amount behind Apparels.
- As per extent of expense on FMCG products in shopping mall majority customers i.e. about 58% spend Rs. 10,000 or lesser amount behind FMCG products.
- About 40% consumers fortnightly visits the shopping malls for their shopping.
- As per rating of ambiance of mall, 22% rate as excellent, 42% rate as good, 30% rate as fair, 6% rate as poor.

From the collected data I can say that income factor affects the consumers' buying behavior, Research shows that only income factor is not enough to measure the buying behavior many other factors like ambiance of shopping mall, Interior , Marketing activities also affects consumers.

#### **SUGGESTIONS :-**

- Shopping malls must take into consideration the buying behaviour of men & women with different income groups in order to increase their sales as well as to provide maximum satisfaction to the customers.
- Marketer should brand and advertise product in a well-defined manner as to attract the consumers of lower income group.
- Retailer should categorize and plan the store, keeping in mind different income groups.

#### **CONCLUSION**

There is cut throat competition in the marketing of goods and services, so shopping malls have emerged to improve the sales and to reduce the costs by making various types of goods available to the customers under one roof. Shopping malls have become an important part of lives of people in today's era. The present study made a systematic effort on studying and comparing the buying behaviour of men and women with different income groups in shopping malls. It also brought into light the impact of branded goods, discount offers, advertisements, etc. on the buying decision of customers. No doubt that the customers are at much ease in buying goods at malls.

Above all, it has become very smooth for manufacturers to make their goods available to the customers through shopping malls.

**ANNEXURE :**

1. Name
2. Age of Respondent      a)Below 20      c)21-30  
   b)31-40      d) Above 40
3. Gender                      a) Male              b)Female
4. Income                      a)Below 15,000      c)15,000-30,000  
   b)30,000-50,000      d) Above 50,000
5. What is your Preferred Place to make purchase when it comes to make shopping from the malls in Ahmadabad?  
a) Himalaya      c)Iscone)Agora  
b) Alpha - one d) D-mart      f) others
6. What are your preferred choices with respect to the purchase you make?  
a) Branded                      c)Depends on rate on discount  
b)Non-branded                      d)Not stipulated
7. What is method of Payment Adopted by you at the time of purchasing from mall ?  
a) Cash                      c)Credit card  
b) Debit card                      d) Mobile Applications
8. What are the majorly demanded products while making purchase from shopping malls ?  
a) Commodities                      c)Apparels  
b) Technology                      d) FMCG
9. What is your extent of expenses on Commodities in malls?  
a)Below10,000                      c)20,000-50,000  
b)10,000-20,000                      d) Above 50,000
10. What is your extent of expenses on Technology in malls?  
a)Below10,000                      c)20,000-50,000  
b)10,000-20,000                      d) Above 50,000

11. What is your extent of expenses on Apparels in malls?  
a) Below 10,000                      c) 20,000-50,000  
b) 10,000-20,000                  d) Above 50,000
12. What is your extent of expenses on FMCG in malls?  
a) Below 10,000                      c) 20,000-50,000  
b) 10,000-20,000                  d) Above 50,000
13. How frequently you make purchase from the preferred mall?  
a) Weekly                      c) Monthly  
b) Fortnightly                  d) Randomly
14. Rate the ambiance of Your preferred mall from the below  
a) Excellent                      c) Poor  
b) Good                          d) Fair
15. Does the mall provide you with any additional services except making Purchase?  
a) Yes b) No
16. What is the extent of Interior, Marketing of the mall on your purchasing decision ?  
a) Highly Affecting      c) Not much affecting  
b) Affecting                  d) Not much important

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## ENGAGING SOCIAL MEDIA FOR NEW PRODUCT DEVELOPMENT: AN EXPLORATORY CASE STUDIES OF FMCG COMPANIES IN INDIA

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### ABSTRACT

*New products are the lifeline of any business. On one hand new products drive growth for the business firms while on the other profitability. New products are the firm's responses to the ever-changing consumer's needs and preferences. However, not every new product survives in the market and is accepted by the consumers. Only meagre percentage of product enjoys the taste of success. One possible way to increase the chances of success is to involve various stakeholders into the New Product Development (NPD) process. Customers being a dominant entity and at nucleus for new product development exercise can actively participate and fulfil different roles in different stages of new product development process.*

*Virtual environment provides firm with an opportunity to engage customers in new product development process. Platforms such as social media can be used to get inputs from the customers. The study intends to explore the use of social media for customer participation in new product development process. The current study focuses on Fast Moving Consumer Goods (FMCG) companies operating in India. The study is qualitative in nature and uses multiple case study method. The use of case study method have allowed researches to gather data which is not bounded into predefined and predetermined categories. The study tries to explore, how and why social media is used for new product development process.*

*The result of our study shows that the use of social media within new product development process is almost non-existent among our respondents. Firm uses social media as a tool of marketing communication but to the minor extend only. This is mainly due to the challenges associated with the use of social media as a platform, challenges associated with customer participation and challenges related to customer participation via social media for new product development process. The respondents were alsodubious about the potential of social media for customer participation in new product development process. However, few companies do anticipate amplified probability in near future.*

**Keywords :** *Social Media, New Product Development (NPD), Fast Moving Consumer Group (FMCG), Customer Participation.*

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## 1. Introduction

Heraclitus, a Greek philosopher once quoted “change is the only constant in life”. This saying holds true not only for people but also for firms and their products. The business environment is mutable and dynamic and so are the needs of the customers (Filieri, 2013) Therefore, business firm’s needs to constantly monitor the change and adopt accordingly. They have to adjust their offering in response to this change. Failing to adopt, in response of the changes can be detrimental to firms overall health and firm would cease to exist the market (Dhargalkar et al., 2016).

