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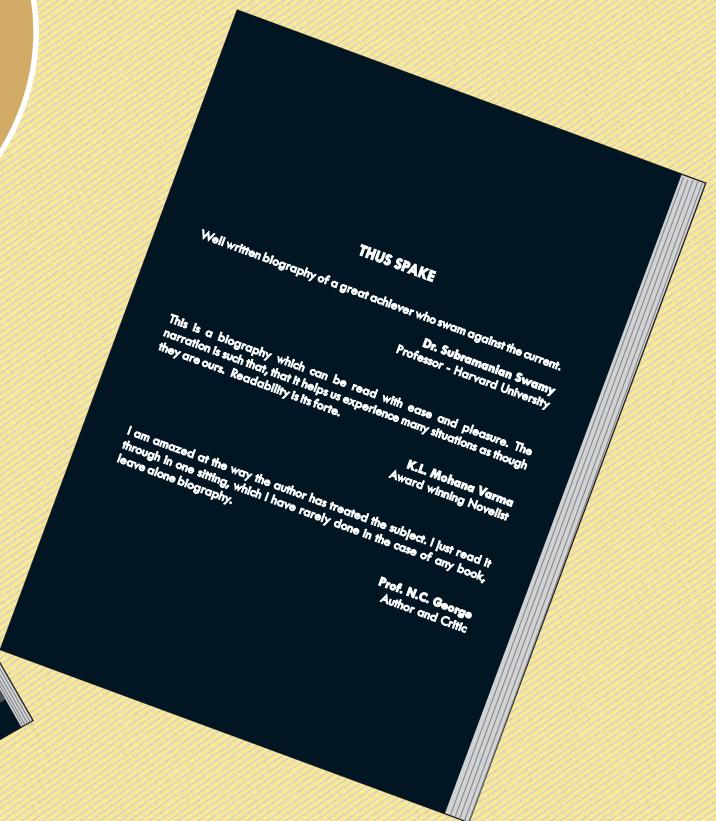
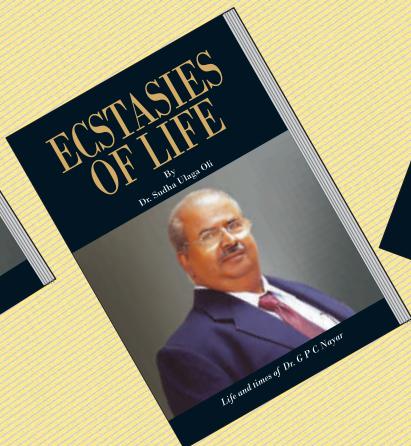
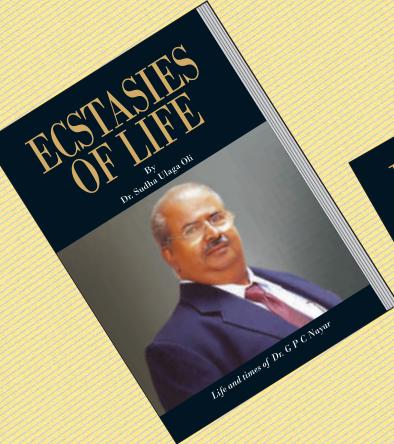
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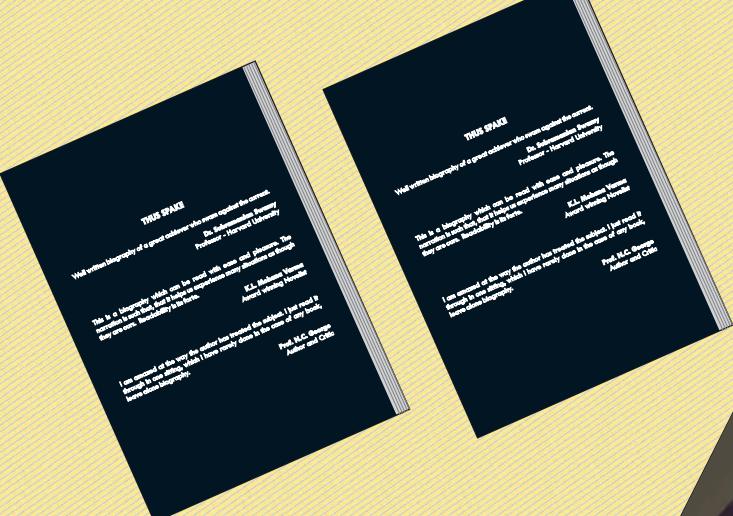
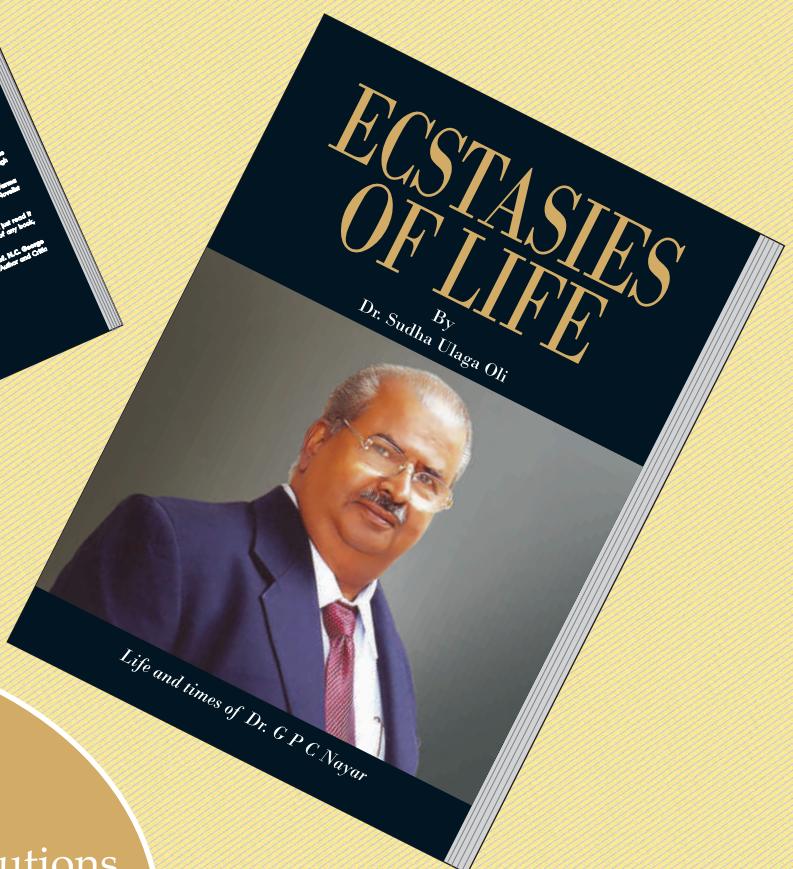
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Here's an entrepreneur  
who has created  
some excellent academic institutions  
in an unfriendly environment.  
It is a saga of trials and tribulations  
in an extremely readable manner  
by a consummate  
writer in English.



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## Chairman's Overview

According to the latest Deloitte study on economic outlook of Latin America, an international economic environment long favorable to the region is fading. In order to avoid the risk of stagnation due to low growth, it has become necessary for the region to design and implement a growth strategy based on increased productivity. Since economic stagnation in developing countries can create the conditions for political and social instability, a strategy for systematic improvement in productivity is required to ensure a path to steady growth for the region.

However, there is also a silver lining in the situation that despite the recent slowdown in growth, the region's economic fundamentals and social conditions remain solid.

Our lead article in this issue - a comparative study of economic experiences in Ecuador, Colombia, and Venezuela, which were once part of Gran Colombia - examines the challenges and opportunities for the three economies under study.

Financial inclusion and financial deepening have an important role to play in promoting economic growth and reducing poverty and inequality, while maintaining financial stability. We bring to you the second lead article, a case study on financial literacy among farmers.

Till date, research in behavioral finance has been sparse and sporadic. A better understanding on behavioral processes is essential for the investment advisors and financial planners to appreciate the way Indian investors respond to market movements. We present to you our third lead article, a survey of individual investors' behavior in North India.

In addition, the issue carries a number of learned articles on a variety of topics such as airport passengers' needs, investors' preferences, employee perception on e-HRM, retention of Gen Y employees, gender difference in investment behavior, et al.

I am confident that this issue will be truly informative and educative to our readers.

**Dr. G. P. C. NAYAR**  
**Chairman, SCMS Group of Educational Institutions.**

# SCMS Journal of Indian Management

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## Editorial



### Setting direction, Creating alignment, and Gaining commitment

Effective leadership, to John Ryan formerly the Chancellor of the State University of New York, involves three key components: setting direction, creating alignment, and gaining commitment. It's important that leaders set a direction and they encourage people to follow in that direction. The best people do it well and others not so well. What people most want in a leader is someone who is authentic, who they trust. People now are educated and intelligent and well-read and they see through people who are/or may be as genuine as they should be. Authentic leaders start with the courage of their convictions – they are not holding polls or taking surveys. They obviously listen to people's news and integrate

them but they also have to get the vision and the direction. They have to understand what direction this particular organization needs to go in.

Creative leadership involves people thinking beyond the boundaries that limit individuals and organizations and if you think about that it extends beyond the typical skills that are associated with routine leadership. Business schools teach people how to analyze data, coach employees, even projects. We try to go beyond that and teach people how to be innovative. And we do that through three elements: assessment, challenge and support.

Advancing Global Leadership is the thinking and emphasis behind this new initiative. People who are involved in global leadership positions are today facing greater complaints in their roles, whether it is at the mid-level or higher level in their organizations. They need to perceive new situations they face, culturally as well as organizationally, with the people they interact with and they have to adapt their leadership style accordingly.

Leadership potential is a “muscle” that needs exercise to develop. What is the best sort of exercise? First of all, one has to commit to it. One can't be a leader if he/she is not going to work at it, practice it. You don't become good football players unless you practise and you don't become a good leader unless you practise. The best way to become a leader is a yearning to become one, to read about it, look for a mentor or a coach, go to a programme and practise those skills. Behaviours are very important in becoming a leader.

Eleanor Roosevelt was born into a wealthy family but was orphaned when she was ten and had a terrible childhood. She became the person who started the Civil Rights Movement and the Women's Right Movement. She had tremendous compassion for the poor. She helped the entire world. She was chair of the UN Committee that drafted the Universal Declaration of Human Rights. Most important she did not take public opinion polls to see what she thought was right.

Mahatma Gandhi practised what he preached at every possible level. He treated others with great concern. In his letters and writings to others to the world and even to young children, never had a patronizing or “holier than thou” element, and always looked at everyone as equals. More importantly though was his ability to articulate a vision in a language that they understood and were inspired by.

**Dr. D. Radhakrishnan Nair**

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# Kuznets' Hexa Characteristics: Economic Development Comparatistics

Dominica Mades and Kishore G. Kulkarni

## A b s t r a c t

*The paper examines how Kuznets' Six Characteristics of Economic Development have evolved in Ecuador, Colombia, and Venezuela, once part of Gran Colombia. It explains these six characteristics of economic development which are: high growth rate of per capita income, which is GDP/population, high growth rates in Total Factor Productivity (TFP), which looks at the means of production such as capital, enterprise, land, and labor, higher growth rate of structural transformation, or the move away from the agricultural sector, high rates of social, political, and ideological transformation in the economy, which means the political changes, ability or propensity (tendency) to reach out to external markets and opportunities, or participation in international trade, and economic growth leads to higher equal distribution of income, or equal international distribution. Ecuador, Colombia, and Venezuela are examined according to Kuznets' Six Characteristics of Economic Development, in order to understand how the economic growth has progressed. For instance, comparing the political changes under Correa in Ecuador and Chavez in Venezuela, or looking at how Colombia has increased its international trade. All six of these characteristics have played a role in economic growth in them, to better understand if there could be a relationship due to the similar characteristics of the countries.*

**Key Words :** Kuznets' Hexa Characteristics, Total factor Productivity, Economic Development Comparatistics



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Economic development across the globe is often related to the countries' locations, history, and cultural similarities. For instance, during the 1800s, many Spanish colonies in Central and South America began to fight for their independence including Gran Colombia. Today, the former Gran Colombia makes up modern day Colombia, Ecuador, and Venezuela. While these countries were once one country, they have since separated, creating their own individual history, culture, and economy. However, there are ties between these countries, which could have an effect on all three economies. The purpose of this paper is to look at how Kuznets' Six Characteristics of Economic Development have shown themselves in Ecuador, Colombia, and Venezuela and also, compare how the economic development has taken place.

Before beginning the main focus of this paper, it is important to have background knowledge on each country, Kuznets himself, and each Six Characteristics of Economic Development. With this information, one can fully

understand the importance of the Six Characteristics, which go beyond economics but also into politics ad location, but how each country has developed in a similar fashion but yet with slight differences.

To begin, Ecuador has become a popular tourist location due to the Galapagos Islands and the adventure activities in the Amazon region, but this country was once part of Gran Colombia. Ecuador was in the northern region of the Incan Empire before the Incas were conquered by the Spanish Empire in 1533. But once Gran Colombia gained its independence; it became part of a different state again. Yet, Gran Colombia separated as a young country, and Ecuador was formed in 1830. Yet life after the country came to be has not been easy, as Ecuador has been plagued with conflicts with neighboring countries and international political instability, such as protests before the last four elections. Currently, the president is Rafael Correa, who has become a controversial figure nationally and internationally due to changing the constitution and putting limitations on freedom of speech, but he remains popular with many citizens because of increased social services. The population in Ecuador is mainly mestizo, which is a mix of white and indigenous heritage, along with indigenous, white, and Afro-Ecuadorian. And the economy is primarily based on petroleum exports. Yet, Ecuador suffered a financial crisis, in which the GDP dropped and poverty increased significantly, which led to Ecuador switching to the US dollar from the Sucre in 2000, this stabilized the economy with oil exports and non-traditional exports. While Ecuador is on its way to stability, but there is need to increase the economic development that is occurring.

Directly to the north of Ecuador is Colombia, which was also part of Gran Colombia during its existence. Similar to Ecuador, Colombia has not had the easiest time establishing itself. For nearly fifty years, conflict has plagued the country, as the Revolutionary Armed Forces of Colombia (FARC) and the government have been at constant conflict with each other. The war that plagues the country is primarily located in the southern part of Colombia; it has been funded by the well-known drug trade. As the conflict has progressed over time, both sides agreed to meet for peace negotiations in 2012, which resulted in 31,000 persons being demilitarized. However, many of these persons formed insurgent groups, which have attacked civilians, but there is a lack of support to overthrow the government. Despite problems with the

FARC, Colombia has had peaceful and transparent transitions of power and maintains civil liberties for its citizens. The population in Colombia is made up of mestizos, which is followed by white and mulatto, a mix of black and white heritage. The Colombian economy is based on energy and mining exports, despite the common belief that coffee is the main source of income. Due to these main exports, the economy is affected by commodity prices and political instability.

The last country to emerge from Gran Colombia is Venezuela, which has come under international scrutiny due to Hugo Chavez's political dealings. Unlike Ecuador and Colombia whose histories have involved political violence, Venezuela's transitions of power have tended to be peaceful. The political system was first controlled by generous military men, and democratic elections began in 1959, in which Hugo Chavez was elected in 1999. Chavez has become known for his promotion of socialism and speaking out against the importance of capitalism in globalization. Poverty has been on the decline since Chavez came to power and there has been an increase in government spending on education and health care. However, despite the peaceful elections, there are major concerns about Venezuela, such as democratic stability due to the fact that Nicholas Maduro was hand selected to be the next president by Chavez and also the possibility of Dutch Disease due to the over dependency on petroleum. The majority of the population is made up of people of European descendants and indigenous populations. And 95% of the economy is based in oil revenues, but this is affected by the influxes in oil prices, such as the economic contraction in 2009-2010.

The background information on these three countries is important to understand how development has affected each one differently, it is also crucial to know about Simon Kuznets, who developed the Six Characteristics of Development. Kuznets is an important economist for developing countries (LDCs), who was awarded the Nobel Prize in Economics for his work focusing on the economic systems in developing countries (Schommer, 347). He was born on April 30, 1901 in Kharkov, Ukraine, but immigrated to the USA in 1922 (Schommer, 347). While he was living in the United States, Kuznets attended Columbia University, where he got his PhD in 1926 (Schommer, 347). He eventually went on to work for the US Federal Government (Schommer, 347); during this time he helped the US Department of

Commerce standardize the Gross National Product (GNP) as a measure of economic well-being (*Concise Encyclopedia*). And he studied the U.S. national income and the patterns of economic growth in nations (Schommer, 347). During his life, Kuznets was a professor at the University of Pennsylvania, Johns Hopkins University, and Harvard (Schommer, 347).

During his life, Kuznets worked on a number of different areas within economics, especially for developing countries in an attempt to explain the differences in development. For instance, he looked at the complexity of fundamental economic data by stressing reliable results can only be derived through large numbers of observations (Schommer, 347). He also calculated national income back to 1869 and measured distribution of income between rich and poor countries (*Concise Encyclopedia*). Additionally, he believed that economic data is dependent on population, structure, technology, quality of labor, government structure, trade, and markets (Schommer, 347). Although he was not the first to build such economic data but Kuznets set the standard with his thorough practice (*Concise Encyclopedia*). For this particular paper the focus will be on the Six Characteristics of Economic Development, which qualifies how countries obtain higher levels of economic development, which are:

- *High growth rate of per capita income*
- *High growth rates in Total Factor Productivity (TFP)*
- *Higher growth rate of structural transformation*
- *High rates of social, political, and ideological transformation in the economy*
- *Ability or propensity (tendency) to reach out to external markets and opportunities*
- *Economic growth leading to higher equal distribution of income.*

According to Kuznets, these six characteristics can be seen in every country no matter what the degree of development, which has occurred.

In this paper, Ecuador, Colombia, and Venezuela's development will be looked at specifically according to these

Six Characteristics of Development as a way to better understand how it occurs. While the development patterns of each may appear to be similar it is important to realize that each has taken its own individual path to promote economic growth.

### **Empirical and Applied Section**

Kuznets defined economic growth as “ a long- term rise in capacity to supply increasingly diverse economic goods to its population, this growing capacity based on advancing technology and the institutional and ideological adjustments that it demands” (Todaro and Smith, 85). This statement could be applied to every country no matter if it is developed or developing. In this section of the paper, the focus will be to better understand how each of Kuznets' Six Characteristics of Economic Development can be seen in Ecuador, Colombia, and Venezuela. According to Kuznets, “The six characteristics are interrelated, and the interrelations among them are most significant” (Kuznets, 5). Demonstrating that while each characteristic is important on its own, how they impact each other is even more important. Therefore, following each of the characteristics, each country will be examined and correlations between each characteristic will be better understood.

#### ***Characteristic 1: High growth rate of per capita income***

The first characteristic of Kuznets is related to the Per Capita Income or PCI, which is calculated by (Schommer, 347):

$$\text{PCI} = \text{Gross Domestic Product/ Population}$$

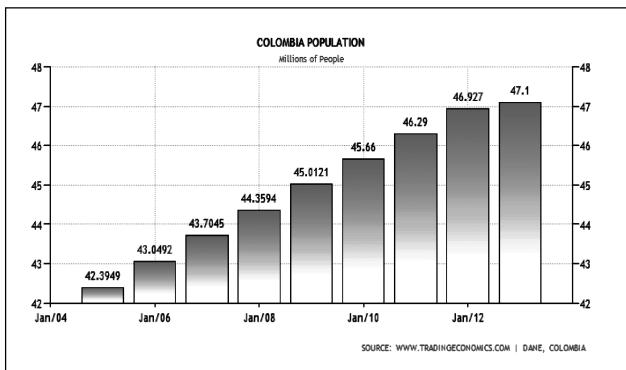
This looks at how a country's economic productivity is growing in comparison to its population, which in short means that the PCI will increase if the GDP is growing faster than the population. “Both are large multiples of the previous rates observable in these countries and of those in the rest of the world, at least until the recent decade or two,” meaning that they divide between developed and developing countries became more apparent recently, as the developed countries continue to advance more rapidly than the developing (Kuznets, 3). The PCI in developed countries has been increasing at a faster rate than those in developing countries due to the fact that the GDP is significantly higher than population growth. According to Kuznets, “the sustained rise in goods is the rise of economic growth (Kuznets, 2). In order to calculate the growth rate for PCI, one must look at the following equation (Schommer, 347):

*Growth rate of PCI = growth rate of output - growth rate of population*

Therefore, countries with a high growth rate in the population would have a low or negative PCI in return (Schommer, 347). In other words, developed countries have been experiencing high growth rates in GDP starting in the 1770s to the present (Todaro and Smith, 86). And these populations in developed countries are increasing at a slower rate while in developing countries are increasing much faster. As a result, it is important to look at Ecuador, Colombia, and Venezuela's PCI in order to understand how GDP and population growth have impacted the economic growth there.

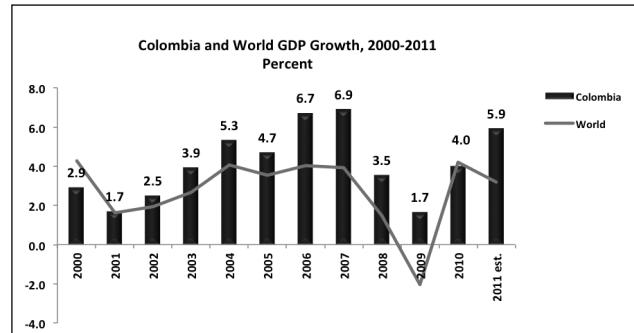
#### *PCI and Population Rates in Ecuador, Colombia, and Venezuela*

To compare the three different countries, it is important to know where Ecuador, Colombia, and Venezuela stand in relation to each other in terms of PCI. According to UN

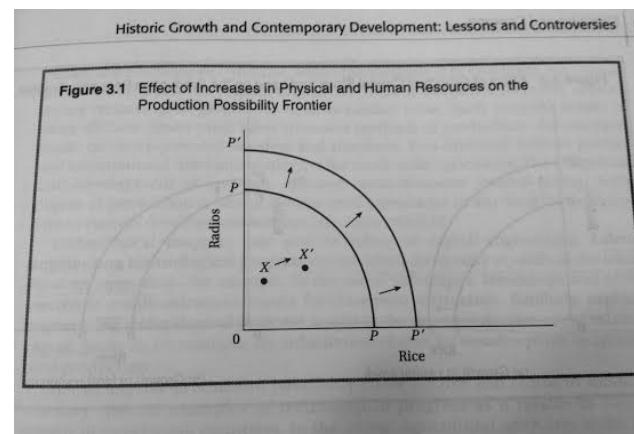


Data, as of 2011, Ecuador had a population of about 15 million people and a GDP \$66 million in 2011, giving it a PCI score of 4526. In Colombia the population was nearly 47 million people and the GDP was nearly \$333 million, which gives Colombia a PCI score of 7100 (Colombia, UN Data). But in Venezuela, the population was calculated at nearly 29 million people in 2011 and the GDP was nearly \$315 million, which means that Venezuela has a PCI score of 10731 (Venezuela, UN Data). As can be seen, Ecuador has the lowest PCI and Venezuela has the largest PCI of the three. While Ecuador has the lowest population and GDP, the relationship here shows that the population is increasing faster than the GDP, demonstrating that it is hard for Ecuador to achieve a higher PCI, leading to economic growth. Despite the fact that both Colombia and Venezuela have larger populations, they also have higher GDPs as well in comparison to Ecuador.

Colombia has a higher GDP population than both Ecuador and Venezuela, but its population is growing faster than that of Venezuela. This gives Colombia a lower PCI score than Venezuela. The higher PCI score may give these countries a better opportunity to have economic growth, which is key to Kuznets' six characteristics.



#### **Characteristic 2: High growth rates in Total Factor Productivity (TFP)**



Characteristic two examines how total factors of productivity and Capital, Enterprise, Land, and Labour (CELL) have an effect on economic development or as Kuznets wrote, "Output per unit of input, is high" for developed countries (Kuznets, 3). This phrase points out that the cost of production must be cost effective in order for economic development to take place, which needs to be seen in TFP and CELL. According to Todaro and Smith, total factor productivity (TFP) is defined as "total monetary value of all units of output per unit of each and every factor of production in an economy; it is a measure of the average productivity of all factors employed to an economy" (Todaro and Smith, 812). As previously stated this means that the cost of production must be cost effective in order to make

monetary gains. An example of TFP can be seen in Figure 3.1 from Todaro and Smith, which shows that the production possibility frontier is shifting outward without calling for more capital or labor (Todaro and Smith, 81). While CELL also play an important role under this characteristic, each comprises different aspects of productivity. To begin capital productivity is measured by the increase in new technologies, better machines, and the higher production of machinery, tools, and equipment, in other words the man made resources used to increase production. Enterprise, or the knowledge or know-how of technology, can be improved by training, services, research, and development innovation. Land productivity, or using the land to its best capability possible, can be increased by the use of better fertilizers, water management, green revolution, or higher output per acre, and better agricultural technology, such as new construction and new buildings. And lastly, labor productivity can be increased by improving the workers' skills, education, creating a higher labor force, and participation. It is crucial to understand that the growth rates for CELL must help to create the growth rate of productivity in the economy (Schommer, 349). Another important aspect of this characteristic to understand is the production possibilities curve, which is "a curve on a graph including alternative combination of two commodities... that can be produced when all available factors of production are efficiently employed" (Todaro and Smith, 807). This is significant because it points out that in order for a developing country to be successful it must use all of CELL in order to effectively use TFP. Additionally, "several World Bank studies have confirmed Kuznets' findings that total factor productivity growth is what determines the rate of growth in developing countries" (Todaro and Smith, 86). While these factors make up characteristic two, they can only be fully understood if they are put to practice.

#### *TFP Growth Rate in Ecuador, Colombia, and Venezuela*

According to Todaro and Smith, it is important to point out that almost all developing countries are located in the tropical or subtropical zones of the world (Schommer, 350). This idea relates to Ecuador, Colombia, and Venezuela because all three are close to the equator, making them fall into this section of the developing world. Colombia and Venezuela are simply to the north of the Equator, while it runs through the northern part of the country in Ecuador. Within this section, the main exports and education for all three countries will be examined to better understand characteristic two.

Despite Ecuador's success with bringing in tourism, there is a need for improvements in regards to the Total Factors of Productivity. Ecuador's top exports are crude petroleum at 51%, bananas at 12%, crustaceans at 5%, refined petroleum at 4.5%, and fish at 4% (Learning more about Trade in Ecuador). Yet, most of the imports coming into Ecuador are manufactured goods, such as refined petroleum, cars, and packaged medicines, which are more expensive than the exports being sent out. This puts Ecuador at a disadvantage when it comes to economic development. Another aspect that is important to TFP is the education of the citizens in Ecuador. According to UNICEF, from 2008-2012 a little more than 95% were enrolled in primary education, but enrollment in secondary education dropped to nearly 74% (Education, Ecuador). While nearly 98% of the population is literate and a majority has continued their education, Ecuador could benefit from more training and furthering education. The fact that Ecuador is involved in international trade and the majority of its citizens have been educated to a degree, there is major need for improvement to help the country's economic growth.

While, in Colombia, the main exports are crude petroleum at 38%, coal briquettes at 17%, refined petroleum at 7%, gold at 4%, and coffee at 4% (Learning more about trade in Colombia). Much like Ecuador, the imports that are being brought in to Colombia are of greater cost than what is being sent out, such as refined petroleum, cars, and computers (Learning more about Trade in Colombia). Additionally, it is important for TFP to know about the education that is available for the citizens. By UNICEF statistics, Colombia has a high rate of primary education enrollment at about 90%, but then again drops to about 75% for secondary education. Thus again demonstrating that continuing education and training could be beneficial for the economy in Colombia. In terms of economic growth, the relationship between education and TFP has had a negative impact on the economy in Colombia, making growth difficult.

As can be expected, the top export in Venezuela is crude petroleum at 78%, followed by refined petroleum at 18%, iron ore at 0.5%, raw aluminum at 0.5%, and iron reductions at 0.3%. Similar to Ecuador and Colombia, the items that are being brought into Venezuela are the manufactured goods, such as medical equipment and broadcasting equipment (Learning More about Trade in Venezuela). Yet unlike the other two, the rates at which these items are coming in are significantly lower, creating more independence. For

instance, Venezuela is producing a small portion of its own refined petroleum, which signifies that it is on its way to improving its international standing in the trade arena. However, because of the extreme dependence on petroleum here, there is a high chance of Dutch Disease occurring. Much like Colombia and Ecuador, the primary education in Venezuela is high at about 95% but then again the secondary education enrollment drops to 72% (Education, Venezuela). Once again demonstrating, Venezuela could benefit from increasing the education and training of its citizens, which, along with improving the TFPs, would have a positive impact on the country's economic growth.

In this section, the TFPs for Ecuador, Colombia, and Venezuela have been examined and all have demonstrated that there is a need for improvement. While education is not perfect, but relatively high in the primary, there are major drops in the secondary education. This means that many of the citizens are not receiving the training or education that could help improve the growth of the economy. Also, the major exports in all these countries were the primary goods, which are being sent to developed countries to be manufactured and then sent back to the LDCs. This is important because it shows that these countries do not have the technological capabilities for manufacturing.

### ***Characteristic 3: Higher growth rate of structural transformation***

The third characteristic of Kuznets' economic development is related to the structural change that must occur in a country in order for economic growth to move from developing to developed. This occurs when a country's main source of income moves from the agricultural sector to manufacturing sector and then to the service sector. This also includes the improvement of infrastructure, such as roadways, airports, and utilities, which would improve industry and trade (Schommer, 352). Additionally, the structural transformation includes the types of products that are being produced such as a shift from small family and personal enterprise to impersonal organization of huge national and multinational corporations (Todaro and Smith, 88). However, as Kuznets wrote, an "advancing technology is a permissive source of economic growth, but it is only a potential, a necessary condition, itself not a source," meaning that every country is capable of moving to the next sector but not all countries are ready for such an economic shift, which could hurt them if it happens too quickly (Kuznets 2). Recently the structural transformation has been from industrial sector to the service

sector (Kuznets, 3). Additionally, it is important to note that while all countries are capable of, but may not ready for the structural transformation, it becomes harder as more countries do make the transition first.

### ***Structural Transformation in Ecuador, Colombia, and Venezuela***

The main idea behind this section is to look at how structural change has occurred in these three countries.

According to the US Library of Congress, in 1987 agriculture was the major source of income in Ecuador, yet this particular sector has dropped significantly in recent years. In nearly fifteen years the percentage of people working in agriculture has dropped to nearly 35% of the population (Composition of Labor Force). And the service sector experienced the largest amount of growth, for example from 1974- 1987 it went from employing 17% of the population to 24% (Composition of Labor Force). Yet, the manufacturing sector employed about 10% of the population (Composition of Labor Force). In 2012, the World Fact Book averaged that 21% work in the agriculture sector, 20% work in the industry sector, and 58% work in the service sector.

According to Oscar Ivan Avila Montealgra, who wrote *The Structural Transformation and Aggregated Productivity in Colombia*, Colombia experienced a structural transformation starting in the 1950s. In his paper, he explained the percentage of the population was involved in the agriculture, service, and industry sectors beginning in 1950-2005 using a system involving shares based on a scale of 0-7 (Avila, 4). Since the 1950s, the agricultural sector has been steadily dropping; it started at nearly six shares but by 2004 was at about two shares (Avila, 4). However, the service sector has been increasing steadily, as it started at three shares in 1950 and has increased to seven shares in 2004 (Avila, 4). The industry sector has maintained a steady percentage of the population at about one share since 1950 (Avila, 4). More specifically, in 2011 the World Fact Book calculated that 17% of the population works in agriculture, 21% in the industry sector, and 62% work in the service sector.

The World Fact Book averaged in 2011 that nearly 7.3% of the Venezuelan population works in the agriculture sector, 21.8% of the population works in the industry sector, and 70.9% of the Venezuelans work in the service sector.

As can be seen by the numbers provided that in all three of these countries there has been a structural transformation

as a majority of the population works in the service sector, followed by the industry sector. This means that there has been a drop in the number of people who work in the agricultural sector. While all three countries are involved in a structural transformation, this does not mean that they can compete with other countries in the international sector to improve their economic growth.

#### ***Characteristic 4: High rates of social, political, and ideological transformation in the economy***

For any economic change to take full effect in a country it is crucial to realize the significance of social, political, and ideological transformation, or what has come to be known as modernization, that must occur. It is necessary to look at the attitudes, age-old practices, taboos, and traditions that exist in one's own country and look at how these could be affecting the economy (Schommer, 354). "Urbanization and secularization come easily to mind as components of what sociologists' term the process of modernization" (Kuznets, 4). Such changes can allow for growth in "labor efficiency and diligence, promote effective competition, social and economic mobility and individual enterprise, permit greater equality of opportunities, make possible higher productivity, raise levels of living, and promote development" (Schommer, 355). This demonstrates all the different areas that the social, political, and ideological transformation can have on a country's economy and how the movement of citizens can also have an impact, making the economy more capable of sustainable growth. Gunnar Myrdal, a Nobel Prize winner, had another way of looking at this type of growth, which followed for different characteristics of modernization (Todaro and Smith, 88). He first looked at rationality, which means using more modern methods of thinking as opposed to the traditional ones in a country, but these new methods must be used in a logical way in order to work (Todaro and Smith, 88). The next important fact in Gunnar Myrdal's model is economic planning, which is a coordinated system that will allow for economic growth and development (Todaro and Smith, 89). Additionally, the promotion of equality in a country, or social and economic stabilization, will also promote economic growth. And lastly, it is crucial to have improved institutions and attitudes will promote a higher quality of work force and a higher rate of productivity (Todaro and Smith, 89).

#### ***Social and Political Ideological Transformation in Ecuador, Colombia, and Venezuela***

Due to the importance of social and political ideological transformation, this section will examine how the political

changes in each of these countries have effected the economic growth there. This is the section that will show the most differences, due to the political situation that has impacted each country in a different way.

In 2008, under the direction of President Rafael Correa, the Ecuadorian population voted to rewrite the constitution, which has been its twentieth constitution since it became an independent nation, demonstrating that Ecuador is still looking for a political transformation that works for them (In Good Faith). Correa called the changes the "Citizen's Revolution" due to the fact that there are more social services being offered and there is a committee of citizens to oversee the branches of the government (In Good Faith). However, many fear that the new constitution would give Correa the ability to turn the government into an autocracy (In Good Faith). Because this particular constitution is so young, it is hard to know if the country will experience economic growth in the future.

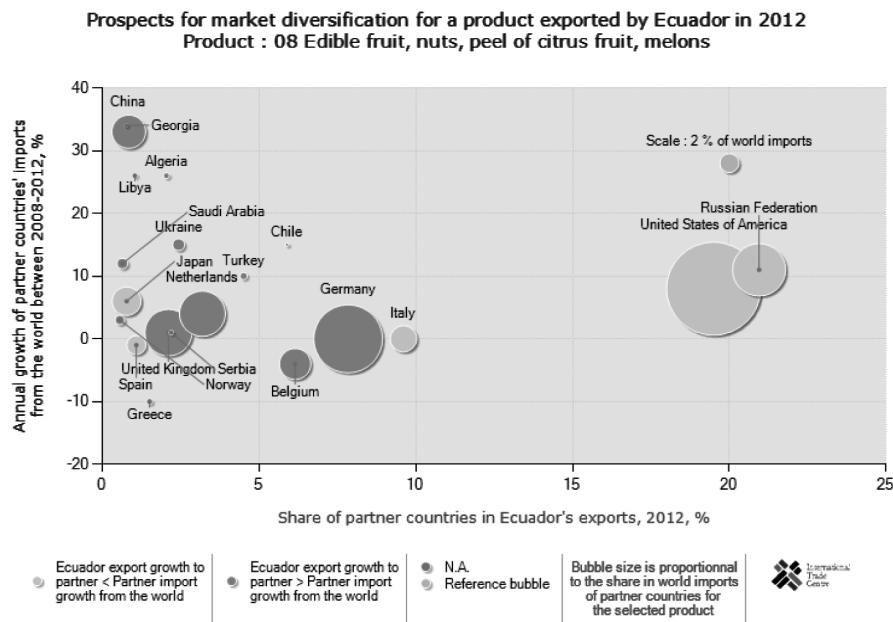
Unlike Ecuador and Venezuela, Colombia has not gone through a major social and political ideology change in recent years, despite the attempts made. Colombia's history has been plagued with violence, as other political parties and guerrilla groups oppose the government (Government and Politics). For instance, the Colombian government and the FARC are constantly struggling over who is in control of the country. Due to the political struggles, Colombia has not had much success in reducing the poverty (Government and Politics). In other words, because Colombia has been so focused on maintaining political stability, much of the attention has been taken away from economic prosperity.

Despite his international reputation, especially due to his political challenges and changes in the oil reserves, Hugo Chavez made many political changes in Venezuela, which changed the ideology of the people. Under Chavez, Venezuela approved a new constitution in 2000 and he increased social programs available for the population (Bulmer-Thomas). Additionally, Chavez increased the minimum wage, which brought many of the citizens out of poverty, and also increased the literacy rate in Venezuela (Bulmer-Thomas). Yet, he handpicked Maduro to be the next president, instead of letting the people completely vote on their next president. This by itself could lead to another political and social transformation in Venezuela.

As can be seen by the short analyses of the political and social changes in these countries, these transformations have had effects on the economic development. For instance, as can be seen by the political and social changes in Venezuela, the economy has been growing because of the services that have been provided to the people. And

despite the fact that Ecuador has the lowest GDP rate of the three countries, it has been growing economically since the changes that have been made under Correa's presidency. On the other hand, Colombia has not experienced a major political change, despite the constant threat of violence, which has not allowed Colombia's economy to fully develop.

#### **Characteristic 5: Ability or propensity (tendency) to reach out to external markets and opportunities**

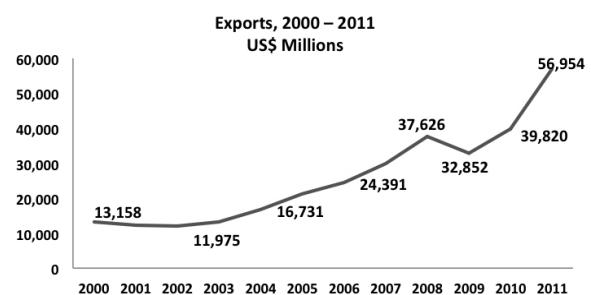


A country's involvement or even capability to participate in international trade is the fifth characteristic of Kuznets' theory. Due to their technological advances and greater economic growth, developed countries have a greater ability to reach all international markets than LDCs, giving them an unfair advantage in international trade (Kuznets, 4). Yet it is crucial for a developing country's economic growth to participate in international trade as it creates a larger market for the products that they have to offer, but these products are mainly natural or primary resources, which are by far less expensive than the manufactured goods. Kuznets recognizes the ongoing propensity of rich countries to reach out to the rest of the world for primary products and raw materials, cheap labor, and lucrative markets for their manufactured products" (Schommer, 356). While it is necessary for countries to participate in international trade, the fact that developing countries are often the ones who are trading the primary goods puts them not only at an economic disadvantage but also a political one, due to the ability to end trade with one country and move on to another (Todaro and Smith, 89), proving that developing countries

could benefit but also be hurt by international trade. Whether or not international trade hurts or benefits Ecuador, Colombia, and Venezuela will be seen in the following section.

#### **Free Trade and International Relations in Ecuador, Colombia, and Venezuela**

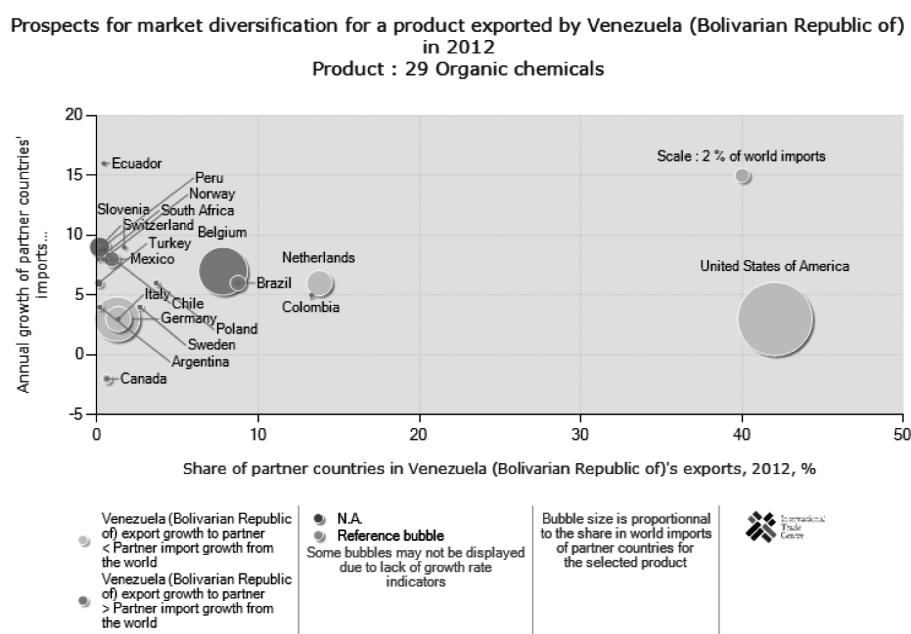
It is important to understand how international trade can have an impact on the economic growth and how Ecuador, Colombia, and Venezuela treat international trade.



Ecuador is highly dependent on the trade of imports and exports in order to help the economy grow (Trade and Tariff Graph, Ecuador). As can be seen on the graph, are all the countries that Ecuador does international trade with and the degree to which the trade is done. "The vertical axis shows import values by key importing countries, while the horizontal axis shows export values by the country for the same sector, i.e. the country has gained market share in the case of an importing country at the bottom right of chart and lost market share for countries top left. The size of circles is proportional to market size" (Trade and Tariff Graph, Ecuador). Demonstrating Ecuador's involvement with

international trade, yet as can be seen by the graph and information from previous sections, Ecuador is at a disadvantage due to exporting primary products.

As can be seen by the chart, Colombia has been increasing the amount of international trade. There could be a number of reasons that the trade has been increasing, due to the expansion in the mining sector in Colombia. This has had a positive impact on the Colombian economy. Yet again, like Ecuador, due to the fact that the primary products are the ones being sent out of Colombia, it is having a hard time competing with developed countries.



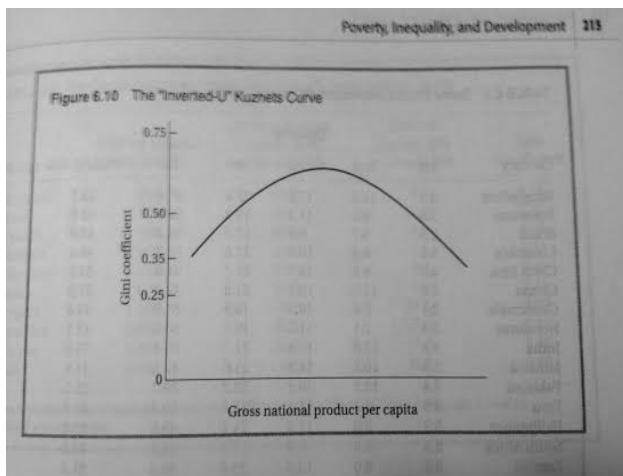
Similar to the Ecuadorian graph, this graph on Venezuela demonstrates the amount of international trade that occurs from this country. As can be seen in both graphs, the United States is one of the major trading partners for both Ecuador and Venezuela. Again, it is important to recognize the fact that the primary products that are produced in Venezuela are putting them at a disadvantage for trading with developed countries. Yet, they have made progress in refining their own petroleum.

As can be seen by the charts, international trade is crucial for the economic development for Ecuador, Colombia, and Venezuela. It can be seen that by opening up the market to international trade increases the money that is coming in but as pointed out in characteristic two. However, all three countries are at a disadvantage because they are mainly

exporting primary products. In order to fully compete with developed countries, Ecuador, Colombia, and Venezuela need to work on producing more manufactured products.

#### **Characteristic 6: Economic growth leads to higher equal distribution of income**

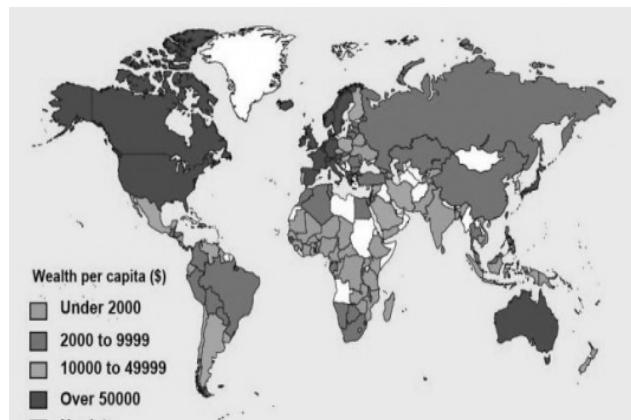
The final characteristic of Kuznets' six characteristics of Economic Development pertains to the idea of increasing the equality of income distribution. This equal distribution means a more widely spread growth across the globe, as it creates a more balanced international distribution of wealth (Todaro and Smith, 89). Unfortunately, this has yet to be achieved due to the fact that 15% of the world's population has a majority of the wealth (Todaro and Smith, 89). In order to better understand how unequal the distribution of wealth is, Kuznets created a way of measuring the disparity.



Kuznets' curve is the "relationship between a country's income per capita and its equality of the income distribution such as per capita incomes increase, the distribution of income at first worsens and later improves from very lows" (Todaro and Smith, 800). An example of the Kuznets' curve can be seen in Figure 6.10, which represents the relationship of the gross national product per capita and the Gini coefficient, which is a collective number to measure income (Todaro and Smith, 215). As can be seen in the chart, the income distribution takes on the shape of an inverted 'u,' which represents the tendencies of growth.

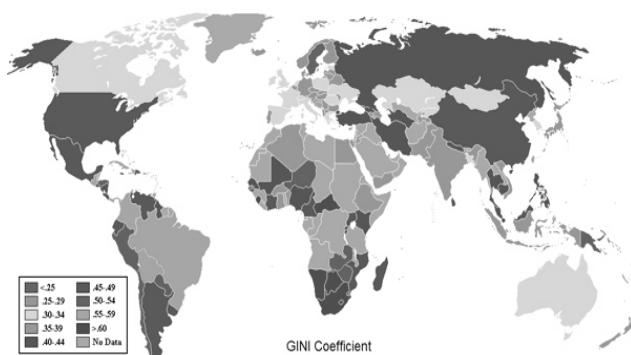
### **Income Distribution for Ecuador, Colombia, and Venezuela**

To understand how the income has been distributed, one must look at how the Gini coefficients of both the developing and the developed world. As can be seen by the map below according to the per capita incomes that Ecuador is the lowest just below \$2000, then comes Colombia, which ranges from \$2000- \$9999, and then lastly Venezuela, which ranges from \$10,000- \$49,999. On the CIA has a list of all the Gini Coefficients listed on the website, which will help to distinguish how the Gini Coefficient is different for developing and developed countries. There are differences in the years, depending on when the last calculation was completed. Here is the list of some examples of the Gini Coefficients for Ecuador, Colombia, and Venezuela along with some developed countries:



Colombia- 55.9 calculated in 2010  
 Ecuador- 44.7 calculated in 2012  
 United States- 45 calculated in 2007  
 Venezuela- 39 calculated in 2010  
 United Kingdom- 32.3 calculated in 2012

As can be seen by the Gini Coefficients for Ecuador, Colombia, and Venezuela, these countries have fluctuating scores, as do the developed countries of the United States and the United Kingdom. Yet, as was discussed in the previous all three countries are working on increasing their GDP in order to increase their PCI but this will still take a long time. In terms of domestic income equality, these countries also have a long way to go in order to achieve equality. For instance, Ecuador, Venezuela, and the United States all have the same ratio as far as income discrepancy goes. While Colombia has a lower rate of income equality and United Kingdom has the highest. This is important because it shows that process needs to be made domestically in order for the countries to compete on an international level. Therefore, all the countries that are listed are no where near having an equal distribution of income.



## Conclusion

As previously stated, the focus of this paper is to look at how the economic development of Ecuador, Colombia, and Venezuela can fit into Kuznets' Six Characteristics of Economic Development. It is easily seen that these countries appear to be developing in a similar manner but with a closer look one can see that the slightest variations can make all the difference in the economic growth of a country.

To begin, according to Kuznets' Six Characteristics, Ecuador fits into the characteristics as follows: the GDP is not growing as fast as the population giving it a PCI score of 4526; TFPs mainly produce the primary products like crude petroleum and food products; only three fourths of the population continue on to secondary education; there has been a move from the agricultural sector to the service sector; there were social and political changes under President Correa; Ecuador participates in international trade; and yet it has not reached equal income distribution in regard to the domestic or international realm.

Colombia has had a similar experience to Ecuador, but the political instability has had a negative effect on the economic growth. By the Kuznets' Six Characteristics, Colombia has had a similar path: the PCI score of 7100 is slightly higher because the GDP and the population are increasing at a closer rate; the TFPs are based on primary products such as minerals and food products; only three fourths of the population continues on to secondary education; a majority of the population has started working in the service sector instead of agriculture and industry; there has not been any major social and political changes due to the political instability that has plagued Colombia; it has participated in international trade; and much like Ecuador, Colombia has yet to reach equal income distribution.

And lastly, Venezuela has followed a similar path to Ecuador and Colombia with slight differences. The economic development follows Kuznets' six characteristics by these factors: Venezuela's population is growing slightly more rapidly than its GDP, which gives it PCI score of 10731; the TFPs are based on primary materials as well like crude petroleum, minerals, and food products; yet, it has a lower rate of secondary education with slightly less than three fourths of the population; over three fourths of the population and the rest of the population are working in the agriculture and industry sector; additionally, there were

political and social changes in Venezuela under Chavez; the country participates in international trade; and like Colombia and Ecuador, Venezuela has yet to reach equal income distribution.

As can be seen by the summary for each of the countries, the economic development has taken similar courses, yet there have been some differences. There is no way to say which country is more developed than the other due to the strengths and weaknesses of each. It is fair to say that Colombia faces the most challenges to economic development due to the political instability, where as Ecuador's population could continue to impact the PCI, and Venezuela faces challenges because of the lack of training for the population. All three countries are working on the economic growth, but a lot still needs to be done to achieve economic development.

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# Literacy and Knowledge: Farmers' Financial Inclusion Feasibility

Michael Lalrinmawia and Hariom Gupta

## A b s t r a c t

*Financial Inclusion is the ability of individuals to access appropriate financial products and services. It is the delivery of financial services at affordable costs to sections of disadvantaged and low-income segments of society like farmers, daily labourers etc. But is financial inclusion alone enough to sustain the individuals to make sound financial decisions. Do they possess adequate financial literacy and knowledge? In the light of financial inclusion, is there still a chance to commit mistakes on the ground of financial fronts? So the question arises, is financial inclusion feasible without the presence of financial literacy? The present study examines the level of financial literacy among farmers of Lunglei district. A survey of 320 farmers all over the district of Lunglei had been conducted. This survey shows that farmers were financially illiterate: as 86.56% have poor financial literacy, 9.38% have fair financial literacy and only 4.06% have sound financial literacy.*

**Key Words :** *Financial Inclusion, Financial Literacy, Lunglei, Farmers*



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**F**inancial Inclusion is the ability of individuals to access appropriate financial products and services. It is the delivery of financial services at affordable costs to sections of disadvantaged and low-income segments of society like farmers, daily labourers etc.

Rangarajan's committee on financial inclusion defines it as:

*"Financial inclusion may be defined as the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost."*

The United Nations (2006) defines it as, "A financial sector that provides 'access' to credit for all 'bankable' people and firms, to insurance for all insurable people and firms and to savings and payment services for everyone. Inclusive finance does not require that everyone who is eligible should use each of the services, but they should be able to choose to use them if desired."

Thus, financial inclusion is a provision of broad range of financial services such as deposits, loans, payment

services, money transfers and insurance to vulnerable groups such as poor and low-income households and their micro-enterprises. By providing these services, the aim is to help the vulnerable groups to come out of poverty through rapid and sustained poverty reduction.

RBI and Government of India have been actively pursuing the road to financial inclusion for the past few years and are convincing the financial service companies and banks to increase their presence and operations in rural areas. Due to their relentless efforts India is now growing towards attaining full financial inclusions. But is financial inclusion alone enough to sustain the individuals to make sound financial decisions. Do they possess adequate financial literacy and knowledge? In the light of financial inclusion, is there still a chance to commit mistakes on the ground of financial fronts? There has been little research on this topic and the few studies that have existed, suggested that the individuals do not possess the basic economic principles and that financial illiteracy is widely prevailing (Lusardi and Mitchell, 2006). Moreover, studies show that financial illiterate persons tend to borrow at a higher rate (Gartner and Todd, 2005; Stango and Zinman, 2007; and Lusardi and Tufano, 2009). These individuals are more likely to seek financial advice from families and friends and tend to abstain from participating in formal financial system (Rooij *et al.*, 2007)

So the question arises: is financial inclusion feasible without the presence of financial literacy? In other words, can financial inclusion succeed without financial literacy? Will the long term objective of the Government to bring every citizen of the country into mainstream financial system be hindered by the prevailing financial illiteracy?

The Organisation for Economic Co-operation and Development/International Network on Financial Education (OECD/INFE) has defined financial literacy as follows: 'A combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing.'

A large number of initiatives have been developed to address the issue of financial literacy/illiteracy. In India, the Reserve Bank of India has been aggressively working to increase the financial knowledge of the general population. The Reserve Bank of India has also introduced Financial Literacy and Counseling Centers (FLCC) to provide consumers with the tools to make better credit choices sources (The Reserve Bank of India, 2008). However, an RBI study shows little awareness among people about these centers. The

education material at these centers also goes little beyond the individual bank's publicity material (Nayak, 2012).

Thus statistics on the current levels of financial literacy, areas of low financial capability and an identification to which these financial educations should be addressed are required to provide financial education effectively. For countries to have efficient financial education and to evaluate the impact on the national level, the measurement of financial literacy levels must be a priority. Such a measurement exercise should allow policy makers to identify need areas in relation to different aspects of financial literacy and provide information about which groups of people need the maximum support (Atkinson and Messy, 2012).

Though a number of studies relating to financial literacy have been conducted (Hudson, 2010), majority of them are confined to the developed countries like the USA. Only a few studies with regard to developing countries like India have been reported. The results of this financial literacy survey could prove to be useful for financial education initiatives and evaluation of impact on such initiatives. Further it could provide guidelines for further research on this field.

### **Review of literature**

Thorat (2007) finds out that the financially excluded sections largely comprise marginal farmers, landless labourers, oral lessees, selfemployed and unorganised sector enterprises, urban slum dwellers, migrants, ethnic minorities and socially excluded groups, senior citizens and women. While there are pockets of large excluded population in all parts of the country, the North East, Eastern and Central regions contain most of the financially excluded population.

Agrawal (2008) pointed out that behavioral aspects, non-price barriers, high cost and financial exclusion are the main reasons why financial inclusion cannot happen on its own and why policy need to be made to increase financial inclusion. For the success of financial inclusion, financial inclusion has to be sync with Real-sector inclusion and a broader approach than microcredit is needed.

Sangwan (2008) carried out an extensive study to estimate the relationship between the percentage of adults having savings and credit accounts with the bank branch density, the literacy percentage and some other factors for 35 states/union territories in India and observed that there is a positive significant impact of branch density and negative but a significant impact of literacy on financial inclusion.

However, Sarma and Pais (2010) reported that literacy is positively and significantly associated with financial inclusion.

Dutta and Dutta (2012) also observed that with a given level of literacy, increase in literacy percentage can further improve the level of financial inclusion in that region.

Cole, S., T. Sampson, and B. Zia (2009) leave us with their findings that financial literacy is an important correlate of household financial behaviour, and household well-being. This provides further suggestive evidence that financial literacy is important, and that educated consumers will make better decisions.

Moodithaya (2012) highlighted the factors which have impacts on financial exclusions or factors which provide hindrances for financial inclusions. These factors are: a) Gender issues b) Age factors c) Legal identity d) Limited literacy e) Place of living f) Social security payments g) Bank charges h) Terms and conditions i) Level of income j) Type of occupation k) Psychological and cultural barrier. He also shows that the level of financial exclusion is the lowest in Andhra Pradesh with 18 percent and the highest in Meghalaya with 95.9 percent. It is worthwhile to know that the level of financial exclusion in Mizoram is 76.4 percent.

Xu and Zia (2012) summarize the findings of various financial literacy studies conducted across the world and find that financial literacy tends to peak among adults in the middle of the life cycle, and it is usually lowest among young people and the elderly. Their findings also show that financial literacy is associated with higher educational attainment and income.

Agarwalla *et al.* (2013) finds that despite the education levels being high, it does not translate into adequate financial literacy. This is likely to be due to absence of inputs relevant to financial literacy in the general education process.

### **Scope of the study**

The study is restricted to Lunglei district, one of the eight districts of Mizoram. Lunglei is at a distance of about 165 kilometres from Aizawl, having a district population of 1,61,428 and a literacy rate of 88.86 per cent (Census of India, Mizoram, 2011). The district is 4536 square kilometres in area with three notified towns and four rural development blocks. As per area wise classification, Lunglei is the largest district in the state of Mizoram. The district is primarily

agrarian in character consisting of 45,439 cultivators, 10,662 agricultural labourers, and 813 household industries. Though the district is served by nine branches of rural banks, six branches of State Bank of India besides a number of commercial banks like HDFC, Axis bank, Canara bank etc, financial inclusion continued to be a major challenge. Moreover 50% of the banks in the district are confined to Lunglei town alone. More than 70% of the population of Lunglei district is comprised of farmers and cultivators who are primarily deprived of banking facilities due to their geographical remoteness and other problems. Lunglei district comprises 33058 households in all, out of the total 18943 rural households (57.30%) are in the district. Only 2677 rural households (14.13%) consisting of 12777 populations are within 5 kms of a bank. Thus 15816 households which constitute 83.49% of the total rural population are outside the perimeter of 5 kms from any bank branch. (Census of India, Mizoram, 2011).

There are nineteen banks in Lunglei district, out of which only seven banks are in the villages. Thus only 36.84% of the banks are in the rural areas. One hundred and seventy two villages are located in Lunglei district (Reports on baseline survey 2010, Lunglei District), but only seven villages are banked. Thus one hundred and sixty five villages comprising 95.93% of the total rural areas remain unbanked. The ratio of unbanked villages to banked villages is 23.57:1. This alone provides a strong case for selection of Lunglei district for this study. The study focused farmers of Lunglei district. Since the number of farmers was practically infinite for the study in hand, selected representatives for banked and unbanked villages in each rural development blocks were taken.

### **Sampling**

Lunglei is divided into four rural development blocks, namely, Lunglei RD block, Lungsen RD block, Hnahthial RD block, and Bunghmun RD block. Households having farming (Agriculture/Horticulture) as their main occupation were taken as the respondents. Multistage stratified random sampling procedure for the selection of sample units was done. Each RD block is divided into two categories: Households within villages which are banked and households within villages which are unbanked. For the unbanked villages, Tawipui N 2 from Lunglei RD block,

Zohmun from Lungsen RD block, Cherhlun from Hnahthial RD block and Laisawral from Bunghmun RD block were selected. For the banked villages/towns, Lunglawn from Lunglei RD block, Lungsen from Lungsen RD block, Hnahthial from Hnahthial RD block and Bunghmun from Bunghmun RD block were selected. From each category forty farming households were selected at random. Thus from each RD block eighty households were selected at random. From the four RD blocks three hundred and twenty households were taken for the sample data collection.

Thus three hundred and twenty farming households were selected and the required information was collected from them personally with the help of a structured questionnaire.

### **Data Collection**

The measure of financial literacy developed by OECD/INFE (2011) was employed. This measure consisted of two modules: the first one measure basic financial literacy with questions about inflation, compounding, interest effect, time value of money etc. The second module stress advanced financial knowledge with focus on topics such as stocks and bonds, working of stock markets, relationship between interest rates and bond prices etc. The original questionnaire was modified to adapt to the conditions prevailing in the district and thus the second module was omitted as it was felt that the farmers may not be able to answer many statements related to financial markets.

### **The Questionnaire**

There were twenty three statements in the questionnaire out of which fourteen questions were related to demographics of respondents such as age, family size, gender, marital status, educational level etc. This was done in order to ascertain whether there was any association between demographic profile and financial literacy. Seven questions relate to categories of basic financial principles, time value of money, inflation, interest and compounding. Most of the statements have several response categories: do not know, irrelevant answer, wrong answer, the correct answer. But in some cases, the statements are highlighted with various types of financial products which the respondents have to state whether they have known about the products. In these statements the response categories were 'YES' and 'NO.'