Introduction of new product is one way to muddle through this change. New products are the engines of growth and critical in the lifecycle of any organization. In order to develop new products it is indispensable to understand the need of the consumer precisely and accurately (Hippel, 1986). However, not every product persists in the market. There is only meagre percentage of products which are accepted by the consumers and enjoys the taste of success. One way to increase the chances of success is to involve various stakeholders into the NPD process (Filieri, 2013). Customers as an important stakeholder can actively participate and fulfil different roles (Nambisan, 2002) in different stages of new product development (NPD) process. Customer can provide information regarding their needs with more precision and accuracy and therefore involving customer in new product development process becomes imperative for business firms.

Virtual environment provides firm with an opportunity to engage customers in new product development process. Studies in past (Fuller et al., 2009; Piller, Vossen & Ihl, 2012; Kao et al., 2016; Roberts & Darler, 2017; Rautela & Singhal, 2017) have proposed the use of online platforms such as social media to get inputs from the customers and has discussed the paybacks for the same. The present study is intended to explore the use of social media in new product development with special reference to selected Fast Moving Consumer Goods (FMCG) companies operating in India. The study is qualitative in nature and uses multiple case studies as a method. This allowed researchers to gather data which was not bounded by predefined and determined categories. The study tries to explore how and why social media is used for customer participation in new product development with special mention to Fast Moving Consumer Goods companies in India.

## 2. Theoretical Foundation

### 2.1 New Product Development

New products are often referred as the “engine of growth” and “lifeline” for any organization (Badrinarayanan & Arnett, 2008) as they are critical for success and progress of any organization (Geise, 2017; Cooper & Kleinschmidt, 1986). In order to survive and gain competitive advantage it is imperative for firms to introduce new products in the market (Davis et al., 2014; Yelkur & Herbig, 1996). New products if introduced at the right time, at right price, with right communication strategy and to right consumer groups can lead to significant returns (Fojt, 1996). New products have different meaning to different people. Crawford and Benedetto (2011) have categorized new products into six categories namely: new-to-the-world products, new-to-the-firm products, additions to existing product lines, improvement and revision to existing products, repositioning's and cost reduction. All these categories in one way or the other are new to the world or new to the firm. In case, the product belongs to first two categories i.e. new to the world or new to the firm, the risk/uncertainties and cost associated with the product are much higher (Crawford & Benedetto, 2011). Most of the products in today's world fall under the category of “me-too” (last four categories) products (Wind & Mahajan, 1997).

Development and introduction of a new product is a risky (Yelkur & Herbig, 1996) and challenging task as the knowledge base for the development of new product is dynamic and varied (Nambisan, 2002). There are only handful percentages of the products which become successful and receive customers' acceptance. Therefore, managers need to align their new product development strategy with the overall strategy of the firm and master techniques to navigate through the complex process of new product development (Tzokas et al., 2004).

New product development (NPD) have been defined in past literature as a sequence of activities which starts with idea generations, involves product development stages and ends with commercialization or launching of the new product (Yang & Yu, 2002; Bhuiyal, 2011; Slavova, 2014). Different models (Booz et al., 1982; Cooper, 1983; Cooper 1994) have been proposed in order to explain the process of NPD. However, in today's world NPD process cannot be rigid or sequential and has to be dynamic and simultaneous so that it can inculcate views of different departments and harness their expert advices. Yelkur and Herbig (1996) also reinforced the same point with respect to development and success of global new products. Bhuiyal (2011) proposed a framework of critical success factor (CSFs) for NPD and advocated the use of certain metrics which can be used to measure these CSFs. He also suggested tools and techniques in order to implement metrics at each stage of NPD.

The present study focuses on NPD with special mention to Fast Moving Consumer Goods(FMCG).FMCG products touch day to day life of individuals and have comparatively shorter shelf life. In order to survive and have better competitive advantage in the market; theFMCG firms need to be innovative and should be able to differentiate its products from those of competitors. Also, one of the key activities for FMCG companies is to introduce new products (Davis et al., 2014) which connect and cater to the customer need in a better fashion.Involving customer therefore seems to be a viable and noble idea for FMCG companies so that firms get better understanding of the consumer minds. This will ensure minimum risk and maximum returns to the FMCG firms. The following section highlights the importance of customer participation in NPD.

## 2.2 Customer Participation in NPD

In order to reduce the risk and uncertainties related to new product, firms seek to interact directly to the customer in order to understand their needs and preferences (Sawhney et al., 2005).“Customer participation” refers to the involvement of customers in the firm’s new product developmental process (Fang, 2008).Customer participation in successful NPD process is vital(Lin & Huang, 2012) and provides useful information about user’s perception about organisation products and services.It also provides firm withthe opportunity to be acquaintance about the changing needs of the customer (Chang & Taylor, 2016), design or modify product according to changing needs, avoid delays to introducing new products in the market and have a better competitive advantage in the market with customer-centric offerings. The potential significance of customer collaboration in NPD is widely argued (Prahalad&Ramaswamy, 2004a; Roberts, Baker & Walker, 2005; Emden, Calantone, &Droge, 2006; O’Hern&Rindfleisch, 2009; Hoyer et al., 2010).

Customers can participate and play different role in different stages of NPD.Nambisan (2002) has identified three important roles played by the customers in NPD process. These roles are – customer as resources, customer as co-creators and customer as users. Fang (2008) have distinguished two dimensions of customer participation- customer participation as an information resource and customer participation as a co-developer. It has also been revealed that the effectiveness of customer participation in NPD varies with the stages of NPD. Chang and Taylor (2016)reveal that customer involvement in the ideation and launch stage of NPD is financially viable for the firms. However, in case of new product development, customer participation delays the product time to market and thus deteriorate the financial performance ofthe new product.

Past studies have also described and highlighted challenges related to customer participation in NPD process. For example - Customers are often not able to accurately describe their ideas and concepts for new product development process

(Piller&Walcher, 2006; Geise, 2017); customer do not understand their needs well and thus lack foresight for new product and services (Wind & Mahajan, 1997); customer participation can affect firms market competitiveness as secret information related to new product may get revealed to the firm's competitors(Nambisan, 2002; Angard&Hillerstrom,2012); evaluation of customer inputs (Nambisan,2002).