### **Data Analysis**

For the data analysis, the various response categories for financial literacy statements were given scores as follows:

1. For response categories with 'YES' and 'NO'

a.	YES	-	2
b.	NO	-	1

2. For other response categories

a.	Correct answer	-	3
b.	Do not know	-	2
c.	Wrong answer	-	1

More weightage was deliberately given to 'Do not know' because it has been observed that individuals generally believe that they are far more financially literate than is really the case (OECD 2009); they are more likely to commit financial mistake. Thus I do not know something is definitely less dangerous than not knowing something but still claiming the opposite. With this scoring scheme, the respondent could score a maximum of 42 and a minimum of 18. Respondents who score 35 and above (approximately 83 per cent or more) were considered to have sound financial literacy: the respondents, whose score ranges from 27-35 (approximately 65 per cent to 83 per cent) were considered to have fair financial literacy: those who scored below 27 (approximately below 65 per cent) were considered to have poor financial literacy. The same scoring scheme was applied for each category of statements like basic financial principles, time value of money, inflation, interest and compounding. Karl Pearson's Chi-square test was applied for any association between financial literacy and demographic characteristics of respondent farmers. A cross examination of banked village and unbanked village for each RD block was also undertaken. All the analysis was carried out using MS Excel and SPSS.

### **Analysis**

Table 1 shows the demographic/economic profile of the respondents. The categories of information include residential location; whether the respondent is from a village which has a bank or banks or whether the village is deprived of banks, educational qualification, age, marital status, village/town population and family size. Out of 320 farmers, 160 (50 per cent) were from villages which have a bank or banks while the remaining half; 160 farmers (50 per cent) were from villages without banks. With regard to educational qualification, out of 320 farmers, 214 farmers (66.88 per cent) were educated within the range of matriculation and below.

This category has wide variations as some of the farmers' educational level were as low as class III. 91 (28.44 per cent) were educated upto higher secondary level, while there were only 15 (4.68 per cent) graduates and none were educated upto post-graduation level. 76 (23.75 per cent) farmers were from age group 35 and below, 137 ( 42.81 per cent) farmers belonged to age group 36-50, and 107 (33.44 per cent) farmers were more than 50 years old. 244 (76.25 per cent) were married while 30 (9.38 per cent) were yet to get married and 46 (14.37

per cent) were either divorced or widowed. 180 (56.25 per cent) farmers came from villages/towns with population less than 500, 80 (25 per cent) farmers came from villages/town with populations between 501-1500, 20 (6.25 per cent) came from villages with population between 1501 -2500 while 40 (12.5 per cent) were from towns with population above 2500. In terms of family size, 229 (71.57 per cent) farmers had family sizes of 5 members or less while 91 (28.43 per cent) farmers had family sizes of more than 5 members.

**Table1: Demographic/economic profile of respondents**

Socio economic category	Category	Number of respondents	Percentage
Residential location	Banked village/town	160	50
	Unbanked village/town	160	50
	<b>Total</b>	320	100
Educational Qualification	Matriculation and below	214	66.88
	Higher Secondary	91	28.44
	Graduation	15	4.68
	Post-graduation and above	0	0
	<b>Total</b>	100	100
Age	35 and below	76	23.75
	36 – 50	137	42.81
	Above 50	107	33.44
	<b>Total</b>	320	100
Marital Status	Married	244	76.25
	Single	30	9.38
	Divorced/Widowed	46	14.37
	<b>Total</b>	320	100
Village/town population	Less than 500	180	56.25
	501-1500	80	25
	1501-2500	20	6.25
	Above 2500	40	12.5
	<b>Total</b>	320	100
Family size	Upto 5	229	71.57
	More than 5	91	28.43
	<b>Total</b>	320	100

Table 2 shows the level of financial literacy among the surveyed farmers with respect to the different categories of statements and the overall financial literacy. At an overall level, 13 farmers (4.06%) enjoyed sound financial literacy, 30farmers(9.38%) had fair financial literacy, and 277 farmers (86.56%) had poor financial literacy. On breaking up into different statement categories it was seen that the financial

literacy level were the highest with basic financial principles but only 30 (9.38%) have sound financial literacy while 245 (76.56%) have poor financial literacy. The financial literacy level fell in terms of time value of money and interest and compounding where 290 (90.62%) have poor financial literacy. It further fell for inflation with 313 (97.81%) having poor literacy knowledge. Financial literacy level was at its lowest

ebb with financial products wherein 320 (100%) had poor financial knowledge.

Overall the participating farmers were generally financially illiterate (only 4.06% had sound financial literacy). The details

show that farmers tend to have a bit more literacy when it comes to basic financial principles, and becomes lesser with regards to time value of money and interest and compounding. With regard to financial products, all the farmers have poor financial literacy.

**Table 2: Financial Literacy among Farmers**

Statement category	Number of respondents having		
	Sound financial literacy	Fair financial literacy	Poor financial literacy
Basic financial principles	30 (9.38%)	45 (14.06%)	245 (76.56%)
Time value of money	30 (9.38%)	0	290 (90.62%)
Inflation	0	7 (2.19%)	313 (97.81%)
Interest and compounding	30 (9.38%)	0	290 (90.62%)
Financial products	0	0	320 (100%)
<b>Overall financial literacy</b>	<b>13 (4.06%)</b>	<b>30 (9.38%)</b>	<b>277 (86.56%)</b>

**Table 3: Association between financial literacy and demographic variables**

Socio economic category	Category	Financial Literacy			Pearson's Chi-square
		Sound	Fair	Poor	
Residential location	Banked village/town	9	18	133	3.56 0.50<p<0.10
	Unbanked village/town	4	12	144	
Educational Qualification	Up to matriculation	1	8	205	191.32 0.05<p
	Higher Secondary	2	18	71	
	Graduation	10	4	1	
	Post-graduation and above	0	0	0	
Age	35 and below	7	13	56	18.452 0.05<p
	36 – 50	5	13	119	
	Above 50	1	4	102	
Marital Status	Married	9	21	214	9.310 p<0.05
	Single	0	1	29	
	Divorced/Widowed	4	8	34	
Village/town population	Less than 500	2	11	167	59.405 0.05<p
	501-1500	1	4	75	
	1501-2500	4	3	13	
	Above 2500	6	12	22	
Family size	Upto 5	8	17	204	4.5 (0.05<p<0.2)
	More than 5	5	13	73	

As mentioned earlier, chi-square test was applied to see the independence/association between financial literacy and the demographic variables.

With the predetermined alpha level of significance (0.05) and our calculated value of  $\chi^2$  for the different demographic variables it is found out that there is no association between

level of financial literacy and the residential location and marital status. However, there exists an association with level of financial literacy and education qualifications. Farmers with higher level of education tend to have higher level of financial literacy. Similarly, there is strong association between level of financial literacy and age, population and family size.

### **Conclusion**

In the past few years it has been the attempt of various countries and governments to eradicate financial exclusion and to have hundred per cent financial inclusion. In India too, the government along with the RBI is relentlessly taking initiative steps for achieving financial inclusion within the country. Banks and other financial institutions are encouraged to increase their presence and operations in unserved rural areas. The need to build inclusive financial system for economic development has been greatly stressed upon in the past decades. Actions and initiatives are being undertaken to achieve these goals.

We however argue that the purpose will not be served effectively and efficiently if we simply include the individuals (farmers and other low income group) in the mainstream financial system unless they are financially literate. There has been little research on this topic and the few existing studies, most of which are restricted to developed economies, indicate that financial illiteracy is widespread and individuals do not possess the knowledge of even the most basic economic principles. In fact, those who are not financially literate are the ones who tend to make the most mistakes on financial decision making. The governments around the world are becoming more interested in finding effective approaches to improve the level of financial literacy among their population (Atkinson and Messy, 2012).

Nowadays, measurement of financial literacy is widely recognised as a priority due to the fact that evidence on the current levels of financial knowledge is required for providing financial education effectively.

A survey of 320 farmers all over the district of Lunglei had been conducted. This survey shows that farmers were financially illiterate as 86.56% have poor financial literacy, 9.38% have fair financial literacy and only 4.06% have sound financial literacy. Farmers tend to have a bit more literacy when it comes to basic financial principles, and becomes

lesser with regard to time value of money and interest and compounding. With regard to financial products, all the farmers have poor financial literacy. Further analysis shows that the level of literacy is not associated with residential location and marital status of the farmer. However a strong association was seen between level of financial literacy and educational qualifications, age, village/town population and family size of the farmers.

The findings can serve as a foundation for policy formation with this regard and a benchmark for any training programme related to financial knowledge and skills to the farmers.

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# Individual Investors' Behavior : In Demographical Backdrop

Kiran Mehta and Renuka Sharma

## A b s t r a c t

*The present scenario of Indian economy is featuring a time when banks are more focused about the financial inclusion, the capital markets are more focused about increasing the participation of individual investor in the stock market and financial market regulators are extra neurotic about financial literacy of the Indian households. An understanding of investor behavior will be of great significance at this stage. The present study has made an attempt to understand the pattern of individual investors' investment, their strategies while investing and their expectations from the investment made by them, and of course their demographic features. The data for study is collected through well designed, structured questionnaire during November 2014 to March 2015. The primary motive of investment by a common investor in India is tax-savings. The middle age group investors are more risk takers than youngsters. The basic idea of investing in equity market is to obtain high returns*

**Key Words :** Behavioral Finance, Equity Market, Individual Investor, Investment Alternatives, Investment Strategy.

**JEL Classification:** G02, G11



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There is a paradigm shift in the life style of Indians with the change in economic growth of the country, the same can also be seen in their decisions related to savings and investment. Earlier the Indian economic system was not so mature therefore the availability of information related to financial products, availability of options in financial products and other saving plans, and availability of developed capital and money market place was not there for individual and small investor. Therefore a more updated study about the individual investor's behavior in India can be of great relevance. The present scenario of Indian economy is featuring a time when banks are more focused about the financial inclusion, the capital markets are more focused about increasing the participation of individual investor in the stock market and financial market regulators are extra neurotic about financial literacy of the Indian households.

A study of demographic features of investors and their basic investment decisions in alternative investment avenue is of

great significance in a country like India where the population is quite large, role of women has increased in financial decision making and income level of individual investor has also increased to a certain level. Consequently a pool of even small savings and investment of the households can channelize huge amount of funds in the economy. Currently, the Indian financial environment has the following features.

- ❖ Indian financial sector has two broader segments, one is stock exchanges and the second is active new issue market which are commonly known as secondary and primary markets respectively.
- ❖ In these segments (primary and secondary), debt and equity instruments are the most popular financial instruments and these instruments are open for the investment by individual investor.
- ❖ The capital market plays a significant role in mobilization and allocation of domestic as well as foreign savings. The mobilization of funds is essential for the development of any country because it boosts the capacity of the economy to produce goods and services.

In a nut shell, it can be said that the capital market plays a significant role in stimulating industrial growth leading to economic growth and development of a country but it must be done without making any compromise with the protection of investors' interest. In India, in spite of all efforts made by capital market regulators, the participation and faith of individual investors is not found significant enough to take the Indian capital market to next level of boom. Something must have not been understood regarding the behavior and choices of the Indian household investors by regulators and financial services providers in a right manner. An understanding of investor behavior will be of great significance at this stage as Indian capital market is expected to touch new peak after the change in political scenario recently.

A variety of empirical studies have been conducted in the context of investment behavior of Indian investors. All these studies have compiled various factors affecting investor's behavior in deciding their choices of investment alternatives. The theories of investment behavior are broadly categorized into economic theory and behavioral finance. The Economic Theory of investment behavior says that the investment

decisions of an individual are termed as macroeconomic aggregate function and various microeconomic foundations of these decisions are drawn from *utility theory*. The most popular proverbs of utility theory are: a) Investors are Rational and risk averters, b) Investors are able to deal with the complex choices and want to maximize their wealth. As per these notions the investors want to select that portfolio which maximizes their expected returns (which is called expected utility of investment) while lowering or minimizing their risk. This theory is called mean-variance approach. Economists presume that when a person is given an option to select a few from among a number of possible investment alternatives, the person will prefer the one that yields highest utility. But the literature on the utility theory does not study the individual investment behavior but it focuses on the development of the models that elaborate the market behavior. Behavioral finance is relatively new sub-discipline which focuses on explaining the behavioral aspects of the investment decisions. It mingles the concepts of financial economics and cognitive psychology which is an attempt to structure a more detailed model of human behavior in the financial markets. As per this model, choices in the market are available under uncertain conditions and information structure and various features of the market participants thoroughly influence the individual's investment decisions. Investor's behavior in the financial markets is influenced by various psychological principles of decision making. It also focuses on how investors interpret the process and performs on particular information floating in the financial market. The research in behavioral finance has concluded three most important fundamental streams of investor behavior. These are Prospect Theory, Regret Aversion and Self Control. All these research streams noted and elaborated various behavior attributes of individual investor. As per the cognitive psychology of behavioral finance, the investors make systematic errors, they are overconfident and they make decisions on their recent experience. But the role and participation of the individual investor is very important for boosting the financial strength of an economy. To maintain liquidity and efficiency in capital market, the transactions by the individual investors are vital.

If one takes a glimpse of Indian capital market then it is clear that it has expanded noticeably due to significant increase in the number of individual investors. And growth in capital market in last few years has further increased this number of individual investors. Strong evidences for the increase in

the number of investors is not available but there is a rough estimate about the number of investors that it has been increased to 55 million. This increase in the number of individual investors in capital market has made it essentially stimulating for the researchers to revamp a study to understand the various characteristics of the investors in terms of their investments, strategies, expectations and relating these features with their demographic features. The investment avenues can be equity shares, mutual fund schemes, tax-saving bonds, bonds and debentures, real estate, gold, silver, pension funds, insurance schemes, bank deposits (in the form of fixed deposits) and many more. Every investor has his/her own decision making criteria to select a few investment avenues out of a given number of avenues. Therefore,

- ❖ Decision making can be defined as the process of selecting the best alternative from a number of available alternatives.
- ❖ Same is the case in capital market where investors have to make various decisions related to their investments.
- ❖ In this process a proper evaluation is done for the available alternatives and an alternative which gives maximum return is selected.
- ❖ Investment decision also involves the allocation of capital for the benefits to be received in the future. This benefit can be in the form of regular income or capital gain or sometimes a combination of both.

*Succinctly, it can be said that even small investments by a massive pool of common investors can channelize significant amount of funds in financial markets. Considering the importance of investments by individual investors in an economic system, the present study has been destined to understand the behavior of individual investors towards various investment avenues available in Indian financial markets.*

### Literature Review

The past studies on investor behavior have focused on very diverse aspects. Some have focused only on the demographic profiles and investment behavior of individual investors. Other studies have focused only on a specific investment avenue and investor behavior. Some of the past studies have specifically focused on individual investor behavior differences on the basis of one aspect, viz., Gender

only or Income only or experience etc. A continuous research is always on ramp studying the behavior of investors from different perspectives. Gupta, Jain, and Kulshreshtha (1994) studied the long term trend of the geographical distribution of the retail owners of shares, debentures and UTI units. Later on Rajarajan (1997a and 1997b) conducted two studies and divided Indian investors on the basis of their demographical characteristics. After second study, it was concluded that the size of the investment in financial assets gives significant information about the preferences of the investors for particular financial instrument and particular investment approach. Again, Rajarajan (1998) concluded that as the investor moves up through various stages of life cycle, the percentage of risky assets in his portfolio declines. Further in a study by Rajarajan (2000) it was founded that lifestyle features such as segmentation variable gives a chance for segmentation of investors and explain some real distinction between individual investors and their financial service needs. Gupta et al. (2001) conducted third All-India survey on household investors and investigated household's preferences, future intentions and experiences, their perceptions and opinion about corporate management, regulators, credit rating agencies and auditors. Gupta and Choudhury (2001) critically evaluated Indian mutual fund industry on the whole from investor point of view. In their studies it was further added that investors prefer fixed assets portfolio when they have lower expected rate of return with lower risk bearing capacity and loss avoidance behavior (Rajarajan 2002-03). In another study, Rajarajan (2003) identified that there is strong association in the demographic features and risk bearing capacity of the individuals.

In more recent studies, Maditinos et al. (2007) studied individual investor behavior and concluded that the majority of the individual investors' investment decisions are based on information given in media, newspapers and noise in the financial market. AjmiJy.A. (2008) studied factors affecting the risk tolerance of individual investor and concluded that the male investors are less risk averse than female investors, investors having less education are risk averse and age factor is key factor in risk tolerance. Mittal M. and Vyas R.K. (2008) investigated the relationship between various demographic factors and the investment personality revealed by the investors. The empirical evidences of their study suggested that demographic features like income, education and marital status influence an individual's investment decision criteria. It was also revealed that Indian investors can be classified into four dominant personalities-Casual, Technical, Informed and Cautious. In the same year,

a study by Waweru et al. (2008) examined the role of behavioral finance and investor psychology in investment decision making and recognized that certain behavioral factors had an effect on the decision making behavior of the investors. Further, Shanmugasundaram and Balakrishnan (2009) concluded that investment related decisions are not guided by rationality or prudence, but the emotions, greed and insufficient information in stock market operations in the highly overloaded information environment. Kabra, G., Mishra, P.K. and Dash M.K. (2010) examined factors affecting investment behavior and their study concluded that age and gender of the investors have main influence on the risk taking capacity of the investors.

Bennet and Selvam (2011) studied investors' perception of Social, Political, Economic, Regulatory, Technological, Environmental and Legal (SPERTEL) risk on the value of the equity stock in the financial markets. The study concluded that except for social factors between married and unmarried investors, political, regulatory and legal factors for age and occupations, all other factors have insignificant effect on the investor's investment decisions. Chaturvedi and Khare (2012) found that investors prefer bank deposits as their first investment avenue. Harikanth and Pragthi (2012) concluded that income and occupation of the male and female investors have more impact on their investment avenue selection criteria. Bhushan and Medury (2013) documented in their study that women investors are more conservative than male investors.

The present study is aimed at building up a profile of individual investors (collected through a sample study) as per their demographic features to uncover the present investment of investors and to classify the same on the basis of gender, income and age of the investors. In addition to this, the current study has also made an attempt to understand the pattern of individual investors' investment, their strategies while investing and their expectations from the investment made by them.

### **Sample Design**

The present study is entirely based on the primary data collected through well designed structured questionnaire. The data was collected from investors and period of the data collection was November 2014 to March 2015. Data has been collected from a sample of 750 individual investors. But a few respondents did not provide the full information therefore incomplete or otherwise unusable questionnaires had been edited and discarded and finally data collected from 621 respondents has been used for the purpose of

analyses. The lacking responses exposed at different stages of the study are properly reflected in the tabular arrangement of data. The required data was collected from various States of North India. Both online and offline modes of data collection were used to obtain desired information.

### **Questionnaire Design**

A questionnaire consisting of ten questions other than questions on demographic details, was developed to collect the required information about the individual investors. All these questions are designed to enquire about the present investment patterns of individual investors, their equity investment strategies, investors' expectations regarding returns from equity, their reasons for investment in equity and investors' awareness and reason to invest in derivative markets.

The present study used a structured questionnaire and this questionnaire was pre-tested on a sample of 40 individual investors before executing a thorough data collection process. This pilot study was done to recognize and remove ambiguous terms from the questionnaire and to check the reliability of various questions in the questionnaire.

### **Statistical Tools**

The focal point of the present study is to bring out the demographic characteristics of individual investors and their investment behavior in India. Consequently the data collected were analyzed using percentages and with this, possible cross sectional tables also have been used.

### **Findings of Study**

The Table 1 has discussed the demographic features of the sample taken in present study. The age wise classification has shown that the majority of the respondents lie in the age bracket of 36-55 years. Only 22 (4%) respondents were above the age of 65. Out of a total of 621 respondents, more than 70 percent respondents were males and 29.47% (183 out of 621) respondents were females. The monthly income of approximately 69 percent respondents was found above Rs. 20,000 per month and approx. 35% respondents were having more than Rs. 30,000 per month income. Approximately 70 percent respondents were found educated or professionals. In addition to this, 20 percent respondents were employed in government institutions, 30% were running their own business and a small proportion of the sample respondents were retired people. Therefore the demographic features of the sample of 621 respondents cover wide range of options to discuss their investment behavior.

**Table 1: Demographic Features of the Respondents**

<b>Age Group</b>	<b>Count of Age of the respondent</b>	<b>Percentage</b>
Below 25	35	6
26-35	57	9
36-45	224	36
46-55	217	35
56-65	66	11
above 65	22	4
<b>Grand Total</b>	<b>621</b>	<b>100</b>
<b>Gender</b>	<b>Count of Gender</b>	<b>Percentage</b>
Female	183	29.47
Male	438	70.53
<b>Grand Total</b>	<b>621</b>	<b>100</b>
<b>Income Per Month (Rs.)</b>	<b>Count of Monthly Income</b>	<b>Percentage</b>
Up to Rs 10000	86	14
Rs10000-Rs 20000	107	17
Rs20001 to Rs 30000	208	33
Above Rs 30,000	220	35
<b>Grand Total</b>	<b>621</b>	<b>100</b>
<b>Education/Qualification</b>	<b>Count of Educational Level</b>	<b>Percentage</b>
Graduate	236	38.00
Non-graduate	124	19.97
Other	55	8.86
Professional	206	33.17
<b>Grand Total</b>	<b>621</b>	<b>100</b>
<b>Employability</b>	<b>Count of Occupation</b>	<b>Percentage</b>
Government Service	125	20.13
Non-Government Service	165	26.57
Other	22	3.54
Own Business	184	29.63
Professional Practice	90	14.49
Retired	34	5.48
<b>Grand Total</b>	<b>621</b>	<b>100</b>

The respondents of the present study have considered more than one Investment Avenue for their investment. As shown in Table 2, the most preferred investment avenue of the sample investors is Tax-Saving bonds/schemes/funds, followed by investment in Gold & Silver and Real Estate.

The investment in Bank Deposits and Mutual Funds is relatively least preferred by the investors. As said above that the respondents of the present research were investing in more than one Investment Avenue therefore the total of middle column of Table 2 is more than 621.

**Table 2: Present Investment of Present Investors**

<b>Present Investment of Sample Investors</b>	<b>No of Investments</b>	<b>%of Total</b>
Equity Shares	238	13.57
Mutual fund Schemes	210	11.97
Tax-Saving bonds, schemes and Funds	408	23.26
Gold & Silver	381	21.72
Real Estate	314	17.90
Bank Deposits (FDs)	203	11.57
<b>Total</b>	<b>1754</b>	<b>100</b>

The following sections have thoroughly discussed the investment avenues considered by present investors on the basis of their demographic features.

As depicted in Table 3, there is a great difference in the behavior of investors on the basis of gender. The male investors have picked different investment avenues in comparison to female investors. In case of some of the investment avenues, the behavior pattern of males is almost opposite to what female investors have preferred. Equity shares and mutual funds are highly preferred by the male

investors while these avenues are least preferred by female investors. The male investors have shown uppermost faith in Tax Saving bonds/ schemes and related funds, followed by Gold and Silver and then gave almost equal importance to investment in Equity shares and Real Estate. But the female investors have considered Tax-Saving bonds, schemes and funds as their first choice followed by investment in Real Estate and Gold & Silver. The least preferred investment avenue for male investors is Bank Deposits and for female investors, it is investment in equity shares and mutual funds.

**Table 3: Gender-Wise Classification of Present Investment**

Gender ↓	Equity Shares		Mutual fund Schemes		Tax-Saving bonds, schemes and Funds		Gold & Silver		Real Estate		Bank Deposits (FDs)	
	No	%	No	%	No	%	No	%	No	%	No	%
<b>Male</b>	207	86.97	186	88.57	296	72.55	248	65.09	206	65.61	127	62.56
<b>Female</b>	31	13.03	24	11.43	112	27.45	83	21.78	108	34.39	76	37.44
<b>Total</b>	<b>238</b>	100	<b>210</b>	100	<b>408</b>	100	<b>381</b>	100	<b>314</b>	100	<b>203</b>	100

The age wise analysis of the data has given various interesting depictions. The age is generally correlated with risk appetite of the investors. The same has also been noticed in Table 4. As shown in Table 4, the tax-saving bonds, schemes and similar funds are preferred most by Indian investors. No matter what is the age group of the investors, this investment avenue is chosen by majority of investors in all age groups. Likewise the Indian investors have given due importance to Gold and Silver as another preferred investment avenue. In case of age wise analysis of the selection of Investment Avenue, one interesting outcome is

also noticed. On an average, the investors below 25 years of age have invested in one investment avenue or two (in some cases), investors in the age bracket of 26-35 have invested in two investment avenues at a given point of time, in the age bracket of 35-45, three investment avenues are identified for investment purpose, the next age bracket of investors, i.e., 46-55 have picked four to five investment avenues, 56-65 age bracket investors have preferred to invest in three to four investment avenues and investors above 65 age have also been investing in three to four investment avenues out of given six investment avenues.

These depictions indicate that the experienced investors are more risk takers and considering more than four investment avenues. The investors in the age bracket of 46-55 seem to be more strategic and decisive in making their

portfolios in comparison to the young investors. Even investors above 65 years of age are making better portfolio strategies than the younger ones given in the following table.

**Table 4: Age-Wise classification of Present investment**

Age Groups ↓	Equity Shares		Mutual fund Schemes		Tax-Saving bonds, schemes and Funds		Gold & Silver		Real Estate		Bank Deposits (FDs)	
	No	%	No	%	No	%	No	%	No	%	No	%
Below 25	12	5.04	8	3.81	37	9.07	34	8.92	32	10.19	22	10.84
26-35	22	9.24	21	10.00	92	22.55	97	25.46	89	28.34	56	27.59
36-45	88	36.97	73	34.76	126	30.88	108	28.35	83	26.43	59	29.06
46-55	83	34.87	69	32.86	91	22.30	88	23.10	71	22.61	36	17.73
56-65	24	10.08	28	13.33	45	11.03	39	10.24	29	9.24	19	9.36
above 65	9	3.78	11	5.24	17	4.17	15	3.94	10	3.18	11	5.42
<b>Total</b>	<b>238</b>	<b>100</b>	<b>210</b>	<b>100</b>	<b>408</b>	<b>100</b>	<b>381</b>	<b>100</b>	<b>314</b>	<b>100</b>	<b>203</b>	<b>100</b>

The findings obtained on the basis of different income groups are also noteworthy. Investors from all income groups have also preferred to invest in tax-saving bonds/schemes and related funds in comparison to other options. The investors having income below Rs. 20000 monthly income have preferred to invest in Gold and Silver than tax-saving schemes. The investors having monthly income up to Rs. 10,000 has preferred to invest in equity shares when compared with tax saving schemes. But in case of investors having monthly income above Rs. 20,000 have preferred precious metals like Gold and Silver as second most attractive investment avenue preceded by real estate and

then equity shares. Mutual funds are relatively least preferred by investors in all income groups. Here the classification based on income has made it easy to understand that the Indian investors do invest for the purpose of tax savings. The investors who do not fall in the category of income tax are probably giving relatively less importance to tax-savings schemes, bonds and funds but those who have relatively higher income and expected to fall in the bracket of income tax payment, these investors have preferred to invest in tax-saving schemes, bonds and funds.

**Table 5: Income-wise Classification of Present Investments**

Income Groups ↓	Equity Shares		Mutual fund Schemes		Tax-Saving bonds, schemes and Funds		Gold & Silver		Real Estate		Bank Deposits (FDs)	
	No	%	No	%	No	%	No	%	No	%	No	%
uptoRs 10000	30	12.61	23	10.95	26	6.37	39	10.24	11	3.50	22	10.84
Rs10000- Rs 20000	42	17.65	37	17.62	67	16.42	82	21.52	73	23.25	41	20.20
Rs20001 to Rs 30000	68	28.57	57	27.14	126	30.88	79	20.73	81	25.80	49	24.14
Above Rs 30,000	98	41.18	93	44.29	189	46.32	181	47.51	149	47.45	91	44.83
<b>Total</b>	<b>238</b>	<b>100</b>	<b>210</b>	<b>100</b>	<b>408</b>	<b>100</b>	<b>381</b>	<b>100</b>	<b>314</b>	<b>100</b>	<b>203</b>	<b>100</b>

### **Understanding Investment Strategy followed by Investors**

As discussed above, the investment in equity is also one of the preferred investment avenue of Indian investors, therefore in the following sections, an attempt has been made to find out the reasons why Indian investors do invest in equity stocks. As shown in Table 6, majority of the

investors hold their position in the equity stock till market reaches a target level, many of them revise their target price also if there is a rise in the price of equity. Once the stock reaches to a target price, then the investors sell their shares. Many of them have said that they hold their positions for short basis only which are generally less than a year and many times it is just a few days or a few months.

**Table 6: Sample Investors' Equity Investment Strategy**

<b>Investment Strategy options</b>	<b>No of Investors</b>	<b>% of Total</b>
Sell the shares within a few days or months or within a year irrespective of the price level.	92	14.81
Sell the shares as soon as price reaches my target	304	48.95
Keep revising the target as price rises	147	23.67
Not interested in selling	78	12.56
<b>Total</b>	<b>621</b>	<b>100</b>

The above findings can further be generalized on the basis of the age group to which an investor belongs. Though an investor by and large has more than one strategy to survive in equity market but in most of the cases the investors from different age groups follow the strategy of selling the equity stock once it reaches a target level. The investors falling in the age bracket of 36-45 and 46-55 are opting this strategy more aggressively. The investors in these age brackets are more consistent in observing the performance of the market and also revise their target prices whenever they find change in the performance of market benchmark. Very less number

of investors want to hold their position in equity stocks for a longer period of time (See Table 7). The income-wise classification of investment strategies of investors has also supported the above findings (See Table 8).

As a result it can be said that the Indian investors do not prefer to invest in equity for a longer period and they always prefer to invest for a certain rise in the price of their equity stock and once it reaches the target price level then the investors sell the stocks and after that they switch to investment in other equity stocks.

**Table 7: Age based Classification of investment Strategy**

<b>Investment Strategies/Age</b>	<b>Below 25</b>	<b>% of Total</b>	<b>26-35</b>	<b>% of Total</b>	<b>36-45</b>	<b>% of Total</b>	<b>46-55</b>	<b>% of Total</b>	<b>56-65</b>	<b>% of Total</b>	<b>above 65</b>	<b>% of Total</b>	<b>Total</b>
Sell the shares within a few days or months or within a year irrespective of the price level.	2	1.69	9	10.17	37	40.68	33	35.59	6	6.78	5	5.08	92
Sell the shares as soon as price reaches my target	20	6.54	23	7.48	119	39.25	102	33.64	28	9.35	11	3.74	304
Keep revising the target as price rises	10	6.67	16	11.11	39	26.67	56	37.78	23	15.56	3	2.22	147
Not interested in selling	3	3.7	9	11.11	29	37.04	26	33.33	9	11.11	3	3.7	78

**Table 8: Income based Classification of investment Strategy**

Investment Strategies/Income	uptoRs 10000	%	Rs10000- Rs 20000	%	Rs20001 to Rs 30000	%	Above Rs 30,000	%	Total
Sell the shares within a few days or months or within a year irrespective of the price level.	9	9.88	15	16.05	22	23.46	47	50.62	92
Sell the shares as soon as price reaches my target	39	12.84	61	20.18	73	23.85	131	43.12	304
Keep revising the target as price rises	27	18.52	16	11.11	87	59.26	16	11.11	147
Not interested in selling	11	14.29	15	19.05	26	33.33	26	33.33	78

**Table 9: Investors' Response Regarding Stock Market Returns**

Stock Market gives Higher Returns than	Number of Investors	% to Total Investor
Bank Deposits	267	28.83
Debentures and Bonds	46	4.97
Real Estate	184	19.87
Gold & Silver	199	21.49
Chit Funds	80	8.64
Mutual Fund Growth Schemes	150	16.19
<b>Total</b>	<b>926</b>	<b>100</b>

The next question asked from the respondents was very interesting depicting their perception and expectations regarding returns from stock market. It is significant to

mention that approximately 80 percent respondents do not believe in long term investment in equity market.

**Table 10: Investors' Expectations Regarding Returns over Time Horizon**

Stock Market gives Higher Returns in	Number of Investors	% to Total Investor
Less than 6 months	100	16.06
Less than a Year	177	28.49
1-3 years	224	36.14
More than 3 Years	72	11.66
No idea	47	7.65
<b>Total</b>	<b>621</b>	<b>100</b>

Majority of the investors look for quick and higher returns from their investment. The same has been documented in the finding of the current study. The investors want to earn a lot from their investments. A good number of investors preferred a hassle free investment avenue. Many other investors wait for fall

in interest rate to leverage their portfolio and to earn better return on their investment. A small number of investors do invest for satisfying their pride instincts and still some investors love to play a game of gambling rather than a rational investment.

**Table 11: Investors' Ranking for the Reasons for Investment in Stock**

Reasons	Number of Investors	% to Total Investor
Fall in interest rate	129	17.20
Quick and Higher returns	202	26.93
Hassle free investment	189	25.20
Pride of Ownership	61	8.13
Satisfy gambling instincts	40	5.33
Any Other (Please specify)	129	17.20
<b>Total</b>	<b>750</b>	<b>100</b>

And at the end regarding awareness and participation in derivative market, more than 40 percent investors are aware about the derivative market but they were not participating

very actively. Only 18 percent of investors were participating in derivative market.

**Table 12**

Awareness about Derivative Market		
Yes	250	40.19
No	371	59.81
Participate in Derivative Market		
Yes	130	20.98
No	491	79.02

### Conclusion and Implications

From the findings of the current study, it can be generalized that the present study is descriptive in nature and destined to know the behavior of common individual investors in a specific region in India. The findings of the study have documented the following evidences.

- The primary motive of investment by a common investor in India is tax-saving.
- The middle age group investors are more risk takers than youngsters.

- The basic idea of investing in equity market is to obtain high returns.
- Majority of investors classified on the basis of income and age prefer to hold their position in equity stocks till the price of equity stocks reaches a target level. Once the stock price touches this target price, the investors prefer to take a short position.
- Majority of investors do not prefer to hold their position in equity for long term. They prefer to sell

- the equity stock as soon as it reaches to a certain pre-decided target price.
- The mutual funds are not very popular investment avenue among the common investors.
- Only a few investors prefer to hold their position in equity for long term and showed lesser interest in selling the stocks. Majority of such investors are of middle age group and were lying in income bracket of Rs. 20,000-40,000 per month.
- Majority of the common investors have awareness regarding the existence of derivative instruments but these investors do not prefer to invest in these instruments.

### **Implications of the Study**

- ✓ After tax-saving instruments, the Indian investors are more attracted towards real estate and precious metals like Gold. The reason is obvious, considering the historical performance of real estate, gold and equity the common investors believe that the equity returns are higher than bank deposits and return on bonds but real estate and gold has shown better Investment Avenue than investment in equity stocks. Moreover the behavior of investor also varies on the basis of their gender, income, age group etc. Therefore for promoting any kind of financial product or Investment Avenue, the investor's mindset needs to be understood on the basis of gender and other demographic features.
- ✓ The findings of the study can be used by the AMCs and other portfolio/fund managers to strategize their tax-saving funds to common investors because tax-saving is the primary objective of investors in India specifically in Punjab region.
- ✓ One important implication for regulators and financial institutions to fulfill their CSR for upgrading the knowledge base of common investor is that the investor awareness must be increased to understand the fundamentals behind equity investment so that the investment by common investor could serve as a more productive capital for the financial system.
- ✓ The findings of the study also strengthen the evidences obtained from more recent studies on investor behavior (discussed under the heading

'Literature Review') that the demographic features specifically gender based categorization significantly affect the selection of investment alternatives out of available bouquet.

### **Limitation of the Study**

As far as the limitation of the study is concerned it can be related to the number of the sampled investors. More than 70 percent of questionnaires were got filled with the reference of depository participants, share brokers and investor associates; hence the sample investors are mostly those persons who are considered relatively active in the market and are expected to be aware about the financial market environment. Therefore the individual investor, who is not investing through the brokers and mutual funds or not a part of investor association, is not the part of the study.

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# Investors' Perception towards Alternativeness and Preferences

N. S. Pandey and P. Kathavarayan

## A b s t r a c t

*This paper examines the investment preference towards Mutual Fund (MF) and other investment alternatives. It deals with investment preference of shares, debentures, mutual funds, bank deposits and insurance policies. The investigation is conducted through primary data with a sample of 100 respondents from Puducherry region, using convenience sampling technique. The main objective of this study is to find out preference of investors about different investment alternatives. The perception of investment and investors' awareness level of MF as investment option have been analysed and interpreted. The data has been collected through interview schedule from the selected respondents. Multiple regression analysis, Chi-square and percentage analysis have been used. The results of the study show that Chi-square analysis is not significant. The Regression analysis shows that gender, education and income are significant towards mutual funds.*

**Key Words :** Investors, alternatives, perception, investment, mutual funds.

**JEL Classification:** G81, G11, G14



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**T**his study deals with the behaviour of the investors in Puducherry region to find the better investment avenues. An understanding of the main concepts and a thorough analysis of the options available can help an investor create a portfolio that maximizes returns while minimizing risk exposure. The main investment purposes are increasing the rate of return and also reducing the risk. Additional objectives like safety, liquidity and hedge against increase in risk are also considered here. Now-a-days a wide range of investment opportunities are available to the investor. These are mainly bank deposits, bonds, mutual funds, pension plans, life insurance, and equity shares. All these options compete with each other for attracting the investors. All instruments have their own returns, risks, liquidity and safety. The investors tend to match their needs with the features of the instrument available for investment. They have varied degrees of preferences for different savings vehicles. Each investor tends to keep some cash balance and maintain a certain amount in the form of bank deposit to meet his/her immediate requirements and

protective needs. In the case of salaried people, contribution to Employees Provident Fund (EPF) becomes compulsory. Life Insurance is generally preferred to face situations arising out of untimely deaths of the bread earner of the family. The disposable income after meeting the statutory requirements/commitments constitutes savings and here arises the need of selecting a good investment options.

### **Review of literature**

Mane and Bhandari (2014) in “A Study of investor’s awareness and selection of different financial investment avenues for the investor in Pune City,” discusses why most investors prefer to park their funds in avenues like Bank Deposits, Life insurance, Mutual Funds and Gold.

Raheja and Lamka (2013) in the study titled “Behaviour of investors towards investment” prove that people with different age groups prefer different investment options for different objectives behind investment.

Bhatt, Brahma, P. S. Raghu Kumari, and Shamira Malekar (2012) in the study titled “A Study of Investor Behavior on Investment Avenues in Mumbai Fenil” aimed to understand the investment behaviour and it proves women are attracted towards investing in gold than any other investment avenues. Most of the investors are in the habit of discussing the options with their family and friends before making any investment decision.

Singh (2012) in his article “A study on investors’ attitude towards mutual funds as an investment option” proves that out of 250 respondents 71 respondents have a positive attitude, 117 respondents have a neutral attitude, and 62 respondents have a negative attitude towards the mutual funds.

Geetha and Ramesh (2011) in “A Study on People’s Preferences in Investment Behaviour” show most of the respondents are unaware about stock market opportunities and most of the investors preferred life insurance policies.

### **Objectives of the study**

- To find out investment preferences towards the various investment alternatives,

- To analyse impact of demographic variables on awareness towards mutual funds,
- To analyse the impact of demographic variables on awareness towards other investment alternatives, and
- To study the perception of investors in choosing investment options.

### **Hypotheses**

- **Ho<sup>1</sup>:** There is no significant impact of demographic variables on investment preferences.
- **Ho<sup>2</sup>:** There is no significant impact of demographic variables on awareness about mutual funds.
- **Ho<sup>3</sup>:** There is no significant association between demographic variables and awareness about other investments.
- **Ho<sup>3.1</sup>:** There is no significant association between age and awareness about other investments.
- **Ho<sup>3.2</sup>:** There is no significant association between gender and awareness about other investments.
- **Ho<sup>3.3</sup>:** There is no significant association between education and awareness about other investments.
- **Ho<sup>3.4</sup>:** There is no significant association between occupation and awareness about other investments.
- **Ho<sup>3.5</sup>:** There is no significant association between annual income and awareness about other investments.

### **Methodology**

The source of the data for the study has been collected from primary sources. A study was conducted to collect the primary data from the selected respondents in Puducherry and the study is focused on investment preferences. The total number of sample size is 100. Adopting convenience sampling method, the data were collected through interview schedule from the selected respondents. Data were analysed through statistical tools like percentage analysis, Multiple Regression analysis and chi-square.

**Table 1 : Demographic profile of Respondents**

STATUS	RESPONDENTS	PER CENTAGE %
<b>Gender</b>		
Male	84	84
Female	16	16
<b>Total</b>	<b>100</b>	<b>100</b>
<b>Age</b>		
21-25 years	33	33
26 to 30 years	38	38
above 31 years	29	29
<b>Total</b>	<b>100</b>	<b>100</b>
<b>Education</b>		
SSLC	9	9
Higher secondary	9	9
UG	44	44
PG	36	36
Others	2	2
<b>Total</b>	<b>100</b>	<b>100</b>
<b>Occupation</b>		
Government	17	17
Private sector	48	48
Self-employment	27	27
Others	8	8
<b>Total</b>	<b>100</b>	<b>100</b>
<b>Annual income</b>		
Below `100000	32	32
`100000 to `300000	57	57
Above `300000	11	11
<b>Total</b>	<b>100</b>	<b>100</b>

Table 1 shows that 84 per cent respondents are male and 16 per cent are female. The highest percentage of the respondents is 38 per cent which is between 26-30 years age group followed by 33 per cent comes between 21-25 years, and remaining 29 per cent belong to above 31 years of age. The education of the respondents having 44 per cent as graduate followed by 36 per cent post graduate, 9

per cent each SSLC and HSC and 2 per cent under others. In occupation 48 per cent respondents belong to private sector job, 27 per cent self-employment, 17 per cent government employees, and remaining 8 per cent in other profession. The annual income of the respondents 57 per cent respondents are between ₹ 1,00,000 and ₹ 3,00,000, 32 per cent below ₹ 1,00,000, and 11 per cent respondents belong to above ₹ 3,00,000.

**Table 2 : Investment preferences**

<b>Investment preferences</b>			
<b>Sl.no</b>	<b>Alternatives</b>	<b>Respondents</b>	<b>Percentage%</b>
1	Bank deposit	24	24
2	Life insurance	13	13
3	Mutual fund	18	18
4	Post office saving	6	6
5	Shares and debenture	10	10
6	Gold and silver	14	14
7	Real estate	8	8
8	PF	7	7
<b>Total</b>		<b>100</b>	<b>100</b>

Table 2 shows that, 24 per cent respondents prefer to invest in bank deposit, 18 per cent to invest in mutual funds, 14 per cent to invest in gold and silver, 13 per cent to invest in life insurance, 8 per cent to invest in real estate, 7 per cent to invest in PF and remaining 6 per cent to invest in post office saving.

### I. Investment preferences towards the various investment alternatives

Influence of investors' demographic variables (Independent variable) and investment preference (Dependent variable) were analysed with multiple regression analysis. The demographic variables like age, gender, occupation, annual income, and education on investment preferences towards the various investment alternatives were considered for analysis ( $Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5$ ).

**Table 3**

<b>Sl.no</b>	<b>Variance</b>	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>
		<b>B</b>	<b>Std.err</b>			
	Investment preferences	5.039	1.634		3.085	.003
1	Age	.319	.312	.109	1.024	.308
2	Gender	-1.834	.642	-.292	-2.857	.005**
3	Education	-.200	.278	-.081	-.720	.473
4	Occupation	.178	.279	.064	.637	.525
5	Annual income	.063	.398	.016	.151	.881
$R^2$					.127	
Adjusted $R^2$					.081	
F statistical					2.734	
.Regression is significant at the 0.01 level						

Source: Primary Data

Table 3 depicts that age, education, occupation and income show non-significant towards investment preferences whereas gender is significant at 1% level of significance, it means gender affects the investment preferences. F statistics result shows that it is not significant at 1% level of significance. The multiple regression analysis has been carried out, the demographical variable on investment

preferences, the model significant value (p value <0.05) in the model is significant p value (.003), it means there is significant impact between demographic factors and investment preferences towards the various investment alternatives, therefore  $H_0^1$  "there is no significant impact of demographic variables on investment preferences" is rejected.

## II. To analyse the various impact of demographic factors on awareness towards mutual fund

Influence of investors' demographic variables (Independent variable) on awareness level towards mutual funds (

Dependent variable) was analysed with multiple regression analysis. The demographic variables like age, gender, occupation, annual income, education on awareness towards mutual fund was considered for analysis ( $Y=a+b_1x_1+b_2x_2+b_3x_3+b_4x_4+b_5x_5$ ).

**Table 4**

Sl.no	Variance	Unstandardized Coefficients		Beta	t	Sig.
		B	Std.err			
	Awareness level	3.984	.576		6.913	.000
1	Age	.116	.110	.098	1.057	.293
2	Gender	-.511	.226	-.200	-2.257	.026**
3	Education	-.389	.098	-.388	-3.962	.000***
4	Occupation	.147	.098	.131	1.495	.138
5	Annual income	.386	.140	-.257	-2.749	.007**
		R <sup>2</sup>			.343	
		Adjusted R <sup>2</sup>			.308	
		F statistical			9.794	
Regression is significant at the 0.05 level						

Source: Primary Data

Table 4 analyses the demographic variables and its relation to awareness level. Multiple regression analysis was carried out to find out the impact of demographic variables on awareness level towards mutual funds and the model significant value is (p value <0.05) in the model is highly

significant p value (.000). It means there is significant impact between demographic factors (gender, education, annual income) on awareness towards mutual funds, therefore H<sub>0</sub><sup>2</sup> "there is no significant impact of demographic variables on awareness about mutual fund" is rejected.

## III. To analyse the impact of demographic variables on awareness about other investment alternatives

**Table 5 : Association between age and awareness about other investment alternatives**

Age	Awareness level				
	Total awareness	Good awareness	Unaware	Totally unaware	Total
21-25 years	6	24	3	0	33
26-30 years	11	15	6	6	38
Above 31	8	7	8	6	29
Total	25	46	17	12	100

Source: Primary Data

### Results of the chi-square test

Degree of freedom	6
Calculated value	15.4772
Table value 1 per cent level	16.812

Table 5 depicts that the calculated value of chi-square 15.4772 is less than the table value 16.812 at 1% level of significance,

that "there is no significant association between the age and awareness about other investment,"  $H_0^{3.1}$  is accepted.

**Table 5.1 : Association between Gender and awareness level**

Gender	Awareness level					Total
	Total awareness	Good awareness	Unaware	Totally unaware		
<b>Male</b>	19	37	16	12		<b>84</b>
<b>Female</b>	6	9	1	0		<b>16</b>
<b>Total</b>	<b>25</b>	<b>46</b>	<b>17</b>	<b>12</b>		<b>100</b>

Source: Primary Data

**Results of the chi-square test**

Degree of freedom	3
Calculated value	5.8834
Table value 5 per cent level	7.815

Table 5.1 shows that the calculated value of chi-square 5.8834 is less than the table value 7.815 at 5% level of significance, that "there is no significant association between the gender

and awareness about other investment." Hence  $H_0^{3.2}$  is accepted.

**Table 5.2 : Association between Education and awareness level**

Education	Awareness level					Total
	Total awareness	Good awareness	Unaware	Totally unaware		
<b>SSLC</b>	0	0	4	5		<b>9</b>
<b>HSE</b>	2	1	4	2		<b>9</b>
<b>UG</b>	12	19	9	4		<b>44</b>
<b>PG</b>	11	25	0	0		<b>36</b>
<b>Others</b>	0	1	0	1		<b>2</b>
<b>Total</b>	<b>25</b>	<b>46</b>	<b>17</b>	<b>12</b>		<b>100</b>

Source: Primary Data

**Results of the chi-square tests**

Degree of freedom	12
Calculated value	58.48
Table value 5 per cent level	21.026

Table 5.2 depicts that the calculated value of chi-square 58.48 is more than the table value 21.026 at 5% level of significance,

that "there is a significant association between the education and awareness about other investment." Hence  $H_0^{3.3}$  is rejected.

**Table 5.3 : Association between Occupation and awareness level**

Occupation	Awareness level				
	Total awareness	Good awareness	Unaware	Totally unaware	Total
Government	7	7	3	0	17
Private sector	9	22	1	6	48
Self employed	7	12	2	6	27
Others	2	5	1	0	8
<b>Total</b>	<b>25</b>	<b>46</b>	<b>17</b>	<b>12</b>	<b>100</b>

Source: Primary Data

**Results of the chi-square test**

Degree of freedom	9
Calculated value	10.319
Table value 5 per cent level	16.919

Table 5.3 shows that the calculated value of chi-square 10.319 is less than the table value 16.919 at 5% level of significance, that “there is no significant association between the

occupation and about other investment.” Hence  $H_0^{3,4}$  is accepted.

**Table 5.4 : Association between annual income and awareness level**

Annual income	Awareness level				
	Total awareness	Good awareness	Unaware	Totally unaware	Total
Below - ₹ 100000	5	13	6	8	32
₹100000 - ₹ 300000	15	28	10	4	57
Above - ₹ 300000	5	5	1	0	11
<b>Total</b>	<b>25</b>	<b>46</b>	<b>17</b>	<b>12</b>	<b>100</b>

Source: Primary Data

**Results of the chi-square test**

Degree of freedom	6
Calculated value	10.935
Table value 5 per cent level	12.592

Table 5.4 shows that the calculated value of chi-square 10.935 is less than the table value 12.592 at 5% level of significance,

that “there is no significant association between the annual income and awareness about other investment.” Hence  $H_0^{3,5}$  is accepted.

#### IV. Perception of investors in choosing investment options.

**Table 6**

Sl.no	Statement	Respondents
1	Liquidity	8
2	Low risk	17
3	High returns	23
4	Safety	41
5	Tax benefit	7
6	Regular income	4
Total		100

Source: Primary Data

Table 6 shows that, 41 per cent of the respondents want safety, 23 per cent of the respondents want high return, 17 per cent of the respondents want low risk, 8 per cent of

respondents want liquidity, 7 per cent of the respondents aim at tax benefit, and remaining 4 per cent of the respondents want regular income.

#### V. Awareness about mutual fund

Sl.no	Awareness	Respondents
1	Total awareness	25
2	Good awareness	46
3	Unaware	17
4	Totally unaware	12
	Total	100

Source: Primary Data

Table 7 shows that, 46 per cent respondents are having good awareness about mutual fund, 22 per cent respondents are having total awareness about mutual fund, 17 per cent respondents are unaware about mutual fund and remaining 12 per cent respondents are totally unaware.

#### Findings

- 67 per cent of the total respondents belong to above 26 years of age groups and 84 per cent of the respondents are male.
- 44 per cent of the total respondents belong to UG category and 57 per cent respondents annual income level is between ₹ 100000 and ₹ 300000.

- 41 per cent of the total respondents consider safety as the important factors before and after investment.
- 46 per cent of the total respondents having good awareness of mutual fund.
- 24 per cent of the total respondents prefer bank deposit.
- The multiple regression analysis carried out on age, education, occupation, and income shows insignificant towards investment preferences whereas gender is significant.
- The multiple regression analysis carried out on age and occupation proves insignificant towards awareness about mutual fund, whereas gender, education, and annual income is significant.

- The chi-square analysis carried out on age, gender, occupation and annual income shows insignificant towards awareness about other investment whereas that carried on education is significant.

### **Limitations of the study**

- The study is limited to Pondicherry region only.
- The sample size taken for study is only 100 respondents.
- The study is mainly focused on mutual fund, other financial products are optional.

### **Scope of the study**

- The study is to understand the investment preferences towards the various investment alternatives and find out awareness level of investors in Puducherry.
- To identify investment behaviours which differ from individual to individual based on the acceptance of return and risk in Puducherry.
- The study provides the awareness of the various investment alternatives in Puducherry.

### **Conclusion**

This study confirms that more relationship among age, education, occupation, and income shows insignificant towards investment preferences whereas gender is significant at 1% level of significance, it means gender affects the investment preferences. 55 per cent of the respondents prefer bank deposits, mutual funds, life insurance products and awareness about mutual funds have significant impact between gender, education, annual income but age, and occupation is insignificant. Awareness towards investment avenues has no association among age, gender, annual income, and occupation but that towards education is significant at 5% level.

### **Suggestions**

- Investor should make the investment with proper planning keeping in mind their investment objectives.
- The investors should select a suitable investment alternative.

- The investors should make portfolio investment as it reduces the risk.
- Government should conduct regular awareness programmes.

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# Airport Passengers: Their Needs and Satisfaction

Rajiv Gupta and Vunnam Venkaiah

## Abstract

In India, the Public Private Partnership airports have improved the standard of airport services and facilities. The research questions addressed are - *what is the importance passengers attach to the various needs provided by an airport? Does an airport which has consistently obtained high service quality ratings satisfy its passengers' needs?* Primary data about 65 needs was collected from 502 passengers of Rajiv Gandhi International Airport (RGIA) at Hyderabad City, India and empirically analysed. The study finds that psychological needs of security are most important to an air traveller and that there is overall satisfaction of his need at RGIA.

**Key Words :** *Airport Infrastructure, Customer Needs and Satisfaction, Facilities and Services*



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The world over, privatisation of airports has seen the transition of airports from being mere interchange hubs for different modes of transportation to dynamic spaces for passengers to relax, stay over, shop, enjoy leisure and recreation activities, and also travel. This has led to emergence of newer needs which go beyond the functional needs associated with air travel. In India, the last decade has witnessed a major change in the role of the airports and the services provided by the private sector airports under the Public Private Partnership arrangements. The Ministry of Civil Aviation, Government of India, in its report of 2012 policy for modernisation and expansion of the airport infrastructure, has stressed upon the fact that airports should be built to international standards and should provide certain pre-decided service standards. The airports too in their quest for higher revenues have accorded due recognition to a customer centric approach by providing all the necessary infrastructural facilities and services that a passenger requires to pass through an airport. The provision of all the necessary facilities and services is dictated by the functional requirements of movement of passengers through an airport as well as the custom and usage norms prevailing at different airports.

## Changing Role of Airports

Betancor and Rendeiro (1999) point out that traditionally airports have been owned and operated by central or local governments, including, in some instances, even through a branch of the army. Airport infrastructure was commonly believed to be a public utility, which supported this type of property arrangement. However, due to public budget constraints and efficiency concerns, consideration of this type of model has occurred, and nowadays the range of possibilities for private sector involvement in airports may be as wide as the range of airport activities themselves.

They further state that airports are complex and multi-product enterprises. An airport is a system that serves a wide range of needs related to the movement of persons and things world-wide. Its development depends upon four crucial elements: passengers and goods that circulate through its terminals; its physical, social and economic environment; its nature as a productive and business generator unit; and agents that operate in it, mainly airlines and franchisees of commercial services. Activities carried out at an airport may be classified in to three distinct groups: essential *operational* services and facilities, *handling* services and *commercial* activities. Operational and handling services are commonly referred to as *aeronautical services*, and the commercial activities are considered as *non-aeronautical* services. Essential operational services include the air traffic control system, meteorological services, telecommunications, police and security, fire, ambulance and first aid services, and runways, aprons, taxiways, grounds and buildings maintenance. These activities determine the degree of safety in airport operations, and hence, are considered essential and at the core of the airport business. Handling services refer to a great variety of activities - those that are directly related to the aircraft (ground and ramp handling), such as cleaning, the provision of power and fuel, and the loading and unloading of luggage and freight; and those that are more traffic related (traffic handling), such as the processing of passengers, baggage and freight through the terminal building. Commercial services involve a large variety of different activities that may be located either at the terminal building or around the airport. Duty free shops and other retail shopping, restaurants and bars, leisure services, hotel accommodation, banks, car rental and parking services, and conference and communication facilities are examples of the

myriad of activities that are included in the non-aeronautical set of airport operations.

According to Doganis (1992), the arrival of the private sector into airport operations has led to what is called the *commercial airport model*, where the infrastructure is regarded as a business opportunity, and as such something beyond a traditional airport. Meetings, visitors, employees, local residents, and local businesses and industries would also be important potential customers for airport commercial services. From this point of view, greater the involvement of the private sector in airport activities, the greater the importance of non-aeronautical sources of revenue.

## Government of India Policy

Accelerated economic growth, aided by expansion of air services in a competitive environment, has manifested itself in a rapid increase in air traffic. For providing connectivity to regions hitherto not served by commercial flights, it is necessary to expand the network of air services by setting up new airports. Some of the State Governments have already taken steps for setting up Greenfield airports. Examples in the past include Cochin, Hyderabad and Bangalore where Greenfield airports have been commissioned with the active support and participation of the respective State Governments. The policy relating to setting up of Greenfield airports has since been liberalised by the Central Government and several new projects are being planned in different states. The airport sector has been witnessing significant interest from both domestic as well as foreign investors following the policy initiatives taken by the Central Government to promote Public Private Partnerships (PPP) on Design, Build, Finance, Operate and Transfer (DBFOT) basis. The Ministry of Civil Aviation recognises that the future aviation sector prospects will depend on adoption of a comprehensive policy and regulatory frame work necessary for addressing the complexities of PPP, and particularly for balancing the interests of users and investors.

The Strategic plan (2010-15) of the Ministry of Civil Aviation, Government of India states that during the last decade the civil aviation sector has grown at a phenomenal pace and India has emerged as the 9<sup>th</sup> largest civil aviation market in the world. It also stresses upon continuously engaging the industry and all stakeholders to understand the needs of the users and service providers for formulation of progressive policies.

### **Rajiv Gandhi International Airport (RGIA), Hyderabad, India**

According to RGIA Hyderabad airport website, RGIA has the distinction of being India's first Greenfield Airport to have become operational. It is promoted by GMR Hyderabad International Airport Limited (GHIAL), a joint venture company of the GMR Group (63%) in partnership with Government of India (13%), Government of Telangana (13%) and Malaysia Airports Holdings Berhad (11%). The Company was incorporated to design, finance, build, operate and maintain a world class Greenfield airport at Shamshabad, named as Rajiv Gandhi International Airport (RGIA), Hyderabad. RGIA was commissioned in a record time of 31 months and inaugurated on March 14, 2008, with an initial capacity of 12 million passengers per annum (MPPA) and 150,000 tons of cargo handling capacity per annum. The airport has the flexibility to increase its capacity to accommodate over 40 MPPA which is to be developed in a phased manner.

The airport is located strategically at the geographical centre of India within two hours flying time to all Indian major cities. It is also well positioned globally within a five hour radius from all major cities in the Middle East and South East Asia. Currently, there are 21 passenger airlines and 5 Cargo Airlines operating from RGIA.

The airport terminal is spread over an area of 1,17,000 square meters with 96 check-in counters, 42 immigration counters and additional counters for "visa-on-arrival" facility. It has 42 stands and 2 boarding bridges, 4 nos. baggage claim belts and car parking capacity of 3200 nos. RGIA has an integrated Passenger Terminal Building (PTB) having modular design for future expansion and is equipped with multiple contact boarding bridges, remote stands, common user terminal equipment (CUTE), check-in desks, self-check-in kiosks, immigration counters and a transit hotel. At the forecourt of Passenger Terminal Building, 'Airport Village' provides ample facilities for shopping and recreation, area for 'meeters and greeters,' dedicated parking facility, etc. Passenger facilities at the PTB also include Porter Service, free Wi-Fi, Multi cuisine food court, Airport Lounges with night stay option, Children play area, Medical centre, Bank/ATM, Forex, facilities for baby care, transfer assistance, State Road Transport originating destination long distance bus services, free shuttle service for movement within the airport, taxi services, over-night stay facilities of dormitories and single rooms, general store, duty free shopping and canteen etc. Its future plans are for developing India's largest Airport City (Aerotropolis) spread over 1,500 acres.

RGIA has been consistently rated amongst the best airports having been ranked amongst the Best 3 airports in the world in 5-15 MPPA capacity 6 times from 2009 to 2014. RGIA states that it has raised the bar in terms of facilities and services for passengers, reflected by the significant progress made in the Airports Council International's (ACI) survey of Airport Service Quality(ASQ) score since 2009, when the score was 4.44 (out of 5). RGIA on its website has affirmed that its consistent accomplishment reflects RGIA's unflinching endeavour to constantly strive to deliver service excellence and offer the best to the travellers from all across the globe. It has also received several other international awards for being the best airport in India and 4<sup>th</sup> and 8<sup>th</sup> best in Asia in its category.