With the advent of internet and internet enabled platforms the ability of firms to engage customers in product innovation has enhanced greatly (Sawhney et al., 2005).Internet enabled platform such as social media enhances two way communication between the firm and customers (Filieri,2013) where customer can actively participate in NPD process.The following section presents an insight on the use of social media for customer participation in NPD process.

### **2.3 Customer participation via Social Media for NPD**

Business firms are witnessing a drastic change in business environment. One of the main reasons for this change is; change in technological environment. The world has moved towards Web 4.0 which is the next stage of Internet evolution where Big Data and Augmented Reality are going to play a key role(Rautela & Virani, 2019). Social Media which is fabricated on the foundation of Web 2.0 provides a platform for the creation and exchange of user-generated content (UGC) (Kaplan &Haenlein, 2016).Mangold and Faulds (2009) argue that social media is a hybrid element of promotion mix because on one hand (as in case of traditional media) it allows firm to communicate with its consumers while on the other (unlike traditional media) it allows customers to interact with each other as well as with the firm. Engagement of customer is also been found to be significantly correlated with customer trust which serves as a motivating factor to engage customers seamlessly (Singhal, 2016).

Firms can utilize social media as a platform for open innovation and can invitepeople outside the organization to integrate their ideas in NPD (Geise, 2017). In other words, social media can act as a platform for co-creation of products and services (Piller et al., 2012). However, the empirical studies endorsing the positive relationship between the use of social media in NPD and business performance is not significant enough (Roberts & Candi, 2014; Marion et al., 2014).Few studies also argue that social networking sites (SNSs)play an important role during new product launch stage and in customer collaboration for NPD(Bashir &Papamichail, 2016).Using social media for customer participation in NPD can lead to creation of value (for firm as well as customers) (Nambisan, 2002), better suited products for customers(Roberts & Candi, 2014) minimizing the risk of failure or rejection from customers (Prahalad&Ramaswamy, 2004b) and strong social relationship between customers and firm (Sawhney et al., 2005).

### 3. Research Methodology

The present study is qualitative in nature and uses multiple case study method. This allows researcher to gather data which is not bounded into predefined and predetermined categories. The researchers are equipped with flexibility to get data which may not be expected or determined. Also, researcher's has to interpret the responses to get a holistic view.

However, the major drawback of using qualitative approach is researchers biasness which is inevitable during the interpretation of the data. Also, the finding of the study is hard to generalize to the rest of the population and should be beheld in context of the present research only (Brymal& Bell, 2010).However, the present study does not aim to generalize the findings and aims at understanding each and every case profoundly and evidently.

#### 3.1 Research Design

Case study, also referred to as the case history provides researches with the flexibility and richness of understanding the subject under study (Cooper, Schindler & Sharma, 2012).A case study is generally used in order to get a detail insight of a "phenomenon, person, group or any subject that requires studies"(Kazimierska&Greboosz-Krawczyk, 2017).Multiple case study design is the extension of the case study design and uses several cases. The present study uses multiple case study design as it provides researchers with the opportunity to compare and contrast the findings derive out of each case in the study. It also motivates researches to find out what is unique and what is common among various cases which endorses theoretical reflection on the research findings (Brymal& Bell, 2010).

#### 3.2 Research Method

The study used both primary and secondary data. Primary data was collected using semi-structured interviews. The use of semi-structured interviews, on one hand guides researchers towards a direction and provides a backbone to the entire interview. On the other hand it provides extra room for more information and topics. This ensures more detailed and complete picture of the topic of interest. For the purpose of the present study the interview questions along with the concept note were mailed to the respondents in advance so that they are familiar with the objectives and scope of the study. The respondents were a mix of R & D managers, new product development managers, Product managers and new product Supervisors. Interviews were then conducted with each individual.

Secondary data aids in determining the direction of primary data. The secondary data was collected using various databases like EBSCO, JSTOR, SCOPUS etc., books, webpages and related documents. This data was gathered and used for literature review and to get an insight about the past studies related to the topic.



### Case Selection Criteria's–

The study was focused on Fast Moving Consumer Group (FMCG) companies operating in India. Following criteria's were considered during the selection process–

- Food and Beverage: FMCG or Consumer Packaged Goods (CPG) can be classified into food and non- food categories. Popular categories of FMCG sector includes food and beverages, household care, personal care, clothing and apparel, tobacco and pet food/pet care (Statista, 2019). For the present study companies which are into food and beverages and household care were selected and contacted. This category was selected as these companies were B2C (Business to Consumer) and have direct link to final consumer of their products.
- Presence in social media: The companies under consideration were having presence in social media platforms such as Facebook, Twitter, YouTube, LinkedIn etc.
- Number of Employee: The companies which were considered for the study were having more than 200 numbers of employees. This was important in order to ensure the uniform size of the company.

### 3.3 Validity and Reliability of Research

Validity and Reliability are important parameters to judge the quality of research. However, the present research is qualitative in nature and there will be concerns raised by qualitative researchers about the use of same approaches and their relevance in qualitative research (Bryman & Bell, 2010).

Validity refers to the “extent to which a test measures what we actually wish to measure” (Cooper, Schindler & Sharma, 2012). Being a qualitative study with limited number of cases it is hard to generalize the finding for other context and scenarios. However, the present study tried to consider all the possible factors researchers could think and acted accordingly. The respondents who were interviewed for the study were highly qualified and were holding a high profile position in their respective companies. Also, they were working or were related to new product development (NPD) process in their organizations. This ensures that the respondent has comprehensive insight and knowledge about the NPD process. The language of interviews was English as all the respondents were having good command over the English language. The study has clear research questions and research objective which add to validity of the present study.