It was only in 2015 that the airport has logged a record capacity handling of 10 million passengers in a year. However, the fact is that the ASQ survey captures passengers' satisfaction with the airport services but leaves out passengers' satisfaction of sufficiency in meeting all the needs. The ASQ survey recognises that smaller airports may differ in some respects from their larger counterparts, but what they have in common is the need to understand their passengers and deliver the kind of quality services that maximize spending of the passenger. The ASQ Survey rates an airport's performance in 34 key service areas and includes eight major categories such as access, check-in, security, passport/personal ID control, finding your way, airport facilities, arrivals services, and airport environment. But the point is that we have to look beyond this and ask ourselves:*what is the importance passengers attach to the various needs provided by an airport? Does an airport which has consistently obtained high service quality ratings satisfy its passengers' needs?* This, it is assumed will help in creating a more customer centric bouquet of providing various facilities and services at Indian airports.

### **Review of Literature - Understanding Passengers' Needs**

Several researchers have identified the importance accorded to customer needs by customer centric organizations. Toombs et al.(1995) determined that forging a company that is truly oriented towards the customer requires specific knowledge of the corporation's external customers and their true needs. Cream (2009) mentions that value needs to be perceived and created by meeting and exceeding the needs of both the business to business partner of airlines and airport passengers and that customer driven perceptions of the airport and service quality are paramount, in particular

in the current environment where value for money and service is important. ACRP Report (2008) mentions that airport terminal landside facilities evolve in response to changes in travellers' needs and industry development and regulation. New functions, services, and processes must be accommodated as they appear even when the facility was not originally designed for the purpose. Increases in passenger and baggage screening, provisions for self-service check-in, blast protection, an aging population, persons with disabilities, and the need to improve intermodal connections are among the various functions, services, and processes that are currently necessitating design invention. To address such demands, some airports have moved functions from their traditional locations, reallocated space within the terminal, converted and reconstructed facilities, or created new types of facilities. Such changes have varied impacts on passengers' experience, airlines' relationships with their customers, and airport revenues and costs. Research is needed on the interface between various airport terminal landside elements (e.g., garages, roads, curbs, terminals) to identify improved ways of accommodating new airport terminal functions.

GAO Report (2013) states that "Development at the airport" refers to existing infrastructure already in place and the actions of airport operators to enhance the viability of their airport by focusing on commercial activities to increase airports' aeronautical and non-aeronautical revenue.

As airport operators seek to attract revenue from passengers and visitors, they are renovating their terminals or improving their physical designs to improve the flow of people to the shops, concessions, and gates. The operators are also increasing the number and quality of retail and services—such as wine bars, massage spas, health care clinics, and high fashion shops—offered to passengers and, in some cases, visitors from the local area.

Cotton (2007) in the context of providing service at an airport; states that the most pressing challenge for an airport is to enhance the quality of the passenger experience. Most travellers want short wait times, easy navigation through the airport and their baggage to arrive quickly. Strong customer focus is a competitive advantage in the air travel industry, and because airports are the gateway to air travel, they can have a large impact on improving the customer experience, helping to increase non-aeronautical revenue. In relation to a year 2025 outlook he further states that airports are evolving to play different roles in the wider

ecosystem of the communities they serve. Driven by the complexity of shifting needs, the airport industry is adapting itself by developing different models, each meeting a different combination of needs. Some travellers wish to experience the airport almost as a destination unto itself, with many options for leisure and entertainment, dining, fitness and shopping. Others want a more minimalist experience, moving as quickly as possible through the airport before and after their flight. Still others may need extra assistance to navigate through an airport. The challenge for the airport is to deliver the experience that each type of passenger wants, consistently and cost-effectively, despite the inherent complexity in meeting a wide variety of needs. The magnitude of this challenge will increase over time as passenger volumes continue to rise.

Rahman(2004) reinforces the thought that researching customers' requirements and developing /marketing products (goods/services) commensurate with the needs constitutes a well-documented strategy for achieving sustainable advantage on an ongoing basis.

Traditionally, customer service analysis is carried out by dividing the overall service into various service elements (or attributes) and conducting a survey among customers (or a representative sample thereof) to obtain a rating of the importance of these service elements.

The results of such a survey are then submitted to statistical analysis by which the service elements and the customer base can be classified into useful groups (service dimensions and customer segments respectively). After ascertaining the customers' needs and the prevailing competitive situation, possible competitive advantages and disadvantages and areas of potential improvement are identified.

Bahia and Nantel (2000) state that linear scales having typically five or seven grades varying, e.g. from not important to very important and are often used in the survey questionnaires. Using these kinds of measures implies a presumption of linearity of the effect of service elements on customer satisfaction. By linearity, it is meant that customer satisfaction is supposed to vary in proportion to the change in service level of any service element. Under this assumption, the order of importance of service elements is an adequate measure for assessing the improvement potential of customer service.

Wang and Ji (2010) researched customer needs based on Kano's model. They emphasise that customer needs have

become a primary concern for companies which compete in the global market and that companies put their effort into meeting customer needs or requirements and achieving customer satisfaction to remain competitive in the market. Kano's model proposed by the Japanese professor Noriaki Kano and his colleagues is a useful tool to understand customer needs and their impact on customer satisfaction. The model helps to ascertain the extent to which a given set of functions and features of a product satisfies customers' needs. By doing so, the model therefore, assists in (i) evaluating the efficacy of an existing product to satisfy customer needs, and (ii) developing a product concept that will ensure customer satisfaction. Kano's model is primarily useful in improving product quality by tweaking the product features based on detailed analysis and understanding of a customer's needs. MacDonald et al. (2006) hold the view that the Kano classification system although sometimes seen in engineering and quality management publications, has not gained a wide acceptance in other academic communities. Even then several researchers have applied it in the context of customer satisfaction. However, in an airport which is a complex service scenario with multiple service providers and as such a direct application of Kano's model was not possible within the bounds of this research study. An important take away of Kano's model is that once customer needs are extracted from customer verbalizations and field observations, it is critical to understand the relevance that each need has to customers.

Surachartkumtonkun et al. (2012) recommended that financial security, the effective use of time in various activities, or whether money is well spent are the typical economic well-being issues that people deal with in their daily life.

Physical well-being needs or the need to be free from physical harm is the most basic of Maslow's (1943) hierarchical needs. While describing the safety needs of human beings Maslow stated that the organism may equally well be wholly dominated by them. They may serve as the almost exclusive organizers of behaviour, recruiting all the capacities of the organism in their service, and we may then fairly describe the whole organism as a safety seeking mechanism. Practically everything looks less important than safety, (even sometimes the physiological needs which being satisfied, are now underestimated). A man, in this state, if it is extreme enough and chronic enough may be characterized as living almost for safety alone.

Customers cannot be satisfied with service encounters unless they feel secure in their lives. Service firms must be aware of security issues for the protection of both their employees and customers. In fact, individuals typically avoid involvement in situations that can harm their physical well-being. Following the September 11 attack, for example, many people feared being in an airport or taking a flight and hence tended to travel by plane less during that time.

Skellet 1995 stressed upon keeping in touch with customers' needs and opinions. Citing the example of Wessex Water he states that it initiated a customer consultation exercise under the slogan "How far should we go?" to understand more fully what customers really expected and endorse future spending plans. An explanatory leaflet was sent to all 900,000 account holders in addition to various other interest groups and face-to-face interviews were held with 1200 customers.

Du et al. (2003) proposed an approach based on identification and utilization of customer need patterns for better understanding of customer preferences and subsequently enhancing the product definition for customization and personalization.

Simonson (1993) maintained that in order to get closer to their customers and satisfy customer needs, companies should be able to identify what their customers want (e.g. on the basis of surveys, focus groups, customers' complaints) and use these wants to guide the development of their strategies.

### **Research Methodology**

Using non-probabilistic snow ball sampling technique a total of 800 questionnaires were distributed in October 2014 to passengers who had travelled through RGIA, Hyderabad. A total of 548 questionnaires were returned out of which 502 were usable valid responses (N=502).

### **Demographic Profile of Respondents**

The survey covered respondents from all age groups 69.3 % of the respondents were in the younger age group of (less than 25 years 21.9%, 25-34 years 24.3%, 35-44 years 23.1%) and 30.7% in the older age group (45-54 years 18.3%, 55-64 years 7.6 %, 65 years and above 4.8%). Above 55 years of age there is a decline in air travel through RGIA. The Gender of the respondents was 55.6% males and 44.4% females and 32.3% were single while 67.7% were married. 78.1% were residents of Hyderabad City and 21.9% were

visitors. The Education Level was 58% Post Graduate and above, 35.6% Graduates, 2.2% Diplomas, 3.4% Intermediate (12<sup>th</sup> Standard), 0.8% Secondary School (10<sup>th</sup> Standard), 6.4% were Government Employees, 56.5% Private Sector Employees, 12% Self Employed and 25.1% Not Employed. The family size of the passengers was singles 1.8%, two member family 13.3%, three member family 21.9%, four member family 42.4%, five member family 14.2%, six member family 4.6%, greater than six members 1.8%.

Respondents frequency of air travel through RGIA in the past 12 months: zero trips 13.5%, one trip 17.5%, 2-5 trips 51.2%, 6-12 trips 12.8%, more than 12 trips 5%, out of these 48.2% had done international travel through RGIA and 51.8% had only domestic travel (within India) experience. To capture Recency Effect information about the most recent trip was sought regarding Finance of Most Recent Trip, 78.1% stated that their most recent trip was self-financed while 21.9% had sponsored trips. Purpose of most recent travel revealed

that 29.9% travelled for work, 27.5% travelled for leisure, 42.4% travelled for visiting relatives and friends, 11.2% travelled for some personal emergency, 7% travelled for religious pilgrimage, 3.6% for employment, 9% travelled for attending conferences, 1.6% travelled for medical reasons, 5.4% for pursuing studies, and 0.2% for Sports. Several respondents stated more than one purpose for their most recent air travel.

### Scale and Reliability

Based on the review of literature and the focus group discussions and passenger feedback responses on various social media a total of sixty five different needs of passengers at an airport were identified. The respondents were required to rate the relative importance of each need on a Likert Scale ranging from "Most Important" to "Least Important" (Table 1), the scores were added later during the coding of the survey results.

**Table 1 Likert Scale Used in the Questionnaire**

Airport Need	Most Important	Important	Fairly Important	Less Important	Least Important
Score	5	4	3	2	1

Reliability was tested using Cronbach's Alpha (Table 2) which showed good internal structural reliability with Cronbach's Alpha of 0.958.

**Table 2 Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.958	.960	65

### Data Analysis

The data was analysed on three parameters (i) locating needs clusters amongst the 65 identified needs, (ii) establishing importance amongst the various needs (iii) testing for significant relationship between overall satisfaction of needs and sufficiency of facilities and services to meet the needs and pricing of needs.

#### (i) Locating needs clusters amongst the 65 identified needs

Cluster Analysis was used to understand the nature of these needs. Using SPSS21 a Hierarchical Cluster Analysis was conducted with the Ward's Cluster Method and Interval Measure using Squared Euclidian Distance generating the

Agglomeration Schedule and a Dendogram. The Agglomeration Schedule was utilised to obtain a judgement about the number of clusters using Nargundkar's (2002) guideline: "the agglomeration schedule can help us to identify large differences in the coefficient. A large difference in the coefficient values between any two rows indicates a solution pertaining to the number of clusters the lower row represents. At this point it is the judgement of the researcher, which should decide whether to go for a 2-cluster or a 4-cluster solution." Accordingly a four cluster judgement was reached and a single solution cluster membership of 4 clusters was performed and the needs emerged as per the following clusters.

The Needs Clusters that emerged are:-

**Needs Cluster – 1 (29 Needs), Mean Value of Responses = 4.39**

Taxi, Parking, Quick Check-in, Baggage Trolley, Flight Information, Security, Friendly Customs, Quick Immigration, Quick Baggage Arrival, Weighing Machine, Seating, Terminal Comfort, Aerobridge, Lift, Travelator, Escalator, buggy (battery car), Rest Rooms (Toilets), Free Wi-Fi, Pharmacy, Hospital Emergency, Doctor, Police, ATM, Money Exchange, Snack Counter, Free Drinking Water, General Information Counter, Wheel Chair

**Needs Cluster – 2 (16 Needs), Mean Value of Responses = 3.74**

Car Rental, Bus, Train, Metro Rail, Valet Parking, Porter, Business lounge, Special lounge, Computer with Internet

facility, Public Telephone, New mobile connections-SIM, Hotel Lodging, Shower Rooms, Luggage Lockers, Travel Desk and Travel Agents, Bank

**Needs Cluster – 3 (11 Needs) Mean Value of Responses = 3.58**

Fine dining Restaurants, Fast Food, Shopping, Books and Periodicals, Souvenir & Gifts Shops, Duty Free Shopping, Recreation Facility, Children's Play Area, Prayer Room, Infant facility – Diaper Change, Nursing Room, Public Television

**Needs Cluster – 4 (9 Needs) Mean Value of Responses = 2.88**

Bar, Beauty Parlour, Spa and Massage, Smoking Zones, Florist, Translators, Post Office, Courier, Photo Kiosk

Based on the type of needs that have emerged in the four clusters they can be summarised as in Table 3:

**Table 3 Summary of Needs Clusters**

Needs Cluster No.	No. of Needs	Mean Value of Responses	Importance Accorded	Cluster Classification
Needs Cluster - 1	29	4.39	Most Important	Primary Core Needs of Passenger Processing and Passenger Security
Needs Cluster - 2	16	3.74	Important	Secondary Needs of Passenger Comfort and Convenience
Needs Cluster - 3	11	3.58	Important	Tertiary Needs for Leisure and Recreation
Needs Cluster - 4	4	2.88	Less Important	Low Preference, non-essential needs

**(ii) Establishing importance amongst the various needs**

In pursuance of this objective the responses were analyzed using SPSS 21 to understand the passengers' needs and their relative importance. Since the list of needs generated was very long it was decided against using a ranking method since the passengers would tend to get confused in ranking 65 different needs. This problem is also recognised by Daetz et al. (1995) They state that customers are asked to rank a list of needs from highest (the most important) to lowest (the least important). Average rank is calculated afterwards. This method is difficult when more than 10-12 needs are ranked. It will also demand a lot of continuous concentration from customers, which is difficult to obtain.

Instead, a descriptive analysis of all the needs was conducted and their means ranked in descending order indicating the Most Important Needs to the Least Important and the same are given in the appendix Table 9. This is inline with Afon et al. (2006) study which investigated how adequate the environmental services provided for users' consumption in Oshodi and Ojuelegba motorparks in Nigeria. Six major environmental services were identified. The users were to rate the level of adequacy of each service using any of the five Likert's scale of: *very much adequate, very adequate, adequate, not adequate and not at all adequate*. In order to obtain the aggregate Facility Adequate Index (FAI) of each service, a weight value of 5, 4, 3, 2 and 1 was respectively assigned to each rating above. The

summation of weight value (SWV) for each service was obtained from the addition of the product of weight value of each rating and the number of responses to each rating. The FAI was finally obtained by dividing total weight value (TWV) by the total respondents that rated each service. Therefore for facility i-j

$$FAI_{ij} = \frac{TWV_{ij}}{N_{ij}}$$

$N_{ij}$

FAI<sub>ij</sub>= Facility Adequacy Index for facility i-j

TWV<sub>ij</sub>= Total Weight Value of facility i-j

N<sub>ij</sub>= Respondents rating each of facility i-j

The nearer the FAI to 5, the more adequate the services were considered by users.

Out of the 65 Needs identified for the RGIA airport passengers we have been guided by Griffin and Hauser's

(1993), methodology to address both strategic and operational decisions. They state that industry practice has evolved a form of customer input that has become known as the "Voice of the Customer." The voice of the customer is a hierarchical set of "customer needs" where each need (or set of needs) has assigned to it a priority which indicates its importance to the customer, this methodology referred to as Quality Function Deployment (QFD) structures the customer needs into a hierarchy of primary, secondary and tertiary needs. Primary needs, also known as strategic needs, are the five to ten top level needs that are used by the team to set strategic direction for the product or service. However, instead of considering only the top level five to ten needs if we consider the higher mean scores of the ratings we observe that top 28 needs have obtained a score of 4 and above. Out of these, if we further classify the top 20 needs, four distinct needs emerge as per Table no. 4

**Table 4 Needs Clusters of Top 20 Ranked Needs**

Needs with Rank and Mean Scores ()	Type of Need
Security, rank no. 1 (4.69) ATM, rank no. 7 (4.53) Police, rank no. 8 (4.49) Hospital Emergency, rank no. 9 (4.47) Doctor, rank no. 10 (4.47) Pharmacy, rank no. 19 (4.34)	Security needs – personal security and financial security
Flight Information, rank no. 2 (4.68) Quick Baggage Arrival, rank no. 3 (4.62) Quick Check-in, rank no. 4(4.59) Quick Immigration, rank no. 11 (4.46)	Time Management Needs
Restrooms (Toilets), rank no. 5 (4.58) Baggage Trolley, rank no. 6 (4.57) Terminal Comfort, rank no. 12 (4.46) Friendly Customs, rank no. 14 (4.43) Seating, rank no. 15 (4.43) Parking, rank no.16 (4.41) Escalator, rank no. 17 (4.40) General Information Centre, rank no.18 (4.37)	Comfort And Convenience Needs
Free Drinking Water, rank no.13 (4.45) Free Wi-Fi, rank no. 20 (4.32)	Value for Money Needs

**(iii) Testing for significant relationship between overall satisfaction of needs and sufficiency and pricing of needs.**

The hypothesis developed is:

H<sub>0</sub>: There is no significant relationship between overall satisfaction of airport needs and sufficiency and charges of facilities and services.

H<sub>a</sub>: There is significant relationship between overall satisfaction of airport needs and sufficiency and charges of facilities and services.

The survey elicited responses for four survey questions about the dependent and independent variables on a five point Likert Scale – Strongly Disagree, Disagree, Neither

Disagree nor Agree, Agree, Strongly Agree. The data was tested for normality and the log linear standardized data showed normal distribution. For testing the significance and establishing a linear relationship between the dependent variable "overall satisfaction of airport needs" with the

independent variables "sufficiency of facilities," "sufficiency of services," and "charges of facilities and services," a simple linear regression analysis was conducted, the results are given in Tables 5,6,7, and 8:

**Table 5 Descriptive Statistics of the Variables**

	Mean	Std. Deviation	N
Overall Satisfaction of Airport Needs	3.64	.807	502
Sufficiency of Facilities	3.90	.764	502
Sufficiency of Services	3.75	.761	502
Charges of Facilities & Services	3.33	.945	502

**Table 6 Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.640 <sup>a</sup>	.410	.406	.622

a. Predictors: (Constant), Sufficiency of Facilities, Sufficiency of Services, Charges of Facilities & Services

**Table 7 ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.669	44.556	115.196	.000 <sup>b</sup>
	Residual	192.620	.387		
	Total	326.289			

a. Dependent Variable: Overall Satisfaction of Airport Needs

b. Predictors: (Constant), Charges of Facilities & Services, Sufficiency of Facilities, Sufficiency of Services

**Table 8 Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
1	(Constant)	.434	.177	2.450	.015
	Sufficiency of Facilities	.266	.040	.252	6.663 .000
	Sufficiency of Services	.448	.040	.423	11.145 .000
	Charges of Facilities & Services	.145	.031	.170	4.732 .000

a. Dependent Variable: Overall Satisfaction of Airport Needs

The correlation coefficient for the relationship between the independent variable and the dependent variables was 0.640 which can be characterized as a strong relationship using the rule of thumb that a correlation between 0.0 and 0.20 is very weak, 0.20 to 0.40 is weak, 0.40 to 0.60 is moderate, 0.60 to 0.80 is strong and greater than 0.80 is very strong.

Based on the ANOVA table for the linear regression  $F(3,498) = 115.196$ ,  $p < 0.001$ , with an  $R^2$  of 0.410 there was a relationship between the dependent variable "overall satisfaction of airport needs" and the independent variable "sufficiency of facilities," "sufficiency of services," and "charges of facilities and services." Since the probability of the F statistic ( $p < 0.001$ ) was less than the level of significance (0.05) the Null Hypothesis is rejected and we state that the alternate hypothesis that there is significant relationship between the variables is supported. Hence we can conclude that the needs of RGIA airport users are sufficiently met.

### Conclusion

Just as ACI's Airport Service Quality survey is designed in a way that indicates the importance of each factor to overall satisfaction and a Prioritisation Analysis provides airport

management with concise, actionable insight into areas requiring immediate attention. Similarly this analysis provides us insight into passenger needs and it emerges that considering the demographic profile of the RGIA passenger survey the primary needs of passengers travelling through RGIA are security, reduced time in processing of passengers, terminal comfort, and convenience of basic services and free service of Wi-Fi and water. If we consider the lower end of the Needs Hierarchy it emerges that Beauty Parlour (rank 65), Bar (rank 64) and Spa & Massage (rank 63) are perceived as least important by the travellers through RGIA and based on our hypothesis we can conclude that RGIA meets the needs of its passengers.

### Scope for further Research

Further research in the area of matching the needs (facilities and services at an airport) to the socio-cultural requirements of the passengers can help airports in different regions to design their offerings of non-core facilities and services at an airport. Since security has emerged as the most important need of RGIA travellers further research can be conducted to determine what factors assuage travellers' fears and build their confidence.

## APPENDIX

**Table 9 Needs Hierarchy**

Descriptive Statistics						
		Valid N	Minimum	Maximum	Mean	Std. Deviation
1	Security	502	1	5	4.69	.615
2	FlightInformation	502	1	5	4.68	.599
3	QuickBaggageArrival	502	1	5	4.62	.646
4	QuickCheck-in	502	1	5	4.59	.644
5	Restrooms (Toilets)	502	1	5	4.58	.663
6	BaggageTrolley	502	1	5	4.57	.688
7	ATM	502	1	5	4.53	.744
8	Police	502	1	5	4.49	.773
9	HospitalEmergency	502	1	5	4.47	.806
10	Doctor	502	1	5	4.47	.798
11	QuickImmigration	502	1	5	4.46	.825
12	TerminalComfort	502	1	5	4.46	.672
13	FreeDrinkingWater	502	1	5	4.45	.869
14	FriendlyCustoms	502	1	5	4.43	.788
15	Seating	502	1	5	4.43	.673
16	Parking	502	1	5	4.41	.908
17	Escalator	502	1	5	4.40	.740
18	GenInformation Centre	502	1	5	4.37	.855
19	Pharmacy	502	1	5	4.34	.818
20	FreeWi-Fi	502	1	5	4.32	.915

Descriptive Statistics						
		Valid N	Minimum	Maximum	Mean	Std. Deviation
21	WheelChair	502	1	5	4.31	1.059
22	MoneyExchange	502	1	5	4.31	.927
23	Taxi	502	1	5	4.28	.966
24	Lift	502	1	5	4.24	.878
25	Aerobridge	502	1	5	4.24	.863
26	Travelator	502	1	5	4.14	.945
27	WeighingMachine	502	1	5	4.12	.971
28	SnackCounter	502	1	5	4.08	.926
29	Metrorail	502	1	5	3.96	1.208
30	PublicTelephone	502	1	5	3.95	1.126
31	Bus	502	1	5	3.88	1.190
32	InfantFacility	502	1	5	3.88	1.199
33	Buggy (BatteryCar)	502	1	5	3.87	1.099
34	Computerwithinternet	502	1	5	3.87	1.085
35	TravelDesk	502	1	5	3.86	1.083
36	BusinessLounge	502	1	5	3.85	1.065
37	LuggageLockers	502	1	5	3.82	1.079
38	Books&Periodicals	502	1	5	3.80	.986
39	DutyFreeShops	502	1	5	3.79	1.112
40	HotelLodging	502	1	5	3.77	1.045
41	Bank	502	1	5	3.76	1.160
42	ValetParking	502	1	5	3.71	1.288
43	CarRental	502	1	5	3.71	1.195
44	FastFood	502	1	5	3.71	1.102
45	SpecialLounge	502	1	5	3.68	1.153
46	NewMobileSIM	502	1	5	3.67	1.261
47	PublicTV	502	1	5	3.59	1.176
48	SouvenirGiftShops	502	1	5	3.57	1.082
49	Porter	502	1	5	3.55	1.191
50	FineDining	502	1	5	3.55	1.212
51	ShowerRooms	502	1	5	3.53	1.157
52	Shopping	502	1	5	3.53	1.112
53	RecreationFacility	502	1	5	3.49	1.158
54	ChildrenPlayArea	502	1	5	3.39	1.213
55	Train	502	1	5	3.31	1.361
56	Translators	502	1	5	3.28	1.286
57	Courier	502	1	5	3.28	1.265
58	PrayerRoom	502	1	5	3.11	1.337
59	SmokingZones	502	1	5	2.98	1.555
60	Florist	502	1	5	2.98	1.250
61	PostOffice	502	1	5	2.92	1.279
62	PhotoKiosk	502	1	5	2.89	1.255
63	SpaMassage	502	1	5	2.58	1.243
64	Bar	502	1	5	2.52	1.398
65	BeautyParlour	502	1	5	2.52	1.241

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# Recruitment and Selection Building Scale: Content Validity Evidence

N.R. Aravamudhan and R. Krishnaveni

## A b s t r a c t

*A robust recruitment and selection process can help the company leapfrog the competition by seeking out, recruit, hire and retain top-notch talents. The extant recruitment and selection literature, though vibrant and diverse, is highly fragmented and compartmentalized. No tool is readily available for organizations to assess the complete recruitment and selection cycle. The aim of this study was to develop a psychometrically sound assessment scale for improving and enhancing recruitment and selection process. When a scale is developed, the first step is to assess the content validity. This research was re-calibrated according to Lynn's two step stages of development and judgment. A total of 27 items were generated for the four sub scales which form the recruitment and selection cycle. Experts' ratings on the items were analyzed using median, percentage agreement item ambiguity, Content Validity Index (I-CVI) and Aiken's Content Validity Coefficient (VI) and content validity ratio. Based on the decision rules established for this study, items were either retained or removed. The paper describes the process and results of generating evidence for content validity of the Recruitment and Selection Capacity Building scale (RSCBS).*

**Key Words :** content validity, construct validity, Capacity building Scale, recruitment and selection



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In today's microscopic world of business, talent is at premium. With the competition for outstanding candidates getting fiercer, companies have to go all-out and ultimately find the best-of-the-breed talent available. Since people inside the organization develop products and processes, make crucial decisions and implement programs, they are so vital to the success of the organization. The companies that are successful in attracting quality applicants and selective in their hiring decision, can leapfrog the competition and enjoy decisive edge over their rivals. If recruitment is done meticulously, it has the potential to be a long-term investment that can help build a top-notch work force capable of accomplishing the organization's vision. Recruitment is all about creating a world class company on the back of strong workforce and investing in to the exciting future of an organization. Perhaps nothing sums up the importance of Recruitment and Selection than the pithy observation made by Jim Collins in his book *Good to Great: Why Some Companies Make the Leap and Others Don't*. To quote "Great companies first got the right people on the

bus, the wrong people off the bus, and the right people in the right seats – and then they figured out where to drive it” unquote (Collins, 2001, p.41). A robust recruitment and selection process coupled with a multi-pronged focus on the cutting-edge training, leadership development and attractive compensation packages can ensure that the company is able to seek out, recruit, hire and retain the best talent and build a top-notch organization. In today’s high-octane competitive environment, recruitment serves the important function of infusing the necessary talent into the organization. Admittedly, recruitment and selection had long been viewed as critical component in an organization matching candidates and future jobs (Scolarios and Lockyer, 1999) central (Wolf and Jenkins, 2006) and critical (Carlson et al., 2002) to the success of an organization (Taylor and Collins, 2000).

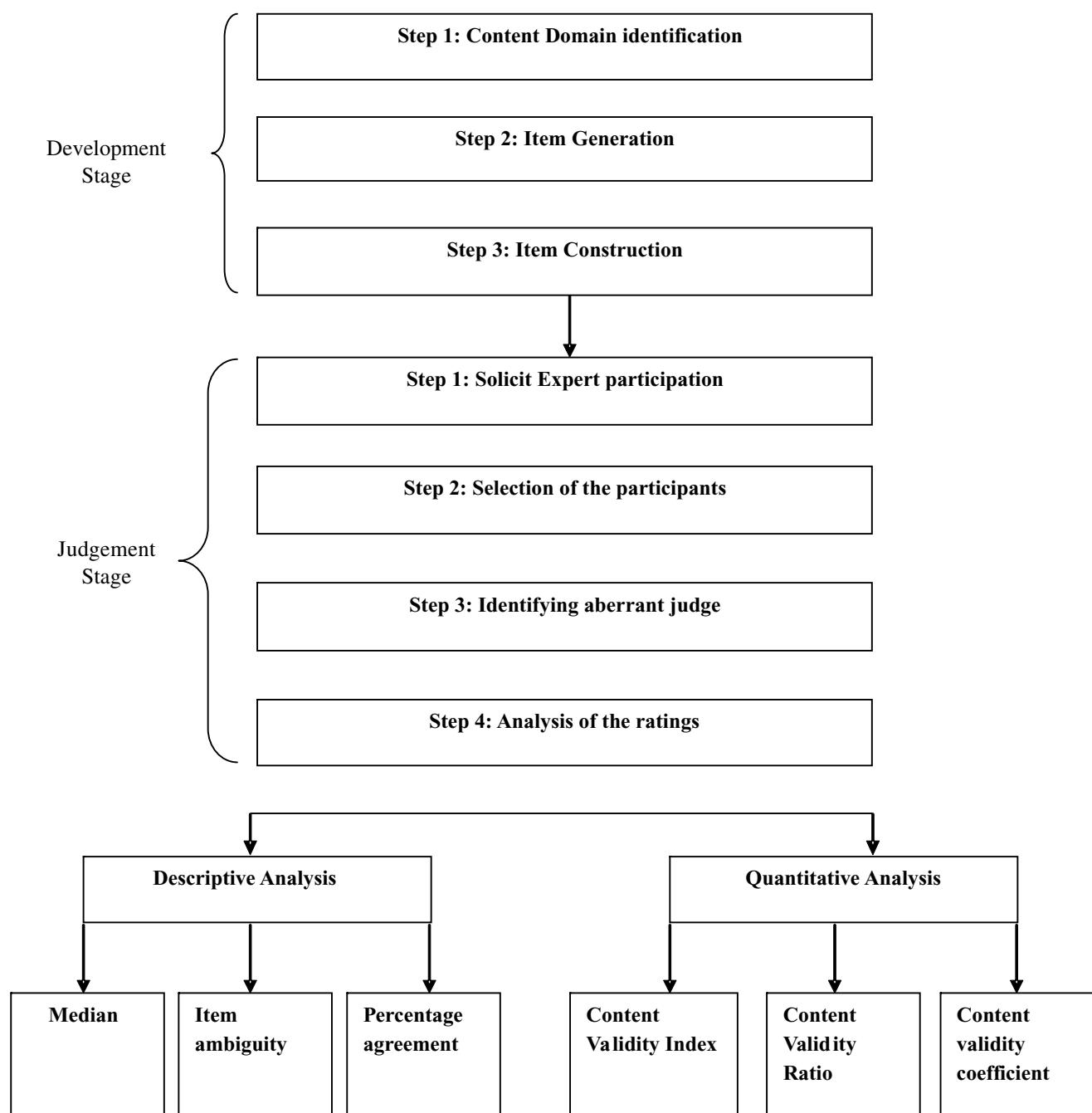
### **Justification for the research – Why do we need a recruitment and selection Capacity Building scale?**

There has been a steady increase in the number of studies (Rynes et al., 1991; Rynes, 1993; Barber, 1998; Salgado, 1999; Hough and Oswald; 2000; High House and Hoffman, 2001; Rynes, 2003) focusing on recruitment and selection. Any retrospective research in the domain of recruitment and selection would doubtlessly suggest that it continues to remain vibrant, robust, topical, and multifaceted over years. The over-arching themes addressed in the recruitment and Selection include examining the recruitment tactics (Lavigna, 1996), sources of recruitment (Werbel and Landau, 1996), content of recruiting messages ( Mason and Belt, 1986), individual differences in job seekers (Judge and Cable,1997), applicants reaction to recruitment process (Taylor and Bergmann, 1987), examining the role of personality and organization images in recruitment (Tom, 1971), recruitment advertising (Ryan et al., 2000), realistic job previews (Breaugh,1983), applicant attraction (Turban, 1998), person –organization fit (Cable and Judge, 1996), recruitment communication media (Allen et al., 2004), recruitment on the net (Cober et al., 2004), applicant decisions in the interview (Schmitt and Coyle, 1976), applicant reaction to selection procedures (Schmitt and Coyle, 1976), personal and situational factors in the interview (Alderfer and McCord,1970), effects of selection practices on attitudes and behavior (Rynes, 1993), employment interview (Judge et al., 2001), types of interviews (Dipboye, R. L., 1994), fairness of selection procedures (Elkins and Phillips, 2000) and applicant reaction to selection methods (Macan et al., 1994).