Reliability refers to “the accuracy and precision of the measurement procedure” (Cooper, Schindler & Sharma, 2012). Reliability also means the degree to which a study can be replicated by any other researcher (Angard & Hillerstrom, 2012). The research is qualitative in nature and one of the drawbacks it suffers is that it cannot



be replicated. The study also involves multiple cases and each case is unique in terms of time and environmental setting. Therefore, it is not possible to create or replicate the same setting and environment by any researcher. However, in future the researchers can check the research findings in their own country or settings.

## **4. Discussion**

### **4.1 Case Studies: Presentation and Discussion**

The following section presents the cases scrutinized in the present study. The cases start with the background of the company, their scale of operation, coverage of geographical region, number of employees etc. It covers the information pertinent to NPD process in the organization and participation of customer in NPD process. The next part of the interview focuses on customer interaction via social media and leveraging social media for new product development. Also, the potential for the use of social media for NPD in future and challenges faced by the firm were explored in the last segment of the interview.

#### **4.1.1 Company A**

**Background Information-** Company A was founded in 1951 and is a leading player in fresh jams, sauces, ketchups, dressing and canned foods category in India. It has a strong distribution network (especially in western and southern India) and thus ensures availability of these products across the country. The main focus of the company is to deliver fine quality products to its customers. The company has 600 employees in total.

**New Product Development Process and Customer Participation-** Company A does not follow any formal NPD process. In order to develop new products the company uses information provided by sales team and do not integrate customers or seek their advice in their new product developmental process. However, the respondent feels that there is the potential of integrating customer especially in commercialization stage of NPD. In order to ensure that the new product introduced by the company matches the expectation of the consumer the company uses market survey and analyses the new product launched in the market by the competitors.

**Customer Participation via Social Media for New Product Development-** Company A uses social media only for marketing communication and for creating brand awareness among consumers.

Social media is not used very actively by Company A for NPD process. When asked the reasons for not using social media the company pointed challenges such as control on content, physical meeting being more effective than virtual presence, security concerns and delay in product development process. However, company A confirmed that in case any comments are received on social media pages they are

analyzed. In case, the company finds negative comments or feedback about their product on social media platforms the root causes of the problem areas are identified and monitored.

When asked whether social media is a good medium to interact with customer for NPD, Company A responded positively. According to Company A, the use of social media can help in understanding the needs of the customer in better manner, develop innovative products, create new designs for example attractive packaging etc. and can increase the success rate of the product. Company A also feels that customer inputs cannot be always welcomed as this can lower NPD effectiveness and may lead to delayed product launch in the market.

#### **4.1.2 Company B**

**Background Information-**Company B started in 1995 and is involved in procuring cow milk from the farmers and producing superior products utilizing world class production facilities. The main products are processed cheese, dairy whitener, butter, Yogurt, UHT Milk Products, UHT Juices etc. Producing quality products is the core value behind the success of this company. The company is a multinational player and has 700 plus employees in India.

**New Product Development Process and Customer Participation -** Company B follows a formal NPD process which starts with new product concept/idea followed by product trial, commercial trial and launch of new product. The company does not integrate customers in NPD process and do not see any potential of integrating customers in near future also. The respondent felt that customer inputs can be used in Idea generation, concept testing and commercialization stages of NPD but was skeptical about the extent to which customers should be involved. Company B responded positively with respect to relationship between innovation and customer involvement in NPD.

**Customer Participation via Social Media for New Product development-**Company B feels that social media can provide better insight of the customer needs and requirement as social media has been increasingly looked as reasonable and acceptable source of information by consumers. Social media platforms are easy and convenient to use and can increase the success rate of the product. Company B does not use social media in order to interact with customer for NPD. When asked whether the comments received on social media platform are analyzed, the respondent answered positively but feels that most of the time consumer comments are in form of consumer complaints which hamper the brand image of the company. Also, as discussed by the firm the comments on social media are not the true representation of the consumer groups and security and safety of these platforms are big concerns areas for the company. Also, interaction with the consumer can be

detrimental to firm's competitiveness and involve risk for both firms and consumers. The respondents also feel that customer inputs can lower NPD effectiveness.

#### 4.1.3 Company C

**Background Information-** Company C was established in the year 1959. It is a pioneer in Indian beverage industry and has more than 5000 employees. The company has few memorable brands to its credit and has presence in more than 50 countries. Through its network of 1.5 million outlets it is present in every part of India.

**New Product Development Process and Customer Participation -**Company C has a formal NPD process. The steps include stages of Idea generation, Raw Material Selection, Product Formulation, Pilot Production, Commercial Production and Launch of the product. The company integrates and promotes participation of customers at various stages of NPD process and feels high potential of integrating customers at idea generation, concept testing and commercialization stages of NPD. The company seeks advice/inputs via SMS (short message service) and social media and use both monetary and non-monetary incentives in order to motivate customers interaction through the platforms. The company strongly believes that customer involvement leads to innovation.

**Customer Participation via Social Media for New Product Development-** Social media is used by Company C for customer participation and integration for NPD processes specially in Idea generation and concept testing stages of NPD. The company believes that social media is a worthy medium to interact with its customer. Social media is also actively used by company C for the purpose of marketing communication, market research, Brand Management and relationship building through enhanced customer participation. The main benefits of social media as highlighted by the company are: reach to target audience at low cost and within short period of time, better insight about customer requirement, genuine source of information for customers, more acceptance and better success rates of new products and convenient product testing. Company C is present in all major social media platforms and analyses the feedback received in these platforms. In case they receive any negative feedback or complain they try to contact the customer and attempt to solve the query/complain or justify the failure with proper technical reasoning. Company C feels that customer inputs can never be detrimental for the whole NPD process and enhances the effectiveness of NPD process. However, the company needs to be active and innovative in social media platforms which sometimes become challenging and time consuming.

#### 4.1.4 Company D

**Background Information-** Company D is a national player of household care products in Indian market. Since its inception in 1995 it has introduced innovative house cleaning products in Indian market. The company has around 225 employees. The company's main focus is to provide quality product at an affordable prices to its customers.

**New Product Development Process and Customer Integration-**Company D has a formal NPD process. The process includes Market Research, Product Idea generation, Product development and testing, Production and Product Launch. The company sees Idea generation and product development stages as high potential stages to integrate customers and actively arranges meetings and events to engage customers with their company. The company also uses SMS, E-mails and phone calls to interact with its customer and give incentive in monetary as well as non-monetary form for their participation. The respondent also believes that customer involvement leads to innovation in NPD process.

**Customer Participation via Social Media for New Product Development-** Company D rarely uses social media for market research and to get inputs for NPD process but believes that social media is a good medium to interact with customers and brings visibility to the products offered by the company. The main benefits of social media as highlighted by the Company D are better insight about customer requirement, honest source of information for customers, high social interaction and better relationship building, more acceptance and better success rates of new products. The company analyses the feedback received from social media platform but respondents were reluctant to mention the steps or remedy taken to counter negative comments on these platforms. Company D also believes that too many inputs sometimes affect the development work of the new product and in such cases consumer's inputs are detrimental to NPD process. When asked for the reasons for non-usage of social media the company highlighted challenges such as difficulty in understanding financial gains, lack of foresight, customer inaccurate knowledge related to product development process and security and safety of virtual platforms and information related to new product discussed in these platforms.

#### 4.1.5 Company E

**Background Information-** Company E is a national player in ready to cook spice mix. It started its operation in the year 1999 and has more than 250 employees. The company aspires to set new quality standards in food industry and tries to proactively respond to the changing needs of its customers.

**New Product Development Process and Customer Participation -** Company E follows a formal NPD process which starts with idea generation and includes stages

concept development, market analysis, prototype development, prototype testing, pilot trials, scale-up trials, commercial launch and post-launch study. The company does not invite customer participation in NPD process but sees a potential of integrating customers in product development stage of NPD process. Company E largely uses human interface to interact with their customers and is skeptical about the relationship between innovation and customer's involvement in NPD process.

**Customer Participation via Social Media for New Product Development-** Company E rarely uses social media for customer interaction and also believes that social media is not a good medium to interact with customers. Social media is used by Company E to spread brand awareness. Negative comments if any are checked for their gravity and then corrective actions are taken to satisfy the customers. Also, the company feels that the comments/ inputs posted by people in most of the cases are not feasible from company point of view and are not the true representation of the target population. Therefore, the company feels that too much engagement of customer in NPD process is detrimental and can lower NPD effectiveness. The company is skeptical about the positive relationship with the new customers on such virtual platforms and shows resistance to adopt new models and practices related to social media. The inability to quantify financial returns of social media engagement was also one of the hindrances faced by Company E.

#### 4.2 Summary of Findings-

Table -1 presents the summary of finding.

**Table 1: Summary of the findings**

Company	FMCG Product Category	Scale of Operation	Total no. of Employees	Formal NPD Process	Customer Integration in NPD	Customer involvement leads to innovation	Using Social Media for NPD	Using Social Media for Marketing Communication	Too much inputs by the customer can lower NPD effectiveness.	Stages with highest potential (in future) of integrating customers
A	Food & Beverages	National	800	No	No	Yes	No	Yes	Yes	Commercialisation
B	Food & Beverages	Multinational	2000-4000	Yes	No	Yes	No	Minor extent	Yes	Idea Generation, Concept Testing, Commercialisation
C	Food & Beverages	Multinational	2000+	Yes	Yes	Yes	Yes	Yes	No	Idea Generation, Concept Testing, Commercialisation
D	Household Care	National	25+	Yes	Yes	Yes	No	Minor extent	Yes	Identifying Product Development
E	Food & Beverages	National	250	Yes	No	Doubtful	No	Minor extent	Yes	Product Development (Minor Extent)

The following section presents analysis of empirical data gathered in terms of usage of social media in product development process and challenges faced by the firm as discussed during the interviews.

### 5.1 Current usage of social media in product development process

The empirical data collected reveals that most of the companies (four out of five) covered in the present study belongs to food and beverages category of FMGC category. Company B, C, D and E follows a formal NPD process while in case of company A the process is informal and has a strong connect to sales team of the company and their inputs. Companies A, B and E do not integrate customers in NPD process while Company C and D engages customer in NPD. Except Company E all the companies believe that customer involvement can lead to innovation in one way or the other however all of them were not able to justify their answers clearly.

Company C was only one company which was using Social Media for NPD and was very positive about the usage and benefits of various social media platforms. Most of the companies were present on social media platforms but were using social media as a tool for marketing communication and not as a tool to create products for consumers. Company A, B, D and E also firmly believe that too many inputs from the customer can be detrimental for the NPD process and can lower the effectiveness of the overall process. Also, concerns related to quality of inputs on social media platforms were raised by most of the companies under study. Company C was very positive regarding the use of social media and was of the opinion that social media provides a platform to get an insight into the mind of the consumers and provides valuable inputs to the companies regarding their consumers.

As discussed in the available literature customer's role differs with the different stages of product development (Nambisan, 2002). While analyzing the empirical data the researchers were not able to figure out clear stages where customer interaction is possible and more effective. The companies which were interviewed have their own description of stages of product development and thus concluding on few stages was not possible for the researchers. During discussions, most of the companies agreed that customers can play an important role during idea generation, concept testing and commercialization stages of the new product development process. However, the present usage of social media for customer participation in NPD was only minor in nature and that too mostly as a tool for marketing communication.

Thus, as is evident from empirical study most of the companies were not using social media in NPD process. Also, when asked for the reasons of non-usage of social media, most of them discussed challenges related to the usage of social media and customer participation in product development which are discussed in next section.