On a closer scrutiny, R&S literature revealed some serious lacunae too. Despite its longevity, there is a dearth of research focusing on the wholesome recruitment and selection cycle in a single source. Most of the recruitment research have examined only a single activity or stage of the recruitment process like realistic job previews, recruitment sources, recruitment interview, much to the exclusion of other recruitment activities and stages (Breaugh and Starke 2000; Collins and Stevens, 2002), selection research focused on selection methods (Ryan et al., 1999) and employee selection procedures (Hunter and Hunter, 1984). This approach is rather slammed by researchers as a piecemeal (Rynes, 1991) and a heavily compartmentalized research (Breaugh, 2008). There is a dearth of research focusing on the assessment of range of activities that encompass the complete recruitment and selection cycle. This paper responds to the call for developing a scale for detailed assessment of the wholesome Recruitment and Selection cycle. This purported discrepancy in the recruitment and selection literature provided the impetus to study the author to construct the Recruitment and Selection Capacity Building Scale (RSCBS).

### **Methodology**

Development of scientific scales mandates scale developers to establish adequate evidence of scale validity and reliability. A valid instrument is one which measures what it is supposed to measure (De Vellis, 2003). It helps researchers interpret variables and the relationship between variables in a more theoretical manner (Bagozzi, 1980). Hence, the development of a valid instrument is the most important goal of any instrument developer. Traditionally, three types of validity may be established – Content, criterion and construct validity. Since content validity is a pre-requisite for other validity, it should be given more importance during the instrument construction. This paper highlights the process and statistical procedures used to establish content validity evidence for the Recruitment and Selection Capacity Building Scale (RSCBS). The content validity evidence of the Recruitment and Selection Capacity Building Scale (RSCBS) was established using Lynn's (1986) two-stage process - Development and Judgment-quantification. Development of the recruitment and selection capacity building scale (RSCBS) formed the first phase of the content validity study. The scale was then assessed by a panel of judges using descriptive and quantitative analysis to establish content validity evidence. This formed the second phase of the content validity study. The outcome of each stage is discussed below.



**Figure No.1**  
showing the development and judgment-quantification process followed in establishing content validity

## Discussions

### Stage 1 – Instrument development.

Recruitment and Selection Capacity Building Scale (RSCBS) was developed by following three sequential steps. A) Domain Identification, B) Item generation, and C) Item Construction.

#### Step 1: Domain Identification

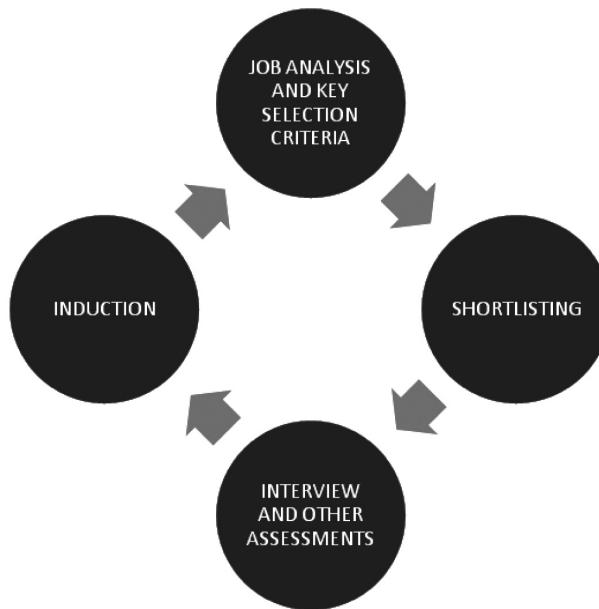
The significance of recruitment and selection has soared in importance in many organizations across the world. Beaumont (1993) identified the constellation of forces that fuelled the importance of recruitment and selection at work. First, an emergence of increasingly diverse work force has put premium on team work. Second, the purpose of recruitment and selection has been turned on its head. Aside from Person –job match, organizations are also driven by the overarching desire to have a multi skilled and flexible work force and hence workforces are inexplicably getting linked with behavior and attitudes. Lastly, the process of recruitment and selection is assuming strategic overtones with more businesses seeking to align staffing practices with the organization strategy. Researchers have reported that a well managed recruitment and selection process can improve organization performance (Robert, 2005) and help create positive organizational image (Pilbeam and Corbridge, 2006). There are enough shreds of evidence emerging to suggest that a sophisticated selection process helped the organization deliver exemplary customer service and enable the company stand out from the competition (Strategic HR Review, 2004). Sophisticated recruitment and selection procedures are positively related to labor productivity (Koch and McGrath, 1996). On the contrary, poorly managed recruitment is fraught with cost implications for employers such as low morale, lost business opportunities and high employee turnover (Christina Evans, 2007). Findings gleaned from the Chartered Institute of Personnel and Development Recruitment and Retention Survey pegged the cost of staff turnover at around £12,500 for managerial and Professional staff (CIPD, 2006). About 60% of the undesirable turnover in organizations is ascribed to bad hiring decisions on the part of the employer (Smith, 2001). Recruitment and selection serve as levers for organizational change, sustaining employee commitment and achieving high performance (Price, 2004). Besides, there is a growing realization that recruiting and selection is super critical not only for sustaining competitive advantage but also for the

organizational survival (Taylor and Collins, 2000). For this reason the recruitment and selection of human capital is a critical human resource function (Grobler et al., 2006). Hence this research viewed recruitment and selection as an important activity.

Recruitment and selection are integrative activities and ‘where recruitment stops and selection begins is still a moot point (Anderson, 1994). Recruitment is considered to be a multistage process (Turban et al., 1995). The opinion is split down the middle amongst researchers about the stages comprising the recruitment and selection process. Prior researches proposed either three, four or five stages for recruitment (Barber, 1998; Breaugh et al., 2008). Employee selection follows two step processes modeled along the lines of Beach's (1993) image theory which examines the decision process as a two step stage comprising the screening and choice stages. Similarly organizations often screen individuals out of selection process in the initial phase and then select the best from the pool in the subsequent stages. Synthesizing various stages of recruitment and selection mentioned in the extant literature, this research proposed a four -stage recruitment and selection process. The proposed four-stage process leaned heavily on literature review and partially on the scale created by Victoria State Services Authority (2008). First, job analysis, job description, and person specification were collapsed in to first stage of recruitment. Many HR experts believed that all these three are interrelated in the business environment. Undertaking job analysis to determine the recruitment and selection criteria and developing key selection criteria and position descriptions based on the job analysis formed the part of this first stage. Job analysis and key selection criteria were finally collapsed in to the phase one of the recruitment and selection process. The specific selection steps which take place to make a selection decision formed the second and third stage. Personnel and line management uses a variety of methods to help the task of predicting which applicants will be most suitable in meeting the requirements of the job (Torrington and Hall, 1998). Drawing up a shortlist involves cutting through the pile of applicants until organization has selected candidates that they would like to invite for interview. So short listing assumes a matter of paramount and formed the second stage of the proposed process. It has been observed that recruiting, selecting and placing applicants were the top three priorities for HR professionals (Straus et al., 2001). The myriads of methods available to help in the selection process such as interviews

and additional assessment criteria formed the penultimate stage of the process. The induction, an initiative needed to support the selection decision formed the last stage of the proposed process. Hence, this research deduced that Job

analysis and key selection criteria, short listing, interview and additional assessment and induction formed the Recruitment and Selection cycle.



**Figure no.2. showing the recruitment and selection cycle**

### Step 2 – Item Generation

In order to generate items, two approaches were used. The first involved ‘culling’ or adapting items from existing scale. The second approach involves qualitative method. This study avoided the qualitative item generation for many reasons. It was observed from the literature that many published scales in journals such as Journal of Business Research (Sin et al., 2005a), Journal of Service Research (Lings and Greenley, 2005) did not always employ a qualitative item generation stage. Though Churchill’s (1979) research suggested a qualitative stage, recent scale development literature e.g. Netemeyer et al., (2003) highlighted the importance of reviewing literature to generate items instead of incorporating qualitative stage. The researcher also had concerns regarding the administration of large number of items to the expert panel. Such a large number of items had the potential to adversely impact the quantity and quality of expert panel participation. So it was decided to generate items grounded in literature. The table showing the items generated and its affiliate sources can be found in Appendix A.

### Step 3: Item Construction

Items were organized in to constructs on the item Content Rating Review forms (Appendix A). The Item Content Rating Review forms included the definition for construct on the top of the form. These definitions provided a reference for the raters to rate the relevance and representativeness of the items. The content reviewers were called upon to judge the degree to which an item fit with the respective construct. Items found to fit each of the construct were listed on the left and rating scale of 1 (No fit) to 4 (Excellent Fit) were listed on the right side. In line with the recommendations of Lyn (1986), four-point scale was used in order to avoid neutral responses. Additional room was provided for the judges to write their suggestions on how items could be further revised. At the bottom of the form, space was also provided for giving further comments. At the end of the item Content Rating Review form, the judges were called upon to answer one open ended questions. The question was “Are there any items that you would recommend as ‘having an excellent fit’ that have been omitted from this item pool?” The second question was intended to meet the

requirements of content validity that each of the domains was adequately sampled (Linn, 1980). There were 27 items ready to be reviewed by the expert panel members.

### **Stage 2: Expert judgment**

The underlying objective of this stage is to analyze the extent to which items created are representative of the target construct and the degree to which such items represent the facet of construct they were developed for (Beck and Gable, 2001). In this study, the items were assessed based on the relevance and representativeness. The higher the rating of relevance and representativeness, better the content validity rating. A description of the study conducted to obtain expert judgment of the items developed for Recruitment and Selection capacity building scale is presented below in four steps.

#### **Step 1: Solicit expert participation**

People who expressed desire to participate were sent out a package containing a) covering Information letter b) Item Content Rating Review Forms and c) A self-addressed stamped envelope. Participants were given 20 days to complete the package and send it back to the researcher. The letter explained the rationale for undertaking Recruitment and Selection Capacity Building instrument, the target population that would be surveyed using the questionnaire, and a summary of the tasks involved in this portion of the study. Participants were assured that their responses would be kept strictly confidential and that only the researcher and supervisor would have an access to the data collected. Participation was purely involuntary and participants are free to withdraw from the exercise anytime. At any given

point in time, if participants were to withdraw, they were called upon not to return the envelope. Envelopes that were not received seven business days after the stipulated 30 days were deemed as withdrawn. The content judges were requested to judge each item based on the degree of fit with the definition for the domain (Crocker and Algina, 1986). After the completion of all the tasks, judges were requested to place the item Content Rating Review forms in the pre-paid self-addressed envelope and return it to the researcher. Upon the receipt of the package, the content judges were given a period of 30 days to complete the judging of items. All rating packages returned were used in the analysis.

#### **Step 2: Selection of the participants**

In selecting the panel of experts, criteria outlined by Yun and Ulrich (2002) were used as a reference point. Selection of experts was done on the basis of their job title, experience, knowledge and availability to complete the task within the specified time frame. Specific guidelines used for the inclusion and selection of experts included experienced HR practitioners with over 10 Years of experience in Human Resource function.

Potential participants who fulfilled the criteria were invited to participate through e-mail. A total of 30 HR managers were approached by e-mail. Personal connections of the researcher were used to contact HR practitioners. A total of 50 invitations were sent out through e-mail. Of the 30 HR managers, 15 agreed to participate and the packages were sent out to these experts. A final total of 11 packages were received with response rate being (73%) of the packages that were sent out.

**Table no.1: Indicating the distribution of judges**

Judges	Category	Area of expertise	Experience
1	Industry	HRM	15
2	Industry	HRM	15
3	Industry	HRM	10
4	Industry	HRM	15
5	Industry	HRM	11
6	Industry	HRM	12
7	Industry	HRM	23
8	Industry	HRM	14
9	Industry	HRM	20
10	Industry	HRM	18
11	Industry	HRM	13

After the receipt of expert panel member's ratings, participant's names were separated from the data. The ratings of the judges were keyed in to MS-Excel programme. To gather evidence of content validity, panel member's ratings for each item on each subscale were compared and contrasted. Hellsten (2008) proposed three major approaches to examine judgment ratings. They are: a) Quantitative b) Qualitative C) Descriptive. Due to paucity of time and resources, qualitative analysis was not employed by this study. This study used three methods of descriptive analysis such as Item Ambiguity, Median and Percentage Agreement and three types of quantitative methods such as Content Validity Ratio, Content Validity Index, Aiken's Content Validity Co-efficient to examine the quality of items. These methods were in turn compared to determine their overall agreement.

### Step 3: Identifying Aberrant Judges through Inter-Judge agreement

Though judges were experts in their chosen field, the possibility of some judges scoring the items in aberrant manner is quite high and can lead to measurement error across the ratings. Inter-rater agreement was employed to identify the aberrant judges. Inter-rater agreements seek to examine the degree of Inter-Judge agreement and identify the aberrant raters as against the rest of the other judges. It was decided to remove the aberrant judges from the further analysis if they were found before conducting analysis. The formula for calculating inter-rater agreement is represented as:

$$JDM_j = \frac{K}{\sum_{K=1}^K XK_j - MdK}$$

where  $XK_j$  is Judge j's rating on subscale K and  $MdK$  is the median of item K (Rogers, 2010).

**Table No. 2: Showing the summary statistics of Judges' Discrepancy from the Median**

Judges	JDM	JDP
1	13	9.5
2	11	8.5
3	12	12.5
4	11	9
5	15	12
6	12	10
7	15	15.5
8	12	14.5
9	10	12.5
10	9	9.5
11	55	

(Note: JDM = Judges' Discrepancy from the Median (Judges 1-9); JDP = Judges' discrepancy from the Median (Judge 11 removed))

The  $JDM_j$ 's for the eleven judges rating the Recruitment and Selection capacity building scale ranged from 9 to 55. The detail on each judge's rating of all the items is listed in Appendix B. One judge, judge 11 was sufficiently different from the other judges to be considered an aberrant judge. The incongruence of judge 11 was a systematic preference for rating items at the extreme that is he/she was assigning only 1 (*No Fit*) option. Judge 11 was an aberrant judge. The judge assigned a 1 (*No Fit*) to almost all the items. Therefore, the ratings for judge 9 were removed prior to completing

any further analyses. Rogers (2010) noted that if one judge has been removed, the median should be recalculated with the rest of the judges and the Inter-judge Agreement needs to be recalculated to determine if there is a second aberrant judge. In line with these recommendations, the median and JDM were recalculated. After removing the aberrant judge 11, the total number of expert panel members for this research stood at ten. Following the removal of judge 11, the  $JDM_j$ 's was recomputed and ranged from 8.5 to 15.5.

#### **Step 4: Analysis of expert Ratings**

This paper relied on Descriptive analysis and Quantitative analysis to obtain experts' judgment. Qualitative analysis was not done due to paucity of time and resources. Though researcher acknowledged the merits of qualitative analysis, quantitative and descriptive analysis offered practicality in terms of time and cost. Three kinds of descriptive analyses (i.e. Item Ambiguity, Median, and Percentage Agreement) and three quantitative methods (i.e. Content Validity Index, Content Validity Ratio, Content Validity Coefficient) were used to determine the quality of the items. Descriptive analysis was conducted first as it highlighted the properties of the items. Firstly, the median item rating was worked out for each subscale. A higher median value indicates a more relevant item. Consistent with the work of Hellsten (2008), an item with a median of 2.75 or above was fixed for the study. Second, the item ambiguity score or the range of scores for each item was worked out. In line with the work of (Rogers, 2010) a range of three or more between scores (or Rk of 4 or higher) was deemed ambiguous since this research used a rating scale of 1 to 4. Percentage agreement was worked out to examine the percentage of judges who agreed the item, was a good fit to the category mentioned. The question "Is this item essential to the domain" was asked at the end of each item and the raters were asked to choose "Yes or No." A criterion of 80% was fixed for this study. The content validity index for each individual item (CVI; Lynn, 1986) is the percentage of judges that rated the item as 3 or 4 (based on the rating scale of 1 to 4 where 4 represent excellent fit. The CVI is expressed in terms of Percentage. Polit, Beck, and Owen (2007) observed that the CV Index value of 0.80 was considered acceptable for a panel of 10 members. So, CVI for this study was fixed at 80%. In order to calculate CV Ratio, the question "Is the item essential to the domain" was worded in to the item content Rating Review Forms for judges. The judges will have to answer in terms of Yes or No. The content validity coefficient (VIK; Aiken, 1985) was examined next. The closer the coefficient is to 1, the higher content validity an item has. To determine whether the calculated coefficient is significant, a comparison is made with a table of the *Right-Tail Probabilities (p) for Selected Values of the Validity Coefficient (V)* by Aiken (1985, p. 134).

After summarizing the results, it was decided that items meeting the criteria of less than 4 methods (66.67% agreement) should be removed.

#### **Findings of the study**

The item rating scale had a response range from 1 to 4. The experts were directed to read and rate the items to see if the item measured the construct. The median, item ambiguity, percent agreement, Content Validity Ratio, Content Validity Index, and Content Validity Coefficient (VI) were computed for each item. Decision criteria outlined earlier were used in retaining or rejecting items. The *right-tail probability value of validity coefficient VI* (Aiken, 1985, p.134) was found from the table for 10 experts, with a rating category of 4 - a value of 0.73 was significant at  $p < 0.32$ . The VI for the items retained were highly significant. Refer to Appendix C for the values and decisions made for all the subscales and the number of items retained in each core and subscales. It shows the results of the analysis for content validity and the decisions made to retain or reject an item. Of the 27 items, 23 items fulfilled the conditions of median cut off fixed for the study (2.75). In the case item ambiguity, eleven items displayed high ambiguity. In relation to percent agreement, only four items failed to achieve the cut-off (80%) fixed for the study. While in the case of CVI, 23 items exhibited the conditions fixed for the study. The minimum CVR for each item to be considered as acceptable was 0.62 for a one-tailed test at the 95% confidence level if a minimum of 10 panelists were used for the study (Lawshe, 1975). Of the 27 items, four items (RS3, RS4, RS5 and RS24) failed to make the cut. In the case of Content validity co-efficient, 22 items met the conditions. 6 items (RS3, RS4, RS5, RS16, RS19, RS24) failed to fulfill the conditions. After all the calculations were done, the results for each item under all the methods were then summarized. It was decided that items meeting the criteria of less than 4 methods (66.67% agreement) should be removed. 23 items met the criteria of four methods fixed for this study. Hence, it was decided to delete four items that did not meet the criteria of less than 4 methods. As illustrated in the Appendix B, 85% of the original items were retained following the content analysis.

#### **Future directions and conclusion**

It would be interesting to conduct studies using qualitative analysis to obtain content validity evidence for the RSCBS. Interview, Focus Group discussions and open-ended feedback can be conducted to establish content validity evidences. The Content validity study that includes qualitative, quantitative and descriptive analysis can make the instrument a good test with strong psychometric properties. It is to be noted that this research only provides one type of validity evidence (content validity) for this

potential measure. Content validity evidence is unitary and therefore multiple evidences should be collected for a test (Mesick, 1991). Hence additional research is needed to gather other validity evidence such as construct validity and criterion-related validity evidence. Aside from the validity evidence, reliability evidence such as test-retest reliability and internal consistency of the items should also be obtained. Continuation of collecting validity evidence can be conducted along with examining reliability issues while performing pilot studies.

Content validity marks a crucial phase in the selection and administration of an instrument. The two-step method used in this study, consisting of a developmental stage and a judgment-quantification stage, called for a comprehensive

literature review, item creation, and agreement from a specific number of experts about the items' and the entire instrument's validity. Ten experts were asked to identify omitted areas and to suggest areas for improvement, and these revisions were made. In the validation process several statistical measures were deployed to identify a well developed set of items for each subscale. The researcher was cautious enough in using a conservative level of significance to retain items. By employing a clear definition of the construct and the matching items by the experts' ratings and deploying appropriate statistical evidence the researcher has lent consistency, rigor, and structure to the RSCBS Scale. This research will also provide an opportunity for future researchers in re-examining and supporting or refuting the outcome of this research.

#### **APPENDIX A- Generation of item pools and its affiliate sources**

Dimensions	Items	Items culled or adapted from
Job analysis and Key selection Criteria	Job analysis is conducted to inform the job description	Kim, S. & Lee, J.2011;
	Job description is prepared to inform selection criteria	Mckillip,2001; Wilk& Capelli,2003;
	Job analysis is conducted to inform the job evaluation	McKillip, 2001; Kotey & Sheridan, 2004;
	Job analysis is conducted to inform the job authority	McKillip, 2001;
	Job analysis is conducted to inform standards of job performance	Lievens et al, 2002;
	Knowledge , Skills and attributes(KSA) required to perform the role is identified	Victoria State Services Authority, 2008
	Incumbents are involved in the process of identifying Knowledge , Skills and attributes(KSA)	Victoria State Services Authority, 2008;
	Managers are involved in the process of identifying Knowledge, Skills and attributes	Victoria State Services Authority, 2008;
	Candidates are able to clearly understand the Key selection criteria	Victoria State Services Authority, 2008;
Short listing	Organization values are communicated to candidate in the recruitment and selection process	Victoria State Services Authority, 2008;
	Standard application form is used	Victoria State Services Authority, 2008;
	Recording and acknowledging applicants is done	Victoria State Services Authority, 2008;
	Scoring procedure is used to evaluate whether applicants meet the key selection criteria	Victoria State Services Authority, 2008;
Interview and assessments	Applicants are matched to other roles to create a talent pool	Victoria State Services Authority, 2008;
	Structured behavior oriented interviews are conducted	Wiesner & Cronshaw, 1988;
	Interviews questions are structured around job related Knowledge , Skills and attributes	Campion et al 1988;
	Job knowledge tests are used for Technically oriented roles	Hunter, 1986;
	Work sample are used for technically oriented roles	Howard, A., 1983;
	Personality tests are used for assessing the candidates	Tett et al, 1991;
	Cognitive tests are used for assessing the candidates	Ree et al, 1994;
	Selection decisions are based on the criteria applicant achieve throughout the selection process	Victoria State Services Authority, 2008;
	Standard offer procedure is adopted	Armstrong ,2003;
	Reference checks are collected and properly documented	Hedricks et al , 2013
Induction	The organization communicates performance results to candidates at the end of the selection process	Mathis and Jackson (2003)
	Structured Induction programme is conducted	Snell, 2006;
	Buddy system is arranged	Rigby,2008 ; Sharon Florentine,2014;
	Formal feedback from the new starter is obtained	Stein & Christiansen, 2010

### Appendix B. Content Validity Evidence of Recruitment and Selection scale

Items	Judges Summary Ratings										Descriptive Methods			Quantitative Methods			Decision Rules ( If the conditions for 4 out of 6 methods are met, Item will be Retained or else Rejected )		
	1	2	3	4	5	6	7	8	9	10	Median	IA	PA	CVI	CVR	KA			
RS1	3	4	3	4	3	3	4	3	3	3	3	2	100%	100%	1	0.77	6	Retained	
RS2	3	4	3	4	4	3	4	3	3	3	3	2	100%	100%	1	0.8	6	Retained	
RS3	1	2	1	2	1	3	3	1	2	2	2	3	18%	18%	-0.64	0.27	0	Deleted	
RS4	1	2	1	1	1	2	2	2	2	1	1.5	2	0%	0%	-1	0.17	0	Deleted	
RS5	1	1	1	1	1	2	2	2	2	1	1	2	0%	0%	-1	0.13	0	Deleted	
RS6	4	4	3	3	4	4	4	3	3	3	3.5	2	100%	100%	1	0.83	6	Retained	
RS7	4	2	2	4	4	3	3	3	3	3	3	3	82%	82%	.81	0.83	6	Retained	
RS8	4	4	3	4	4	4	3	3	3	3	3.5	2	100%	100%	1	0.83	6	Retained	
RS9	4	4	4	4	4	3	3	3	3	4	4	2	100%	100%	1	0.87	6	Retained	
RS10	4	4	3	4	3	4	4	4	3	3	4	2	100%	100%	1	0.87	6	Retained	
RS11	4	4	4	3	3	4	4	3	3	4	4	2	100%	100%	1	0.87	6	Retained	
RS12	4	4	2	4	3	4	4	3	3	4	4	3	91%	91%	.81	0.83	5	Retained	
RS13	4	4	3	4	3	4	4	3	3	4	4	2	100%	100%	1	0.87	6	Retained	
RS14	4	4	4	4	3	4	3	2	3	3	3.5	3	91%	91%	.81	0.80	5	Retained	
RS15	3	4	2	4	3	3	4	3	3	3	3	3	91%	91%	.81	0.73	5	Retained	
RS16	3	3	3	3	3	3	4	3	3	3	3	2	100%	100%	1	0.70	5	Retained	
RS17	3	4	4	3	3	4	3	3	3	2	3	3	91%	91%	.81	0.73	4	Retained	
RS18	4	4	3	3	3	3	4	2	3	3	3	3	91%	91%	.81	0.73	5	Retained	
RS19	3	3	3	3	3	4	4	3	4	1	3	4	91%	91%	.81	0.7	5	Retained	
RS20	4	3	3	3	3	3	4	3	4	4	3	2	100%	100%	1	0.83	6	Retained	
RS21	4	4	3	3	3	4	4	4	3	3	3.5	2	100%	100%	1	0.85	6	Retained	
RS22	3	4	3	3	4	4	4	4	3	3	3.5	2	100%	100%	1	0.85	6	Retained	
RS23	4	4	3	3	4	4	4	4	3	3	4	2	100%	100%	1	0.87	6	Retained	
RS24	1	1	1	2	2	1	1	1	2	1	1	2	0%	0%	-1	0.10	0	Deleted	
RS25	4	3	3	3	4	4	4	2	3	3	3	3	91%	91%	.81	0.77	6	Retained	
RS26	4	3	3	3	3	4	4	4	2	4	4	3.5	3	91%	91%	.81	0.80	5	Retained
RS27	4	3	3	3	4	4	4	4	2	3	3	3	91%	91%	.81	0.77	5	Retained	

(IA- Item Ambiguity, PA- Percent Agreement , CVI-Current Validity Index, CVR-Current Validity Ratio, VIK-Content alidity co-efficient)

**APPENDIX -C**  
**RECRUITMENT AND SELECTION CAPACITY BUILDING SCALE**

Dear Sir /Madam,

Regards. We are conducting a survey on “Recruitment and Selection Capacity Building of HRM Functions .The survey focuses on identifying the important areas for improving and strengthening the Recruitment and Selection, This study will hugely benefit the organizations that are keenly looking to identifying, improving and strengthening vital areas of performance enhancement.

Instructions (Tips to assess the form)

1. Item rating – You need to rate the item on the scale of 1 to 4. ( 1- No fit, 2-May fit, 3- Good Fit, 4-Excellent Fit)
2. Suggested Ratings – You can re-word/correct the item if need be
3. Is the item well written – Indicate Yes or /No
4. Is the item essential to the Domain /Category - Indicate either Yes or /No

Recruitment and Selection

Category		Category Specifications									
Recruitment and Selection		Organizationally articulated proposal, with theoretical and practical constructions , to perform job analysis , identify KSA Prepare position description , Short listing, interview assessment and selection criteria and Induction									
		Item rating scale :									
		1 "No Fit"		2		3		4 "Excellent Fit"			
Item#	Item		Item Rating			Suggested Item Revisions		Is the Item Well Written?	Is the Item Essential to the Domain?		
Job analysis and Key Selection Criteria											
RS1	Job analysis is conducted to inform the job description		1	2	3	4		Yes / No	Yes / No		
RS2	Job description is prepared to inform selection criteria		1	2	3	4		Yes / No	Yes / No		
RS3	Job analysis is conducted to inform the job evaluation		1	2	3	4		Yes / No	Yes / No		
RS4	Job analysis is conducted to inform the job authority		1	2	3	4		Yes / No	Yes / No		
RS5	Job analysis is conducted to inform standards of job performance		1	2	3	4		Yes / No	Yes / No		
RS6	Knowledge , Skills and attributes(KSA) required to perform the role is identified		1	2	3	4		Yes / No	Yes / No		
RS7	Incumbents are involved in the process of identifying Knowledge , Skills and attributes (KSA)		1	2	3	4		Yes / No	Yes / No		
RS8	Managers are involved in the process of identifying Knowledge, Skills and attributes		1	2	3	4		Yes / No	Yes / No		
RS9	Candidates are able to clearly understand the Key selection criteria		1	2	3	4		Yes / No	Yes / No		
RS10	Organization values are communicated to candidate in the recruitment and selection process		1	2	3	4		Yes / No	Yes / No		
B. Shortlisting											
RS11	Standard application form is used		1	2	3	4		Yes / No	Yes / No		
RS12	Record and acknowledge applicants		1	2	3	4		Yes / No	Yes / No		
RS13	Scoring procedure used to evaluate whether applicants meet the key selection criteria		1	2	3	4		Yes / No	Yes / No		

RS14	Applicants are matched to other roles to create a talent pool	1	2	3	4		Yes / No	Yes / No
<b>C. Interview and assessment criteria</b>								
RS15	Structured behavior oriented interviews are conducted	1	2	3	4		Yes / No	Yes / No
RS16	Interviews questions are structured around job related Knowledge , Skills and attributes							
RS17	Job knowledge tests are used for Technically oriented roles							
RS18	Work sample are used for technically oriented roles	1	2	3	4		Yes / No	Yes / No
RS19	Personality tests are used for assessing the candidates	1	2	3	4		Yes / No	Yes / No
RS20	Cognitive tests are used for assessing the candidates	1	2	3	4		Yes / No	Yes / No
RS21	Selection decisions are based on the criteria applicant achieve throughout the selection process	1	2	3	4		Yes / No	Yes / No
RS22	Standard offer procedure is adopted	1	2	3	4		Yes / No	Yes / No
RS22	Standard offer procedure is adopted	1	2	3	4		Yes / No	Yes / No
RS23	Reference checks are collected and properly documented	1	2	3	4		Yes / No	Yes / No
RS24	The organization communicates performance results to candidates at the end of the selection process	1	2	3	4		Yes / No	Yes / No
<b>D. Induction</b>								
RS25	Structured Induction programme is conducted	1	2	3	4		Yes / No	Yes / No
RS26	Buddy system is arranged	1	2	3	4		Yes / No	Yes / No
RS27	Formal feedback from the new starter is obtained	1	2	3	4		Yes / No	Yes / No

1. If you were to group together the items you rated at 3 or 4, would these items completely represent the category of Recruitment and selection?

❖ Yes      ❖ No

2. If the answer is No, please indicate what items should be added. Are there items that you would recommend as ‘having an excellent fit’ that have been omitted from this item bank

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# Gender Difference : Investment Behavior and Risk Taking

Malabika Deo and Vijayalakshmi Sundar

## A b s t r a c t

*Behavioral finance is a unique school of thought that applies to investment decisions unifying the concepts of finance, economics, and psychology. Through investment, an individual is swapping the present cash outflow with a future cash inflow. While the present is certain, future is uncertain, thus the cash inflow is uncertain, as a result the investor is exposed to risk. As Investment comprises risk, it becomes essential for an investor to discern the various investment avenues and the risk associated to it. The study focuses on the role of gender in investment behavior and risk taking, with a sample size of 200 respondents using Mann-Whitney U-test and Chi-square statistics for hypotheses testing. It discloses that there is a significant difference among men and women in investment behavior. It also confirms that men are strong risk takers, and women on the other hand seemed not to tolerate uncertainty in investments, and prove to be more risk-averse than men.*

**Key Words :** Investment, Risk, Gender, Investor Behavior, Stock market.



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Indians are said to be the wise savers but poor investors. The world's fourth-largest economy with 1.2 billion populace and, India's recent growth and development has been one of the most significant achievements of the times. Over the six and half decades since independence, the country has brought about massive economic growth but still inequity endures in all dimensions, including region, caste, and gender. Although the education level of women started leaping, still many women feel a burden for the investment and also deal it with less confidence and they generally avoid taking risk in most matters leave aside investments.

A recent all-India survey has found that 80% of working women have no investment. Despite handling responsibilities at their workplace, they depend on parents and family members, friends, and financial advisers when it comes to taking a call on money matters such as where and how much to invest. The reasons for this behaviour vary from risk aversion, insufficient financial knowledge to even lack of freedom to take financial decisions. Though the human psychology is perceived to be common but still there

exists difference between the genders, as male and female react differently to certain circumstances, environment, incident etc. When comes to investment and risk taking, it is believed that men and women differ in their mentality and behaviour. As per the dictum of finance theories, all human beings are rational and behave in the same manner as far as expectations, preference etc., are concerned as all are utility maximizers. However, as far as investments are concerned whether the unifying rational prudence prevails over the psychology of the gender need to be examined. The present study tried to find whether gender plays a significant role in investment.

The volume of research in the field of behavioural finance has grown over the recent years and is very popular in stock markets across the world for investment decisions as markets go in cycles, from bull to bear vice versa. It took a very logical premise about the tradeoff between risk and return and added psychology. Perfect application of behavioural finance can make investors successful in their stock market also the basic mistakes namely emotional decisions, mental errors, herd mentality can be avoided. People expend too much time studying investment behavior and not enough time focusing on investor behavior. Regardless of what an investment does, it is the decisions of the investor to buy or sell that ultimately determines success or failure. This fact is the underlying premise in behavioral finance.

### **Review of literature**

Academic researchers have identified various psychological approaches to elucidate gender difference in investment behaviour, and risk taking level of male and female. Researchers like Jianakoplos and Bernasek 1998, Charness and Gneezy 2007, Beckmann and Menkhoff 2008, Tahira and Cäzilia 2008, Nataliya et al. 2009 point to difference by gender in investment goals; risk tendency and investment return prospect. Martenson (2008) observes that women were found to have a preference for short-term achievements are less interested than men in making long-term investments, investment decisions and financial choices when compared to men. Burton (1995) observes that the identities, self-esteem and sense of power held by men, are intrinsically connected with the attainment and use of money while observing that women tend to seek immediate satisfaction through spending money wisely rather than acquiring it. Estes and Hosseini (1988) and also Charness and Gneezy (2007) found that these gender-based self-perceptions led

to men being more preoccupied and concerned than women in investment and resource allocation decisions, both in family and social life situations.

When the Risk attitude is concerned, it is observed that there are differences between men and women (Byrnes et al. 1999, Bernasek and Shwiff 2001, Dwyer et al. 2002, Felton et al. 2003, Faff et al. 2008, Neelakantan 2010). In a meta-analysis of 150 studies in which the risk-taking tendencies of male and female participants were compared, Byrnes et al. (1999) suggest that men are generally more inclined towards risk taking than women. Using data from a survey of nearly 2000 mutual fund investors, Dwyer et al. (2002) report that women exhibit more careful and cautious risk-taking behaviour than men in their mutual fund investment decisions. Research on professional investors by Olsen and Cox (2001) observes that women often follow a more careful investment strategy of systematically reducing the level of risk involved in their decisions. Unlike men, who are found to be orientated to increasing returns, women appear to be more concerned with ensuring steady returns from their investments and accordingly exhibit greater tendency to select a return target and then work systematically forward, reducing the risk involved.

Behavioural finance researchers such as Barber and Odean (2001), Gervais and Odean (2001) and Tahira and Cäzilia (2008) believe that in matters relating to finance and investments, men are temperamentally more over-confident than women and therefore tend to be more prone to risky decisions. A number of researchers have questioned the widely held and deterministic assumptions about the influence of gender on investment orientation and behaviour of men and women (Schubert et al. 1999, Olsen and Cox 2001, Bliss and Potter 2002, Dwyer et al., 2002, Barasinska et al., 2009, Sapienza et al., 2009). Olsen and Cox (2001), though reporting that women are more careful and risk-conscious than men, state that women are equally capable of making financial choices and decisions. Schubert et al. (1999) argue that women are not typically risk-averse and that they do not always make less risky financial choices than men. Schubert et al. further state that the comparative risk propensity of men and women in financial choices depends, to a large extent, on the decision frame. Similarly, Dwyer et al. (2002) believe that the impact of gender on risk taking is significantly weakened when investor knowledge of financial markets and investments was controlled.

Tahira and Ca'zilia (2008), while reporting that women invested less money, in less risky ventures than men did, point to the lesser possession of capital in the former group as a contributory factor alongside their traditionally lesser access to education and information. While the above observations challenge many of the assumptions about the role of gender difference in investment behaviour, the objectives and hypotheses adopted as a starting point for this research investigation are formulated in the light of the assumption that gender differences may influence investment and risk preference among investors.

### **Objectives:**

The overall objectives of the study are:

1. To find out whether there exist difference in investment choice between men and women, and
2. To find out whether there exist difference risk level between men and women.

### **Hypotheses:**

Based on the above objectives, the following hypothesis were set

$H_0^1$ = There is no significant difference in the investment preference between male and female.

$H_0^2$ = There is no significant difference in the risk preference between male and female.

### **Data**

To accomplish the aforementioned research objectives, data are collected from a structured questionnaire survey of 200 investors from Pondicherry under Convenient sampling technique. The Mann-whitney Rank Sum and Chi-square tests have been applied for data analysis.

### **Demographic Profile of the Sample Respondents**

This section presents the demographic and economic characteristics of the respondents with emphasis on gender differences which include age, marital status, education, monthly income and monthly investment. About three-fourth of the respondents were men (75%), and about one-third were women (25%). On average, respondents were thirty five years old, majority married (83%). About three-quarters of the respondents held a Bachelor's degree (41.5%) and are full-time employees, typically in highly professional positions. While the three fourth of the sample reported an annual single income group earned over 200,000 annually,

on average, respondents reported annual investment of 60000.

It is evident from Table 1 that a majority of respondents (45%) were between twenty six and thirty five. Almost three fourth of the men (70%) were under the age of thirty five; while just slightly near half of the men (30%) were under the age of thirty five. To indicate their marital status, participants could choose among the following options: married; or single. Overall, the majority of the respondents were married (83%) among that more were men (75.9%) than women (24.1%).

The survey instrument requested educational details; possible answers included Master's degree, Bachelor's degree, Vocational or technical school and High school or equivalent. Gender differences in levels of education reported that a majority (41.5%) of the participants in this sample had Bachelor's degree and in that more were men (84.3%) than women (15.7%) and a very small percentage of the total sample (12%) indicated that they had a vocational or technical school. A larger percentage of men (66.7%) than women (33.3%) reported that they had a professional degree. Slightly more than one fourth of the respondents had Masters' degree. Information provided by the respondents about their occupations was grouped in five occupational categories that are recognized by Professional, Business, Employee, Retired and Others. Information provided by the respondents about their occupations was grouped in five occupational categories that are recognized by Professional, Business, Employee, Retired and Others. Slightly less than half (44.5%) of the respondents were employed personnel. They were engineers, managers, teachers, share brokers and businessmen. Slightly less than a quarter (15.5%) indicated that they held managerial positions such as financial analysts, accountants, executives, educational administrators, and managers. A small percentage of the respondents (5.5%) indicated that they are retired, as can be seen from the information presented in the table below. There were notable differences between the occupations of men and women in the study. The percentage of men employed in the professional occupational category (64.5%) was slightly higher than that of women (35.5%). On the other hand, majority of men (96.4%) than women (3.6%) were engaged in their own business. As can be seen from Table 1, a majority of the respondents (54.5%) incomes are between 10000 and 25000. However, 15% of the respondents were in highest income category, more than 600000 annually. Gender differences were notable on both ends of the income scale.

Nearly three fourth of the men are earning above 10000. On the one hand, slightly larger percentage of men (92.3%) than women (7.6%) reported a monthly income above 50000. Table

1 summarizes respondents' demographic characteristics and also exhibits the profile of respondents gender wise.

**Table 1: Demographic characteristics**

Variable	All		Men		Women	
	N	%	N	%	N	%
Gender	200	100	150	75	50	25
Age						
<i>Up to 25 Years</i>	11	5.5	4	36.4	7	63.6
<i>26 - 35 Years</i>	90	45	63	70	27	30
<i>36 - 45 Years</i>	60	30	51	85	9	15
<i>46 - 55 Years</i>	20	10	14	70	6	30
<i>56 - 65 Years</i>	14	7	13	92.9	1	7.1
<i>65 and Above</i>	5	2.5	5	100	0	0
Marital Status						
<i>Single</i>	34	17	24	70.6	10	29.4
<i>Married</i>	166	83	126	75.9	40	24.1
Education						
<i>Master's degree</i>	60	30	37	61.7	23	38.3
<i>Bachelor's degree</i>	83	41.5	70	84.3	13	15.7
<i>Vocational or technical school</i>	24	12	16	66.7	8	33.3
<i>High school or equivalent</i>	33	16.5	27	81.8	6	18.2
Occupation						
<i>Professional</i>	31	15.5	20	64.5	11	35.5
<i>Business</i>	56	28	54	96.4	2	3.6
<i>Employee</i>	89	44.5	58	65.2	31	34.8
<i>Retired</i>	11	5.5	11	100	0	0
<i>Others</i>	13	6.5	7	53.8	6	46.2
Monthly Income						
<i>Up to 10000</i>	36	18	27	75	9	25
<i>10001 - 25000</i>	109	54.5	77	70.6	32	29.4
<i>25001 - 50000</i>	42	21	33	78.6	9	21.4
<i>Above 50000</i>	13	15	12	92.3	1	7.6

### **Investment preference and risk taking: An investigation.**

The participants were asked to respond by saying "yes" or "no" if they prefer any of the following investment assets such as real estate, gold, debenture, deposits, insurance, shares, PO savings, and mutual funds. Detailed information is included in Table 2. A majority of the respondents (84%) owned shares. Nearly half of all respondents indicated that they prefer to invest in deposits (42.5%), insurance (40.5%) and gold (39.5%). One fourth of the respondents owned Mutual funds and PO savings (22.5% and 22%). A much

smaller percentage of the participants indicated investment in real estate (14%) and debentures (15.5%). Differences between men and women in these areas were prominent. Comparatively, higher rate of the men prefers land (86.5), Real estate (100%), shares (82.1%), and mutual funds (82.1%) than women. About a quarter of the women in our sample made frequent use of PO savings (22.7%). Similarly, when questioned about their deposits, women reported a slightly higher rate (64.7%) than men (35.3%). Also women showed nil interest to invest in real estate and debentures.

In case of type of company they invest, a majority indicated that they prefer matured company. More than three fourths of men prefer to invest in matured, newly established and diversified company, however it is of some concern to note that about slightly more women (56.9%) than men said that they prefer growth oriented company. We also included a question to determine their scrip preference in relation to risk. The options presented to them were: (a) High Return with High risk, (b) Low return with low risk, (c) Moderate return with Moderate risk. Also included question to determine their risk tolerance level and the choices given was: (a) Low risk, (b) High Risk, (c) Moderate risk, and (d) No Risk. The results presented in Table 2 show that most respondents (68.5%) prefer scrip with moderate returns and

a smaller percentage (13%) indicated that they prefer High return with High risk. The scrip preference varied significantly between men and women. A majority of the women (91.9%) indicated that they preferred to take low return with low risk. On the other hand, majority of the men (95.6%), preferred to take Moderate return with Moderate risk. The results also show that most respondents (30%) were willing to take low risk, smaller percentage (8%) indicated that they were willing to take high risk. The willingness to take specific levels of risk in anticipation of specific levels of return varied significantly between men and women. A majority of the women (76%) indicated that they preferred to take low risks with their investments. On the other hand, no women prefer to take High risk.

**Table 2: Investment preference and risk taking**

Variable	All		Men		Women	
	N	%	N	%	N	%
Gender	200	100	150	75	50	25
Asset preference						
<i>Land</i>	74	37	64	86.5	10	13.5
<i>Real estate</i>	28	14	28	100	0	0
<i>Gold</i>	79	39.5	55	69.6	24	30.4
<i>Debenture</i>	31	15.5	31	100	0	0
<i>Deposits</i>	85	42.5	45	52.3	30	35.3
<i>Insurance</i>	81	40.5	51	63	30	37
<i>Shares</i>	168	84	138	82.1	30	17.9
<i>PO Savings</i>	44	22	34	77.3	10	22.7
<i>Mutual Funds</i>	45	22.5	40	88.9	5	11.1
Company Preference						
<i>Matured</i>	74	37	68	91.9	6	8.1
<i>Growth</i>	65	32.5	28	43.1	37	56.9
<i>Newly established</i>	43	21.5	33	76.7	10	23.3
<i>Diversified Company</i>	18	9	15	83.3	3	16.7
Choice of Income						
<i>Risk free regular income</i>	114	57	77	67.5	37	32.5
<i>High yielding risk</i>	28	14	26	92.9	2	7.1
<i>Earnings Investment</i>	38	19	25	65.8	13	34.2
<i>Enhanced returns</i>	30	15	20	66.7	10	33.3
Scrip Preference						
<i>High Return with High risk</i>	26	13	16	61.5	10	38.5
<i>Low return with low risk</i>	37	18.5	3	8.1	34	91.9
<i>Moderate return with Moderate risk</i>	137	68.5	131	95.6	6	4.4
Risk tolerance level						
<i>Low risk</i>	60	30	24	40	46	76
<i>High Risk</i>	16	8	16	100	0	0
<i>Moderate risk</i>	58	29	32	55.1	26	44.9

## Results and Discussion

$H_0^1$ = There is no significant difference in the investment preference between male and female.

Mann Whitney U test revealed that there is a significant difference between gender and investment preference (Rejected Null Hypothesis). Males (Mean Rank = 115.98,

n=150), Females (Mean Rank = 54.06, n=50), U=1428, Z=-6.624, p=.000)

From the data analysis and hypothesis, it is concluded that male and female respondents do differ in their investment preference.

**Table 3**  
**Investment preference between Gender**

Gender	N	Mean Rank	Sum of Ranks
<b>Investment Preference</b>			
Male	150	115.98	
Female	50		2703
Total	200	54.06	

Mann- Whittney U test

### Test Statistics

	Gender difference
Mann Whitney U	1428
Wilcoxon W	2703
Z	-6.624
Asymp Sig. (2 tailed)	0

## Chi-Square Analysis:

### Association between gender and risk preference

$H_0^2$ = There is no significant difference in the risk preference between male and female.

Chi-Square value discovered that there is no significant relationship between gender and risk preference (Rejected Null Hypothesis). Chi-Square value = 5.537, Asymptotic. Sig. value = 0.019 which is lesser than the critical value (P=0.05).

**Table 4**  
**Chi-Square results**

Particulars	Value	df	Asymp. Sig.(2-sided)
Pearson Chi-Square	5.537 <sup>a</sup>	1	0.019
Likelihood Ratio	6.851	1	0.009
Linear-by-Linear Association	5.509	1	0.019
N of Valid Cases	200		

## Conclusion

A review of literature clearly shows that one of the significant determinants of investment behavior is risk tolerance level. In our effort to better understand the behavior of this sample we included a question to determine their risk tolerance level. It is believed that men are less risk averse and do more investments which involve high risks but on the other hand women are risk averse and not ready to take up risky investments. Basically women don't come forward to do investments while men do lot of investments. As Investors react in a different way in their investment and risk taking, it is a necessity to substantiate the general conviction that men and women differ in their investment behavior. From the results, it is understood that there is a significant difference among men and women in investment preference, most of men were willing to take average risk for average returns and a smaller percentage indicated that they were willing to take above average risk for an above average return. On the other hand women are not willing to take high risk. Very few are willing to take medium risk but they rather prefer less risk. Overall, we found that the majority of respondents were involved in daily money management, saved regularly, and were well-equipped with regular banking products, such as checking accounts, retirement accounts, and life insurance.

The study revealed that the women of our sample took on more responsibility for daily money management whereas the men were the investment decision-makers. Men were more active investors than the women in our sample, likewise the men of our sample reported a higher financial risk tolerance. Women said more often that they consult with an advisor. The ownership of investment vehicles mirrors these differences between men and women. They are different in choosing scrip, company, sector etc., besides men are confirmed to be a strong risk takers, women on the other hand seemed not to tolerate uncertainty in investments, and prove to be more risk-averse than men as large percentage of women invested in the minimum-risk portfolio available to them.

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# Employee's Perception towards e-HRM Implementation : Indian Service Sector

Chandra Sekhar and Manoj Patwardhan

## A b s t r a c t

The paper aims to examine employee perception towards implementation of e-HRM in service organisation. Employees, Managers, and HR professionals working in service sector interviewed to examine their perception towards implementation of e-HRM. Responses were analysed using factor analyses. The main findings were large elimination and cutting of redundant activities and a boost to the profit margins of service organisations. e-HRM seemed to be both motivator and facilitator of change in the service industry of India. It reduces dependence on time consuming and error-prone human resource paper trail.

**Keywords:** *Electronic Human Resource Management, Employee, Managers, HR Professionals, Service organisation*



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Recent technology development and explosion of information technology (IT) in India have made it possible to create real time, information-based self-service cooperative work environment for employee working in service organisation. It helps employee to keep knowledge current in line with recent development and compete worldwide. In 2013, Bissola and Imperatori showed development of electronic human resource management (e-HRM) helpful in shaping employees organisation relationship and in influencing the role of human resource. It is gaining more attention these days, needed to introduce in the working organisations as suggested by Lin (2011). Likewise, e-HRM as a research stream emerged, as consequence of latest technological advancements (Lujan et al., 2007). Though, over the time, human resource professionals began to explore full range of opportunities for using internet along with other technologies for delivery of human resource services. In the word of Parry (2011), e-HRM can be defined as a means to upsurge the significance of the human resources (HR) functions, within the framework of resource-based view. Many HR

professionals expressed its advantages and believed that feasibility of implementing e-HRM is much dependent on availability of resources. Here, the word 'implementing' has a general meaning, such as putting something into practice, making something work or having somewhat realised (Ruel et al., 2004). Technophiles expressed, this phenomenon could help to reduce cost as well as number of personnel in HR section. It makes HRM role more strategic and driving force behind HRM value creation. The goal of gaining efficiency is often related to goal of reducing costs. Technophobia's posits implementation and maintenance of e-HRM systems involve huge investment, complex and difficult to understand. These results in, less educated employee can lose their employment and personal value in organisation as well as in societies. e-HRM speeds up transaction processing, decreases information errors, and advances the tracking and control of HR actions (Bondarouka et al., 2009). With e-HRM facility to management, employee is expected to improve and help to create new paths for contributing in organisational success and considered as driving force behind HRM value creation. e-HRM is identified as catalyst towards achieving business strategies, and little interest among local companies to adopt it. Likewise, (Strohmeier 2007) concluded e-HRM could be understood as the application of information systems (IS) for both networking and supporting actors in their shared performance of HR activities. It reduces the repetitive paperwork that HR specialists have to carry out (Han et al., 2013) and it improves service delivery (Lengnick-Hall and Moritz, 2003). Most of the respondents opined that, better internet facility in organisation is critical success factor for using e-HRM in service organisation. It speeds up and streamline the recruitment process, makes it easier and will be main tech driver for recruitment process in the years to come (Nura et al., 2012). By using e-HRM web-based technologies, supervisors and personnel are made responsible for fulfilling the activities of HR role and by these a new HR architecture is created. Huang and Taylor (2013) highlighted, HR plays more proactive role in shaping and reshaping users' perceptions towards accepting such a technology by better understanding, how systematic interventions can be developed, used and evaluated. The activities offer opportunity to generate cost savings, efficiency improvements and need fulfilment of employees and managers. So, e-HRM technology implementation enables HR professionals to do HR activities when the technology "possesses the specialist knowledge" and e-

HRM activities are based on well through thought of HR policies. Hence, still interesting to test end-user acceptance, satisfaction, and actual use behaviour of HR activities provided through e-HRM within the service organisation.

The paper is organized and will proceed in the following manner. First, section of the paper describes the overall introduction of e-HRM and its consequences. Second section of the paper proceeds with service industries in India and its international comparison. Third section of the paper includes the brief literature review and researchers view on e-HRM and problem statement. In the same way, fourth section is followed by research methodology section and characteristics of the service industries. Fifth section comprised demographic profile of the respondents. Sixth section includes reliability and factor loadings of the factors. Seventh section includes result and discussion of the paper and in the end paper ends with the conclusion, implication, limitations, and future direction of the paper.

### **Service Industry in India**

The services industry is one of the largest and fastest-growing sectors in the global market [1]. Its contribution to the Indian economy is significant, with regard to employment potential and impact on national income [1]. The sector expanded with double-digit growth in the second half of the 2000s [2]. And in 2013, it contributes to 60 per cent (%) of the country's gross domestic product (GDP), 35 per cent of employment, a quarter of the total trade, and over half of the foreign investment inflows [1]. The services sector received foreign direct investment (FDI) equity inflows worth Rs 179,150.49 crore (US\$ 28.78 billion) in the period April 2000–August 2013, according to Department of Industrial Policy and Promotion (DIPP), India [1]. 80 per cent (%) of India's total exports are dominated by high-skilled services, such as financial services, software business services, and communication services [1]. The expenditure of Indian banking and securities companies on IT products and services is expected to be around US\$ 422 billion in 2013, a 13 per cent (%) increase from 2012 [1]. These characteristics of service sector in India are the main motivation for selecting the concerned sector for present study.

### **International Comparison**

In world GDP of US\$70.2 trillion in 2011, the share of services was 67.5 per cent (%), more or less the same as in 2001 [3]. Interestingly the top 15 countries in terms of services GDP are same in overall GDP in 2011 [3]. This list includes the

major developed countries and Brazil, Russia, India, and China. Among the top 15 countries with highest overall GDP in 2011, India ranked 9th in overall GDP and 10th in services GDP [3]. Comparison of the services performance of the top

15 countries in the eleven-year period from 2001 to 2011 shows that the increase in share of services in GDP is the highest for India (8.1 percentage points) followed by Spain [3].

**Table-1: Performance in Services: International Comparison**

Country	Rank		Overall GDP (US\$ Billion)		Share of Services (Percent of GDP)			Change in Share 2011 Over 2001	Services Growth Rate (Percent)			CAGR 2001 -11
	Over-all GDP	Ser-vices GDP	At Current Prices 2011	At Constant Prices 2011	2001	2010	2011		2001	2010	2011	
US	1	1	14991.3	13225.9	77.0	78.3	78.4	1.4	2.9	2.5	5.1	2.1
China	2	3	7203.8	4237.0	40.6	41.9	41.7	1.1	10.4	9.9	8.9	11.1
Japan	3	2	5870.4	4604.1	70.6	69.9	70.5	-0.1	1.8	1.1	0.6	0.4
Germany	4	4	3604.1	3048.7	70.0	70.8	70.0	0.0	2.5	1.0	1.9	1.3
France	5	5	2775.5	2240.5	76.8	79.0	79.2	2.4	1.8	1.9	2.1	1.4
Brazil	6	8	2476.7	1126.4	65.4	66.2	66.5	1.1	1.8	5.0	3.1	3.8
UK	7	6	2429.2	2381.1	74.0	76.4	76.0	2.0	3.8	1.1	1.2	2.3
Italy	8	7	2195.9	1773.1	70.9	73.1	73.1	2.2	2.6	1.4	0.7	0.6
India	9	10	1897.6	1322.7	50.1	56.8	58.2	8.1	7.5	9.4	7.4	9.2
Russia	10	13	1857.8	947.2	56.3	62.4	62.1	5.8	3.3	3.9	3.6	5.5
Canada	11	9	1736.9	1233.5	65.0	69.9	69.7	4.7	3.5	2.6	2.2	2.7
Australia	12	11	1515.5	894.5	67.9	69.0	69.2	1.3	3.9	2.3	3.6	3.3
Spain	13	12	1478.2	1183.8	63.7	69.8	70.0	6.3	3.6	1.2	1.2	2.8
Mexico	14	14	1155.2	956.8	61.4	63.8	64.2	2.8	1.2	5.4	5.0	2.9
South Korea	15	15	1116.2	1056.1	60.5	57.0	56.6	-3.9	4.4	3.9	2.7	3.5
<b>World</b>			<b>70201.9</b>	<b>52667.7</b>	<b>68.2</b>	<b>67.6</b>	<b>67.5</b>	<b>-0.7</b>	<b>2.8</b>	<b>2.9</b>	<b>3.6</b>	<b>2.6</b>

**Source:** Ministry of Finance, Govt. of India (2012).

**CAGR:** Compounded Annual Growth Rate

**Note:** Rank is based on current prices, shares are based on constant prices (US\$), growth rates are based on constant prices (US\$), CAGR is estimated for 2001-11; construction sector is excluded in services GDP

## Literature Review

The presented work aims to investigate employee perception towards e-HRM implementation and its use in a service industry in India. In this connection the following dimensions of e-HRM are taken into consideration i.e.,

Attitude (AT); Perceived usefulness (PU); Behavioral intention (BI); Amount of information (AI); Perceived enjoyment (PE); Security and privacy (SP). Scholarly contribution consists of linking the emerging literature on e-HRM (Huang and Taylor, 2013; Yusliza and Ramayah, 2011;

Zafar et al., 2010; Bondarouk et al., 2009). Body of empirical research that discussed adoption of e-HRM in the organisation (Strohmeier and Kabst, 2009; Galanaki and Panayotopoulou, 2008; Panayotopoulou et al., 2007; Ball, 2001). Results showed that theoretical and empirical research in this area is still at an early stage. Earlier researchers have suggested e-HRM might support the HR role in becoming more efficient, efficient service delivery system and adopting a greater role in delivering the firm's business. Main goal of e-HRM is to produce efficiency gains or cost reductions by reducing headcount and removing administration, this assertion is supported by the authors (Martin et al., 2008; Ruel et al., 2006; Snell et al., 2002). Panayotopoulou et al., (2007) had identified array of reasons for e-HRM adoption in an organisation which includes operating cost reduction (Stanton and Covert, 2004) company image enhancement and time management etc. They concluded that collaboration between human resource (HR) and IT can be considered as the most success factors for e-HRM adoption. It enhances effective evaluation of developmental activities and learning ability of employee (Ensher et al., 2002). Likewise, Ruel et al., (2007) emphasized e-HRM research is still in its "youth phase" and could improve the HR service level and become strategic partner by giving space to HR department (Armstrong, 2005). They stated e-HRM were necessary to measure their value and uniqueness for the specific organisation. The adoption of e-HRM affects the responsibilities of different stakeholders for performing HR activities. Likewise, Lengnick-Hall and Moritz (2003) identified three different levels of e-HRM that have developed over time involves one-way communication from organisation to employees or managers through web-based

channels. The second higher-level involves automation of transactions, workflow, and even supply-chain integration where paperwork is replaced by electronic input. Managers and employees can access databases, update information, search for needed information, and make decisions. The third and highest-level involves transformation of HR system. The e-HRM systems are used to deliver training, manage employee performance, administer compensation and help systems (Strohmeier, 2007; Gueutal and Stone, 2005). It were helpful to increase the efficiency of HR practices, moderate administrative costs, and decrease transaction times (Gueutal and Stone, 2005). Attitudes towards e-HRM implementation should influence individuals' behavioral intentions and behaviors when electronic systems are used compared to traditional HR systems for e-recruiting process (Braddy et al., 2008). The website characteristics influence applicants' impressions of organisation. Likewise, technology developments have potential to generate more strategic role than an administrative one for HR department (Lujan et al., 2007; Strohmeier, 2007). The ability to cope with changes in HR role and support that is provided to employees during e-HRM implementations are deemed essential (Voermans and Veldhoven, 2007; Fisher and Howell, 2004). Likewise, Shabha (2000) stated whole technology have not only enhanced knowledge storing methods and learning techniques but acted as catalyst to combat inefficient HR practices and notable barriers of inflexible organisational structures. In addition, Hall and Moritz (2003) still believes that it has potential to affect both efficiency and effectiveness scientific in terms of organisational decisions and e-HRM practices are more of utilitarian in nature than a disaster (Nura et al., 2012).