## 5.2 Challenges allied to customer interaction and usage of social media in NPD process

Customer Interaction via social media for NPD process brings many benefits for the firm. However, there are many challenges associated with the usage of social media as well as participation of customers. Table 2 summarizes the challenges associated with the use of social media in NPD as well as challenges faced by the firms as a result of customer interaction and participation in NPD process as discussed in past literature and the firms who empirically confirm these challenges.

Table 2: Summary of challenges discussed in literature and confirmed empirically

Challenges as discussed in literature	Description of the challenge	Confirmed Empirically
<b>5.2.1 Challenges related to usage of Social media</b>		
Active participation of firms is vital in social media platforms (Kaplan & Haenlein, 2010).	In order to develop relationship firms needs to share content which is fresh and which can enhance customer participation.	Company C
Control on content is not possible (Kaplan & Haenlein, 2010).	The content is not only generated by firms but also by the users. Thus, controlling the user generated content (UGC) is not possible.	Company A , B, E
Physical meetings are better relationship builders (Angard & Hillerstrom, 2012).	The power of physical meetings cannot be underestimated as it provides better ways to understand customers and gives human touch to the entire communication process.	Company A , E
Different types of risk are associated with the usage of social media (Haynes & Robinson, 2015).	Users are exposed to variety of risk categories such as social, occupational, personal etc. when they use social media and related platforms.	Company B, D
Time consuming (Kietzmann et al., 2011).	The firm has to constantly chase the information related to social media activity which is time consuming.	Company C
Understanding financial gains (Kärkkäinen et al., 2010).	The financial outcomes are difficult to quantify.	Company D, E
Adoption of new mental models and practices (Kärkkäinen et al., 2010).	The usage of social media requires adoption of new mental models and practices. This may be quite challenging as people resist to change.	Company E



<b>5.2.2 Challenges related to Customer Participation (CP)</b>		
Customer participation may not affect or may even damage the relationship with customers who have not had a special prior connection with the firm (Chang & Taylor, 2016).	Customer Participation has a positive effect on relationship when the company has a prior relationship with the customer. However, in case of new customers CP may have no affect or negative affect on relationship between customer and firm.	Company E
Customers are often unable to accurately describe their ideas or wishes for new product in written or oral form (Geise,2017; Piller& Walcher,2006).	Customers can give need related information but this information may be incomplete, vague and ambiguous and may not be very useful for the firm.	Company D
Customer lacks foresight (Wind & Mahajan, 1997).	Customers do not understand their needs well and thus lack foresight for new product and services.	Company D
Customer inputs can be detrimental and can lower NPD effectiveness (Nambisan, 2002).	Too much customer input in the product conceptualization and design phase can be inimical and can lower the effectiveness of NPD process.	Company A , B, D, E
Detrimental to the firm's market competitiveness (Nambisan, 2002).	Detrimental to the firms market competitiveness as secret information related to new product may be revealed to the firm's competitors.	Company B,D
<b>5.2.3 Challenges related to Customer Participation via social media in NPD</b>		
Delay in product development process(Nambisan,2002).	Product development can be delayed due to uncertainties from the part of consumers.	Company A
Not voice of all customers included (Nambisan,2002).	Only those customers comments/feedback/suggestions are inculcated who are active on online platform. These customers only represent small strata of customer's population.	Company B, E
Security and Transparency needs to be define carefully (Nambisan, 2002).	While using online platforms, security and transparency needs to be defined carefully.	Company A,B, D

## 6. Conclusion

Social Media is the new buzz word for the business firms. Presence in these platforms has become imperative in today's highly connected world. Without social media presence, a firm loses an important touch point to interact with its present and future customers (Coelho, 2017). Studies have also associated the effective utilization of social media with the success of firms doing business (Medina &



Pereira, 2012). The present study focuses on two important research questions-How and Why related to the usage of social media in NPD process by FMCG companies in India.

In terms of how social media is used in NPD we can conclude that firms are not using social media at all. As is revealed by the present study only one of the five companies interviewed has confirmed social media usage in NPD process. Also, despite the fact that many researcher has acknowledge social media as a captivating and fascinating platform for customer interaction most of the firms under study were using these platforms as a marketing communication tool to the minor extend only. We can thus conclude, that social media was not given high precedence in the cases under this study.

The second research question why initially focuses on why social media was used by the firms? But in the later part of the study the question was attuned to why social media is not used by the firms for customer participation in NPD process. The firms under study listed a number of challenges which were related to the usage of social media, challenges related to customer participation and challenges related to customer participation via social media for NPD. The three important challenges which compel companies not to use social media are (i) Control on content on social media platforms, as user also can generate content. (ii) Customer inputs which can be detrimental and can lower NPD effectiveness and (iii) Security concerns.

To conclude, we can summarize that despite social media provides a wonderful platform for customer participation its usage is very limited by the cases under study. Most of the firms are aware of benefits of such virtual platforms and also see potential of using these platforms in near future. However, the firms are sceptical about the integration of social media platforms in present organization structures because of the challenges associated with its usage. Challenges related to quantifying financial gains were not explicitly expressed by most of the firms but implicitly was one of the concern areas among all the cases under study.

## **7. Limitation and Future research suggestions**

The present study was undertaken taking into account five FMCG companies operating in India. The study was qualitative in nature and aims to understand the situation comprehensively. However, the study has certain limitations. The study was confined to five companies which may not be considered as true representation of the entire FMCG firms operating and doing business in India. Thus, the findings of the study cannot be generalised and has to be seen in light of specific context and setting. The study involves certain specific cases and their comparison which makes it difficult to replicate by any other researcher. Researcher biasness can also act as a limiting factor for this research.

The present study can be done by the researchers in any other geographical area. There is a potential to undertake the same study by the prospective researchers using different industries as their sample in order to discover the usage of social media in NPD process. Further, this research provides avenues for exploring how social media can be inculcated in organization structure and used in NPD processes

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## A STUDY OF GROWING POPULARITY AND HINDRANCES IN THE IMPLEMENTATION OF E-LEARNING IN HIGHER EDUCATION

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### **ABSTRACT :**

*Technology has played a significant role in the education sector; it facilitates equal access of education to all stakeholders. E-learning is an expanding concept of training and development which has enhanced the scope, reachability and accessibility of learning opportunities for all. E-learning means a form of learning which use electronic media or internet to deliver valuable learning experience. E-learning in higher education provides students extra knowledge and enables them to do research which helps to broaden their horizons. Thus, it has become an indispensable tool for accessing unlimited knowledge available from around the world. On the contrary, a number of barriers are also present which cause hindrance in its proper utilization. The researcher has termed these variables as enablers and barriers. Through, this study the researcher has focused on identification of these enablers that encourage e-learning and barriers that create difficulty in the successful implementation of e-learning. The researcher has studied data available on secondary sources and conducted focus group to understand these variables. The study will be useful to policy makers, academicians in understanding the requirements for successful implementation of E-learning in higher education.*

**Keywords:** *E-learning, higher education, enablers, barriers.*

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### **1) Introduction**

#### **1.1) E-learning**

The swift advancement in information technology has steered the way for its adoption in education and has become e-learning. Various digital courses have been incorporated in the curriculum and books in the digital form have been made available to the students thus increasing the availability of resources. (Kuo, Chen, Hwang, & Chen, 2015). The landscape of e-learning is constantly evolving. Many educational institutions and universities are redefining the way the education is being imparted and this has led to an overwhelming response towards adoption of electronic learning or e-learning in the curriculum of various institutions, thus opening exciting and new opportunities for learning. Thus, e-learning can be defined



as “instructional content or learning experience delivered or enabled by electronic technologies” (Wagner, Hassanein, & Head, 2008).

Thus it can contain the use of internet, computers, mobile devices, videos and various new upcoming innovations for better delivery of useful content to students. The recent developments in the education system also pose as a challenge for the institutions who are trying to implement it (Barajas, & Owen, 2000). The growth of e-learning is not curtailed just to the online courses but also extends to any other material which is provided with the help of technology (Bell, & Federman, 2013). To make learning more enjoyable, new concepts such as edutainment are coming up to give “real-world” experience (Mesfin, Ghinea, Gronli, & Hwang, 2018).

### **1.2) Higher education & developments in e-learning**

Higher education is generally the undergraduate and post-graduate courses after schools and provides a degree to the student on completion of it. It provides the students adequate skills on which their career depends. Thus it becomes an important part of shaping the personality of the students and has the most applicability of e-learning as at that stage a student has to be prepared for the life and thus gaining knowledge from sources other than the books is necessary.

Various developments have taken place in the e-learning scenario in higher education. At this age mobile phones and e-readers become a part of life for the students and their use and ability to gain access to study material is commendable. These devices also provide access to various smart tools such as dictionary, text-to-speech, and research activities supported by Google, makes an overall atmosphere conducive for extra learning (Hwang, Liu, Chen, Huang, & Li, 2015). In today's world, new applications and software's are also available which can be downloaded for providing extra classes on various subjects and the concept of personal learning environment where a learner can learn according to his/her abilities is growing at a rapid pace. Personal learning environments are tailored according to the need of the learner and provides content delivery based on the pace of the learner (Harmelen, 2006).

### **1.3) Objectives of the Study:**

- 1) To study the role of e-learning in providing additional knowledge to higher education students.
- 2) To study the hindrances in the effective implementation of e-learning in higher education.



## 2) Theoretical Background:

**2.1) Enablers of e-learning in higher education:** Enablers are the factors which help in the implementation of e-learning and provides opportunities for the students to learn more and improve their knowledge which is not just restricted to the syllabus taught in classrooms.

**2.1.1) Artificial intelligence and internet:** Artificial intelligence is the invention of a computer software which possess human intelligence and is able to perform simple tasks such as visual perception, speech recognition, translation between languages (Cheka, 2017). With the advent of internet the availability of information has become simple and effortless, thus it is the backbone of e-learning system as without it the accessibility of knowledge to masses would have been a herculean task and also knowledge sharing among students would not have facilitated to such an extent. The artificial intelligence has led to production of systems which help in the easy access of required information on the internet such as electronic books and research material through mobile devices where one can assess it at their convenience (Spector 2013).

**2.1.2) Policies and Culture:** The strictness or leniency in a policy is a major barrier or an enabler and the way the policies are designed, culture plays an important role in the perceived utility and the formation of policies which further directs the behavior of the students. So if a university decides to be more liberal and encourage their students to pursue MOOC courses from foreign universities to gain extra certification will automatically lead to a mindset towards achieving more and indulging in research work (Cheka, 2017). But these policies are made by the management of the university and they also have to take into account the culture of their university. If the culture is more liberal, the proliferation of e-learning will take place (Ardichvili, 2008).

**2.1.3) Supporting tools:** The online learning systems and learning communities have been conceptualized as an interaction among humans and technological software's which is dynamic in nature (Ardichvili, 2008). Such systems which help in this interaction in higher education are known as learning management systems and is used by various universities to facilitate content management and attendance records as it can be accessed anywhere over the cloud. This system has seen rapid advancement and adoption while improving the compatibility and making learning management a simpler task with its storage capacity (Black, Beck, Dawson, Jinks, DiPietro, 2007). The availability of proper infrastructure such as computers provides a plethora of learning opportunities through distant learning and online courses. Virtual learning environment (VLE's) genuinely facilitates e-learning experience of the students as they provides complete infrastructure for not only the students but also for

the teachers as they also grow their knowledge by using VLE's for teaching purposes (Barajas, & Owen, 2000).

**2.2) Barriers to e-learning in higher education:** The factors which make the adoption of e-learning difficult are the barriers. These factors curtail the uses of e-learning in one's academic life.

**2.2.1) Assessment of the learning of the students:** Evaluation is an important part of learning process which indicates about how much the student has been able to grasp the learnings. E-learning platforms uses various different methods for evaluation of students such as MCQ tests, intellectual reasoning, etc. and students can attend these tests at any point of time and they mostly do in the absence of teacher, as it can lead to malpractices such as cheating, that is searching for the answers from the internet. Thus it of utmost urgency that the accountability of the students is raised but the focus should be on improved learning (Spector, 2013).

**2.2.2) Culture of the institution:** Sometimes the culture is so strict that people don't want to adapt to change. Hofstede's uncertainty avoidance model explains this practice that in countries with high uncertainty avoidance index, people don't appreciate change and like to follow the same old traditions. Similarly while adjusting to technology both students and teachers are non-adaptive and this leads to lack of flexibility towards accepting e-learning as a mode of teaching as well as learning. People also don't want to change because they see it as negative and as extra work without thinking much about the usefulness (Kumar, & Artemi, 2010). The institutes sometimes don't want to change because of additional costs which they will have to incur for the training and the infrastructure.

**2.2.3) Communication and outcomes:** In most of the e-learning materials, except virtual classrooms and webinars, there is lack of interaction between teacher and students which is a key hindrance to its effectiveness as students tend to lose their focus while just listening to the study material instead of an active communication. Such concerns are raised when students are unable to find answers to their questions which is not the case with the traditional classroom learning as teachers can resolve the doubts of the students. Thus when students are unable to clarify their doubts, they lose their focus and the basis of e-learning fails, that is to enhance the knowledge (Cole, & Timmerman, 2015).

### **3) Research Methodology:**

The researcher has gathered his research material from secondary sources such as Jstor, Google Scholar, Scopus, Emerald and Ebsco. The researcher has also conducted a focus group interview to understand the enablers and barriers. The

questions were answered by the students based on their own experiences with e-learning methodologies. The responses were recorded and carefully monitored(Refer to 7) Annexure).

#### **4) Findings and Discussion**

Question 1) Would you prefer to do online courses even if your university/college is indifferent towards you doing it?

9 students told that they would definitely go for online courses even if their college does not support them. Also, the motivation level would be higher as they have chosen the course by themselves and the topic also interests them. They also told that since they are not being graded on it by their college there would not be any pressure on them and to gain extra knowledge they would definitely go for the online courses. But also a main point was reported that the inclination should be there from the college towards e-learning but the choice of course should be left upon the students as then the outcome of the courses would be better, thus validating the point of Cheka, 2017.

Question 2) How should the assessment of online courses be designed to prevent malpractices?

7 students reacted positively that sometime or the other they have been indulged in malpractices such as cheating in the online courses as the college forces it upon them as the certification is required by the professor's for grading and when they lack time they switch to searching for answers from google (Spector, 2013). Students told that if they are not graded by the faculty and when they do it themselves for additional learning, they would not indulge in malpractices as they will be cheating themselves at that point. Students suggested that it can be prevented by adding trackers to the website, so that they cannot change their tab while giving the assessments to make it more reliable.

Question 3) Have you ever faced difficulty in resolving your doubts in online courses? How would you remove such a communication barrier?

10 students had an affirmative stand saying that they have had problems in resolving their doubts in the online MOOC courses (Cole, & Timmerman, 2015). Students were of the opinion that to remove such a barrier, the website can create a forum for the people taking that course can resolve each other's doubts and live sessions with the tutor of the course and if the mail id or the phone number of the tutor be provided, it can aid them in their doubt clarification process. Very few websites provide these forum's and one such website is Coursera, which helps you to learn with other people taking that course. Thus, it should be incorporated in other websites as well.

Question 4) What blend of e-learning and traditional classroom learning would you prefer:

1. 100% E-learning and 0% Traditional classroom learning
2. 80% E-learning and 20% Traditional classroom learning
3. 60% E-learning and 40% Traditional classroom learning
4. 40% E-learning and 60% Traditional classroom learning
5. 20% E-learning and 80% Traditional classroom learning
6. 0% E-learning and 100% Traditional classroom learning.

In this question the 11 students were asked about how much of each sphere of learning they would prefer to be incorporated into their curriculum. The responses were such as:

1. 9% students preferred 100% E-learning and 0% classroom learning
2. 0% students preferred 80% E-learning and 20% classroom learning
3. 18% students preferred 60% E-learning and 40% classroom learning
4. 55% students preferred 40% E-learning and 60% classroom learning
5. 18% students preferred 20% E-learning and 80% classroom learning
6. 0% students preferred 0% E-learning and 100% classroom learning

The same data has been shown with the help of a pie chart below:

80% and 0% E-learning slots value is zero hence is not shown in the pie chart.

The researcher has focused on both secondary and primary sources of data in this paper.

#### **4.1) Conclusion:**

To suffice the need of various students, e-learning implementation should be based upon the requirement of students to have the assurance of efficient utilization of the resources provided to them, as the liberty to choose on their own the type of courses or virtual classroom lectures, would help them to be motivated, and focused in their pursuits of knowledge. The data collected can be used to implement the e-learning solutions more efficiently so that students are able to learn more instead of being deceptive. E-learning has become a popular concept in many universities and with the advancement of technology, the software development should be such that it provides memorable learning experience and also should result in fairness in assessments. Thus, e-learning has opened new horizons to explore but can be improved by removing the barriers for a more productive learning.

**5) Limitations and Scope for further research:**

The study has various limitations and scope for further research as the participants in focus group study were limited and all belonged to first year. It can also be different for students pursuing different degrees and graduates might have a different experience than undergraduates. The questions were based on online MOOC courses but didn't venture into other categories of e-learning because of the limited experience. The secondary sources include journal, articles and other web-based resources but books were not used for reference.

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#### 7) Annexure:

Question1) Would you prefer to do online courses even if your university/college is indifferent towards you doing it?

Question 2) How should the assessment of online courses be designed to prevent malpractices?

Question 3) Have you ever faced difficulty in resolving your doubts in online courses? How would you remove such a communication barrier?

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