**Table-2: Researchers' views on e-HRM from the period ranging from 2000 to 2013**

<b>Author</b>	<b>Views on e-HRM</b>
Bissola and Imperatori, (2013)	e-HRM influences employee commitment and their perceptions of competence in HR departments.
Ruel and Kaap, (2012)	e-HRM is anticipated as driving force behind HRM value creation. It is in line with system's intended purpose and contextual factors.
Yusliza and Ramayah, (2011)	e-HRM technology provides human resource functions with opportunity to create new avenues for contributing in organisational success.
Zafar et al., (2010)	e-HRM is in its initial stage and has become imperative to meet HR challenges of 21st century.
Bondarouk et al., (2009)	There are differences in use of e-HRM between line managers and employees. Its applications are associated with HRM effectiveness.

<b>Author</b>	<b>Views on e-HRM</b>
Sanaye and Mirzaei, (2008)	e-HRM tools are rarely used, have a positive effect on HRM output in organization.
Ruel et al., (2007)	e-HRM applications influences HRM technical and strategic effectiveness. These will give HR department space to become a strategic partner.
Hooi, (2006)	e-HRM have significant impact on competitiveness of the industry, namely, recruitment, compensation and benefits, training and development, communication and performance appraisal.
Burbach and Dundon, (2005)	e-HRM commonly used for administrative rather than strategic decision making purposes; and the firms with e -HRM had better HRM information compared with non-e-HRM using companies.
Ruel et al., (2004)	e-HRM is a concept - a way of ‘doing’ HRM. Helpful in implementing HR Policies, strategies, and practices in organisations through a conscious and directed support of and/or with the full use of web-technology-based channels.
Shrivastava and Shaw, (2003)	e-HRM is expected to facilitate more efficient and strategic way of working for HR professionals.
Snell et al., (2002)	The main objective of e -HRM is to produce efficiency gains or cost reductions by reducing headcount and removing administration.
Ball, (2001)	e-HRM allows the managers to access data, relevant information, conducts analysis, make decisions, and communicate with others without consulting an HR professional.
Bowman and Ambrosini, (2000)	e-HRM increase value through more efficient management of generic labour and effective support of differential labour.

### Problem Statement

After going through extensive literature review and dimensions revealed by earlier researchers, it has been clearly indicated that there are very few studies that are carried out in Indian context with reference to e-HRM implementation in service organisation. e-HRM concept was implemented in international level and the outcomes of e-HRM help the service sector in great manner. These inspired us to take up the challenge to study the employee perception towards implementation of e-HRM in service organisation in India. Towards achieving these objective in Indian context one has to focus on e-HRM in Indian service sector for the better progress. The authors therefore have identified that the problem lies in the perception of employees while implementing e-HRM.

### Research Methodology

The survey questions relating to six scales adapted from existing literature viz. Attitude (AT); Perceived usefulness (PU); Behavioral Intention (BI); Amount of information (AI); Perceived enjoyment (PE); Security and privacy (SP). The three dimensions including Attitude; Perceived usefulness; Behavioral Intention related questionnaire consisted of 11 (Eleven) statements are adapted from Nura et al., 2012. The dimension so called Amount of information; Perceived enjoyment and Security and privacy, consists of 9 (Nine) statements are adapted from Pikkarainen et al., 2004.

### Characteristics of the service sector

Enterprises from the samples were independent and are operating in diverse activities sectors covering both low

and high technology environments, to obtain a complete and general outlook. The service organisation in sample has diverse activity areas includes consulting firm (35.13%); Banking (33.58%); Retailing (31.29%) of the total sample size.

The survey instrument for this research was structured survey questionnaire. The structured questionnaire used Likert scales ranging from strongly disagree to strongly agree. It is to be noted that, the questionnaire as a survey instrument for this research, were more helpful due to its simplicity, its versatility and its low cost as a method of collecting data (Singh et al., 2010). The strategy for collection of responses carried out exclusively through internet (E-mail) and field survey. It was useful as it enabled the researcher to be present in administering the questionnaire and allowed for greater response rate. Participation was voluntary and respondents were assured confidentiality of data. Three hundred fifty (350) questionnaires were

distributed to employees, managers, and HR professionals using convenience sampling. The data obtained from the questionnaire were reduced using factor analysis. The software used for the statistical analysis was SPSS version 19. Before using data for analysis, the normality condition of data was checked. The standard range for normality is skewness and kurtosis lying between -1 and 1 (Chan, 2003). In 2009, Hair et al. describes for sample size < 30, significant departures from normality can have large impact on results. On the basis of reviewed literature, the data fulfills normality and other assumptions and could be used for analysis.

### **Demographic profile of sample respondents**

The characteristics of sample were summarized in Table 3. A total of 173 questionnaires were returned from 350 sent, 131 of which were useable. This translates into an overall response rate of 49.42 per cent, and a usable response rate of 37.42 per cent.

**Table-3: Demographic characteristics of sample respondents**

Profile of the Respondents	Frequency	Percent (%)	Mean	Standard Deviation
<b>Respondents Gender</b>				
Male	73	55.7%		
Female	58	44.3%	1.44	.49
<b>Respondents Age</b>				
Below 25	14	10.7%		
25 - 35	44	33.6%		
36 - 45	37	28.2%	2.79	1.10
46 - 55	27	20.6%		
56 and above	9	6.9%		
<b>Respondents Marital Status</b>				
Unmarried	44	33.6%		
Married	87	66.4%	1.66	.47
<b>Respondents Academic Qualification</b>				
Graduate	30	22.9%		
Post-Graduate	41	31.3%		
Professional Degree	47	35.9%	2.32	.94
Others	13	9.9%		
<b>Respondents Annual Income ( Indian Rupees)</b>				
Below Rs. 100000	23	17.6%		
100001 – 300000	30	22.9%		
300001 – 500000	37	28.2%	2.90	1.33
5, 00001 – 7, 00000	18	13.7%		
Above 700001	23	17.6%		
<b>Respondents Work Experience (Years)</b>				
1 - 5 yrs.	28	21.4%		
6 - 10 yrs.	36	27.5%		
11 - 15 yrs.	23	17.6%		
16 - 20 yrs.	20	15.3%	3.68	1.88
21 - 25 yrs.	14	10.7%		
More than 26 yrs.	10	7.6%		

## Reliability

To establish internal consistency, Cronbach's  $\alpha$  value for reliability were calculated. The scales were reliable, with composite reliabilities ranging from 0.71 to 0.87, greater than the benchmark of 0.70 (Nunnally, 1978). The generally applied acceptability limit for Cronbach's alpha has value 0.70 (Hair et al., 1998). Table 4 shows the reliability level for each scale and factor loadings for each item in a scale.

## Exploratory factor analysis

Beforehand conducting the analysis, tests of sampling adequacy were first conducted. The Kaiser–Meyer–Olkin (KMO) statistic is 0.66, appropriately greater than the recommended cut off of 0.60. Furthermore, Bartlett test of

sphericity was significant at the 1% level. Construct validity (convergent and discriminant) is checked through exploratory factor analysis. High loadings on one factor and no cross loading showed convergent and discriminant validity (Fornell and Larcker, 1981). The principal component method was used to extract factors with an initial setting for Eigen values  $>1.0$  (Field, 2005). Orthogonal rotation (varimax) was applied to reduce potential multi-collinearity among the items. High loading on the same factor and no large cross loading confirm convergent validity and discriminant validity.

Factor analysis results of Attitude (AT), Perceived usefulness (PU), Behavioral intention (BI), Amount of information (AI), Perceived enjoyment (PE), and Security and privacy (SP) scale are shown in Table 4.

**Table-4: Factor loadings and composite reliability (CR)**

Factor items and composite reliability (CR)	Factor Loading					
	AT	PU	BI	AI	PE	SP
<b>Attitude (AT); (CR=0.80)</b>						
AT1 I feel confident with e-HRM	0.82					
AT2 I feel more committed to duty with e-HRM	0.67					
AT3 I enrich my skills with e-HRM	0.77					
AT4 I feel motivated with e-HRM	0.87					
<b>Perceived Usefulness (PU); (CR=0.87)</b>						
PU1 e-HRM is better up security wise		0.87				
PU2 e-HRM brings along efficiency and effectiveness		0.86				
PU3 e-HRM increases organisational performance		0.81				
PU4 e-HRM increases reliability		0.83				
<b>Behavioral Intention (BI); (CR=0.81)</b>						
BI1 e-HRM would inculcate the habit of discipline in workers			0.84			
BI2 e-HRM would get deviant behaviors checked and reduced in my organisation			0.77			
BI3 e-HRM would facilitate quick decision in my organisation			0.87			
<b>Amount of information (AI); (CR=0.71)</b>						
AI1 I has generally received enough information about e-HRM				0.85		
AI2 I have received enough information about the benefits of using an e-HRM				0.84		
<b>Perceived enjoyment (PE); (CR=0.79)</b>						
PE1 Using an e-HRM is pleasure					0.89	
PE2 Using an e-HRM is positive framework of mind					0.87	
<b>Security and privacy (SP); (CR=0.82)</b>						
SP1 I trust in the technology an e-HR is using						0.67
SP2 I trust in the ability of an e-HRM to protect my privacy						0.82
SP3 I trust in an e-HRM as an Organisation						0.83
SP4 Using an e-HR is financially secure						0.74
SP5 I am not worried about the security of an e-HRM						0.75
<b>Eigenvalue</b>		3.69	3.11	2.54	1.88	1.56
<b>Percent of variance explained</b>		18.48	15.58	12.75	9.44	7.79
<b>Total Variance explained</b>		71.56				

Table 4 shows the reliability level for each scale and factor loadings for each item in a scale

**Table-5: Demonstrate inter-construct correlation**

Variables	AT	PU	BI	AI	PE	SP
<b>Attitude (AT)</b>	1					
<b>Perceived Usefulness (PU)</b>	.879	1				
<b>Behavioral Intention (BI)</b>	.421	.308**	1			
<b>Amount of information (AI);</b>	.104	.507	.157	1		
<b>Perceived enjoyment (PE);</b>	.903	.882	.519	.439	1	
<b>Security and privacy (SP);</b>	.535	.517	.508	.360	.223*	1

**Notes:** \*Correlation is significant at the 0.05 level (two-tailed); \*\*correlation is significant at the 0.01 level (two-tailed)

Table 5 demonstrates inter-construct correlation between the dimensions

## Results and discussion

The outcome of the data analysis showed that the implication of e-HRM implementation had significant, positive effect on HRM effectiveness in service organisation. This means how employees, managers and HR professionals judge the content and design of e-HRM application and the extent to which they perceive the e-HRM to be technically effective. When they feel positive about the content of an e-HRM application, it is easier for the employer to implement in service organisation. In general terms, the authors found that employees, managers and HR professionals favored the introduction of e-HRM in service industry in India. However, the experienced employee and managers are needed to support the shop-floor employees in handling the new technology for its better use. All the factors are in line with the earlier researchers.

### Factor 1: Attitude

This factor measures the employee, managers and HR professional's attitude towards the e-HRM implementation in the service organisation. It explained 18.48% of its underlying variables and its Eigen value is 3.69. It is a composite index of four variables with reliability coefficient of 0.80 and the factor loading ranging from 0.67 to 0.87. The variable motivated with e-HRM 0.87 and confident with e-HRM 0.82 was contributing more weight to the factor attitude followed by skills enrichment with e-HRM 0.77 and committed to duty with e-HRM 0.67. It revealed that organisation should give more emphasis on conducting the implementation and motivation program related to e-HRM, so that employee that employee can understand the importance of e-HRM in the service organisation. The present finding is further in line with earlier researches that employee's attitude is significant to the e-HRM

implementation in the organisation (Nura et al., 2012; Tan and Teo, 2000). Developing the positive attitude among employee will be an added advantage towards achieving success. Positive attitude should be developed through soft skill development program within the service organisation.

### Factor 2: Perceived Usefulness

This factor measures the degree to which person believes that using an e-HRM enhance his or her job performance (Davis et al., 1989). The factor perceived usefulness consists of 15.58% of its total variance of its underlying variables with Eigen value 3.11. It is a composite index of four variables with reliability coefficient of 0.87 and the factor loading ranging from 0.81 to 0.87. The result indicated that, all variables were contributing significant weight to the dimension. The result of the present study is in line with the earlier study that e-HRM implementation enhances his or her job performance (Nura et al., 2012; Tan and Teo, 2000). Here, perceived usefulness is the degree of managerial obligation to use e-HRM in the organization. Managerial obligation is to develop positive attitude of employees towards e-HRM implementation in the organization.

### Factor 3: Behavioral Intention

This factor measures the employee, managers and HR professional's behavioral intention, as the amount of effort, one is willing to exert and meet a goal (Nura et al. 2012). It is the employee's perceived likelihood towards e-HRM implementation. It explained 12.75% of its underlying variables and its Eigen value is 2.54. Factor Behavioral intention is a composite index of three variables with reliability coefficient 0.81 and the factor loading ranging from 0.77 to 0.87. This shows that variable such as help quick decision in the organisation 0.87 and would inculcate

the habit of discipline in workers 0.84, contributing more weight to the factor and having more importance in the dimension. This factor is in line with the earlier research (Nura et al., 2012). It specified that employee intention towards e-HRM implementation could add help to the service organisation.

#### **Factor 4: Amount of information**

This factor measures the amount of information employees have about e-HRM technology and is identified as a major factor impacting the adoption in the organisation (Pikkarainen et al. 2004). This factor, amount of information consists of 9.44% of its total variance of its underlying variables with Eigen value 1.88. It is a composite index of two variables with reliability coefficient 0.71, factor loading of received enough information about e-HRM is 0.85 and received enough information about the benefits of using an e-HRM is 0.84. Both the variables were contributing significant weight to the factor. This factor is in line with the earlier study (Pikkarainen et al., 2004; Sathye, 1999). e-HRM implementation is a new experience for many employees and low awareness about the technology are the major hindrance for not adopting technology in the organisation. Organization has to conduct a seminar on e-HRM implementation in the organization so that employees become aware about the technologies which are being implemented. This leads to easy acceptance of technology by employees in service organization.

#### **Factor 5: Perceived enjoyment**

This factor measures the extent to which activity of using an e-HRM technology is perceived to be enjoyable in its own right (Pikkarainen et al., 2004). It explained 7.79% of its underlying variables and its Eigen value is 1.56. It is a composite of two variables with reliability coefficient 0.79 factor loading using an e-HRM is pleasure 0.89 and using an e-HRM is positive framework of mind 0.87. Both the variables were contributing supplementary weight and are important to the factor. This factor is in line with the earlier study and is found to have the effect on the e-HRM implementation in the organisation (Pikkarainen et al., 2004; Teo et al., 1999; Davis et al., 1989). e-HRM implementation in service organisation could provide with an enjoyable learning experience for employees.

#### **Factor 6: Security and privacy**

This factor measures the security and privacy to the acceptance of e-HRM technology, are noted in many earlier

studies (Pikkarainen et al., 2004; Black et al., 2002; Tan and Teo, 2000; Sathye, 1999). The factor security and privacy consist of 7.52% of its total variance of its underlying variables with Eigen value 1.50. It is a composite index of five variables with reliability coefficient 0.82 with factor loading ranging from 0.63 to 0.83. The variable trust in an e-HRM as an Organisation 0.83 and trust in the ability of an e-HRM to protect my privacy 0.82 were contributing more weight to the factor. Followed by not worried about the security of an e-HRM 0.75; using an e-HR is financially securing 0.74; and trust in the technology, an e-HR is using 0.67. The factor is in line with the earlier study and has an impact on e-HRM technology implementation in service organisation (Pikkarainen et al., 2004). Security and privacy is confidence booster of the employees towards e-HRM implementation and its use in service organisation.

#### **Conclusion**

In this research, the employee perceptions towards implementation of e-HRM in service industry were examined along with their related factors. Findings have insightful implication for academicians and for industry people. The factors that were considered for the study were in line with the earlier research and have a significant influence on implementing e-HRM in the service organisation. e-HRM reduces dependence on time consuming and error-prone human resource paper trail. But, as always, technology comes with its inherent risk- that of huge set up costs, overkill and loss of the "human touch." Hence, it is very important for the HR professionals to have prior information being implemented for the purpose to get comfortable with technology before they make other people see the value of such tools. Employee attitude should be considered (positive and negative) prior to the e-HRM implementation in service organisation. This makes sure the safety as well as perceived enjoyment for employee. Most of the respondents opined that better internet facility in organisation is the success factor for using the e-HRM in the organisation. Today's e-HRM implementation offers increasingly sophisticated functionality giving enterprises the opportunity to automate labour intensive processes and devolve routine transactions to line managers, HR professionals and, to employees themselves. In nutshell it can be said that challenges are many and having phenomenal implications like huge set-up costs to support robust tech-infrastructure. The limitations in mapping physical human resource processes into e-HR process, too much focus on aggressive timelines in project execution,

possible conflicts with respect to process ownership by human resource and information technology departments, etc. It gives managers and HR professionals with more time to focus on strategic tasks and manage better the company's most important resource- its people.

### **Implication**

The study provides an insight for managers and HR professionals in context to e-HRM implementation in the service organisation. The employee's positive attitude toward the e-HRM implementation reduces the predicament related to resistance to change. e-HRM seemed to be both a motivator and facilitator of change in service industry of India. The structure of service industry has changed significantly in recent years as it has technologically backed up opportunities to enter into the market resulting into emergence of new technology-based services organisation. Through e-HRM, service organisation can combine computing and communications to facilitate ordering and product tracking. Its functions often are implemented as manual processes; mechanizations of older, ideally, but, they include fundamental redesign of processes. The e-HRM implementation in service organizations can employ to manipulate the performance and behaviour of the people on whom they rely on to achieve business success.

The use of e-HRM in service organisation is believed to be an opportunity for employee, managers and HR professionals to become strategic partners of the business. Corporations that have successfully tackled the challenges of e-HRM have made life easier for employees. Its implementation makes it possible for service organisation to perform strategic HR more efficiently, while at the same time preserving quality standards for more routine HR operational tasks, like administration, performance reporting. If its installation is taken up in the right direction, considering all the challenges, can take an organization a long way towards success and manage better the company's most important resource- its people.

Since, service industries are technologically driven, the application of e-HRM will be immensely required for the effectiveness of the service organisation. HR managers will be able to capitalize the strengths of their employees to cater the goals of the organisation. Perceived usefulness will enhance the reliability among the employees which in turn will focus on customer satisfaction. The novelty of the paper is: paper addresses an important sector that is service sector whose contribution to nation (60%) GDP is significant

as compared to other sectors. Employees, Managers and HR professional working in service organisation are considered for the study.

### **Limitations and Future Direction**

The study was carried out on specific organisation of service industries operating in central India. Small sample size has an effect on the generalisation of the findings that might have a concern for user's acceptance. Furthermore, we encourage researchers to consider the manufacturing sector for the future study. Consideration of other sectors apart from Consulting; Banking; and Retailing sector for the study may result in more generalization of findings.

### **Notes**

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- [2] <http://www.indiastat.com/table/economy/8/10.servicessector/767395/767404/data.aspx> (accessed on 07-01-2014).
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# Employee Retention Enablers: Generation Y Employees

M. Aruna and J. Anitha

## A b s t r a c t

*Organisations face a daunting challenge in retention of Generation Y workforce in a vulnerable, uncertain, complex and ambiguous (VUCA) situation. Their parental brought up, sense of get-now attitude and immediate gratification culture, 24\*7 technological connections has all facilitated the Gen Y to adhere to sky rocketing expectations from the workplace. This study identifies the significant factors for retaining Gen Y, namely, mentoring, career development, job satisfaction, inclusive style of management, work environment and nature of working style. Descriptive statistics, correlation, and regression analysis were used. The study implies that organisations have to redesign mentoring support and work environment retention strategies..*

**Keywords :** Generation Y, Employee Retention, Enablers, Mentoring, Work Environment



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Organisations in today's scenario confront challenges in managing and retaining employees. Employee retention is a process of making employees to stay with the organisation. Employee retention is the responsibility of the employer to retain their best employees, if not the organization will lose the star performers (Gurumani, 2010). Generally Gen Y is not loyal to the company but they are loyal to the job. Retaining Gen Y employees in today's corporate scenario has become a phenomenal task for the organisations in this VUCA scenario. The generation Y are those who are born in the period 1980 – 2000. Gen Yers are also known as Millennials, Next Gen, Dot com generation, Net generation, Digital natives, Sunshine generation and a number of other terminologies that denote their newness and lifestyle. These young employees are rejuvenating every institution of modern life, from the workplace to the marketplace, from politics to education, and down to the basic structure of the family.

Gen Y possesses significantly different characteristics from previous generation and high expectations of immediate

results that classify them as distinct employees. Popular media like Time, Newsweek, and Business Week advocates that Gen Y has to combat with globalization, global warming and the advent of social media environment. These external influences have moulded them in a robust manner. The authors, Cone (2006) and McElhaney (2008), have described the generation Y as friendly, open minded, intelligent, responsible, social – minded, informed and civic minded. Apart from these, they are techno savvy and fast learners who enhance the speed and efficiency to the organisations.

Above all, Gen Y, the new generation poses an ultimate challenge for the corporations with regard to their retention. They tend to challenge new opportunities and management decisions; strive for more work life balance, and involve in decision making. In a nutshell, the culture of Millennial are asking challenging questions and demanding honest answers, meaningful social interaction, valuing volunteerism and caring for the society. Millennials are the next hero generation and to be the perfect generation. Hence it has become a management challenge for the managers as how to manage the generation Y talent and utilise their potential as they are the futuristic business leaders.

## **1. Literature Review**

This section covers a wide literature review that encompasses these factors, identified as significant and is classified under six major headings. These are termed as ‘enablers’ as they are found to have a positive influence in retaining employees in the organisation. The enablers described below have been considered as important requisites for the millennial to stay with a particular enterprise. The enablers that are derived from the literature review include mentoring, career development, job satisfaction, inclusive style of management, work environment, and nature of working style. These six variables though seem to be common motivators of previous generations; the study has shown that there is significantly a different perspective in these qualities, when expected of, by the Gen Y employees. These variables were found to be vital for Gen Y employees’ retention at workplace.

### **1.1. Mentoring in Gen Y context**

Mentoring involves a relationship between a senior employee, the mentor and a junior employee, the protégé, in which mentor provides career guidance to the protégé. The protégé gets benefits by the advice and guidance from the mentor and in return, the mentor benefits through

recognition, respect, and sense of satisfaction. Mentoring is one of the retention strategies for the young employees (Munde, 2010). Mentoring in previous years relied on mentor’s one way of instructional direction, delayed feedback, and primarily with senior level focus. The distinct expectations of Gen Y in mentoring are reverse mentoring, progressive mentoring; instant feedback, good rapport with the mentor, constant approval and praise; to respect and listen to their views. The traditional hierarchical junior-senior mentoring model has been now replaced with reverse mentoring and progressive mentoring models in order to cope with generation Y employees (Bloomquist, 2014). Reverse mentoring is where the protégé shares their technological knowledge to senior employees and in return older employees gives administrative and managerial training to the young employees. Reverse mentoring can be employed which enhances harmonious relationships between Gen Y and older generations (Koster, 2013). The older generations can be supported by the millennials with the dissemination of their knowledge and technology usage (Koster, 2013). Progressive mentoring model also called as rotational or serial mentoring having series of mentorships for continuous learning and up gradation of skills (Bloomquist, 2014).

Many studies have explored that Gen Y employees expect the superiors to provide instant feedback honestly and to have a good rapport with them in coaching (Cennamo and Gardner, 2008; Gibson et al., 2009; Lowe et al., 2008; Reynolds et al., 2008). They seek constant approval and praise from their supervisors (Crumpacker and Crumpacker, 2007). Apart from these, they wanted to be respected for their views and expect to know when they have done a good job and when they haven’t (Raman et al., 2011). Generation Y employees are more efficient if the supervisor treats them with respect and provide frequent and honest feedbacks regarding their performance.

### **1.2. Career Development in Gen Y context**

Career Development is the process of development given by an organisation to enhance the employees in the process of acquainting skills, knowledge and individual growth throughout their career path. The career development in previous years were found to rely on flexible work arrangements, professional growth, interested in accepting rather than giving work, formal learning with step by step instructions, less exposed to computer technology in learning and lesser turn over. The Career development aspect

is found to have different dimensions for Gen Y which details on professional development, self-development, changing careers frequently, risk taker in career path, learning and development, lifelong learning, continuous learning, multimedia training and e-learning. The variations in the generational cohorts are due to many external influences, different parenting style of their bringing up and the nature of their lifestyle. A career should provide them flexibility in their personal life and professional satisfaction (Sayers, 2007).

If Gen Y employees feel that they have mastered their job, they would quickly move on to other companies (Weyland, 2011). These employees change their careers more than six times in their life (Burmeister, 2009 and Dolezalek, 2007). This depicts that they would not remain in a particular organisation for a longer period of time. Surprisingly, employees are loyal as long as the organisation provides meaningful work and self-development and they don't even hesitate to quit the job within 24 hours if unsatisfied (Logan, 2008). It is interesting that they are found to acquaint with the job only if the values are matched in the company (Ohlrich, 2011). They dare to quit the job and find a new position at the new company as they are confident in their skills. This characteristic provides a direct challenge for organisations in retaining Gen Y employees. Apart from these, Johnson and Lopes (2008) advocate that young employees tend to accept higher level of risks in their early career paths. This shows that they are risk takers and self-reliant in nature.

Significantly, Gen Y employees expect a significant contribution by the organisation for learning and development. The learning and development should enhance their individualism, new experiences and self-development (Weyland, 2011). The organisation should act as a platform for their self-development and enhancement as well as life-long learning. Gen Y needs to have a continuous learning environment with web based training apart from these workshops, job shadowing, temporary assignments, and functional moves. However, they give utmost importance to personal development and continuous learning (Terjesen et al., 2007).

Obviously, training and development is one of the significant factors for the development of Gen Y careers and also a retention tool for the millennials (Price Water house Coopers, 2008; Dolezalek, 2007). Gen Y employees work collaboratively with others and real world activities are

essential criteria for them to be included in training. They prefer multimedia training and development programme which enhance them both laterally and vertically to acquire skills with in a multi-directional career system (Shaw, 2008). It is obvious that e - learning has rapidly emerged as a significant stake in the global workforce. Hence training and development should be a continuous program to update their knowledge and skills.

### **1.3. Job Satisfaction in Gen Y context**

Job satisfaction is the process of making employees fulfilled both mentally and personally in their work. The previous generations were satisfied with more extrinsic rewards, extra pay for extra hours, lesser work-life balance, retirement and fringe benefits in the job. However, Gen Y employees seem to have different expectations with regard to satisfaction at job. This characteristic is also of prime importance as job satisfaction is found to be a great retention tool for the Gen Y employees to stay in the organisation. Job satisfaction caters to different aspects for Gen Y employees, as they give importance to personal life in work life balance, high salaries, immediate reward, and instant gratification. The Gen Y employees give preference to their family and friends, rather than work, when they ought to balance work and life (Crumpacker and Crumpacker, 2007). They are more interested as how the organisations would support their family and personal lives.

They need their job to be paid well and expect high salaries by the time they reach the age of 30. Beck and Wade (2004) contend that immediate reward transfers are the essential criteria to excel in their work. Gen Yers disagrees with delayed gratification as they need everything now and now only (Henon, 2006). The main reason for their instant gratification and immediate reward are due to the influence of digital gaming as it provides immediate rewards for the player to the next level of difficulty. Millennials tend to behave like investors rather than assets as they seek best return for their input of their time and energy. They tend to expect what the employers will do for them rather than what they do for their employers. This has made the organisation to offer attractive compensation package to retain them.

### **1.4. Inclusive Style of Management in Gen Y context**

Inclusive style of management is a style of management which is wholesome and encompassing all the benefits that the employees need for. Previous generations relied on bureaucratic leadership and job security from their

management. Gen Y intends to stay in an organisation based on a constructive management, look for corporate socially responsible company, mutual respect and to be treated as partners (Weyland, 2011); honest and participative leaders and open minded managers. The young workforce are enthusiastic and ready to contribute to the organisation through their suggestions, ideas, opinions and they also challenge the traditional mind set of organisational management and look for constructive management (Rai, 2012). They add value to the company by understanding how their everyday work has an impact on overall success of the organisation.

Apart from these, Corporate Social Responsibility (CSR) is found to be a retention tool for the Gen Y employees (Pinkess, 2008). Price Waterhouse Coopers (2008) found that Gen Yers look for companies that promote CSR. Gen Y seeks to have a mutual understanding with their leaders and they respect their leaders who are honest, straight forward and open (Rai, 2012). Generation Y seeks a participative leader who respects their views, listen to them, and make flexible in taking their decisions. Gen Yers are enthusiastic to participate in decision making process (Beck and Wade, 2004). They perform better to the managers who are open-minded as they are not afraid to express their views.

### **1.5. Work Environment in Gen Y context**

Work environment is a basic pre-requisite that a company provides to the employees which supports them to perform better. The employees of previous generation had long hours of work time, work only at office, lesser technological influence, lesser entertainment and no fun atmosphere. Gen Y employees have great expectations from the organisations in work environment. The aspects of work environment that Gen Y expects from the company are physically comfortable and socially enhancing environment; boundaryless and open with break out spaces; technology for dissemination of knowledge and entertainment; social media; fun atmosphere. Work place environment is the place where they learn, collaborate and socialize (Rai, 2012). Work environment is very important for retaining millennials as it is composed of two elements, namely, physical and social environment (Raman et al., 2011). They need their workplace to be boundaryless, colourful and open with break out spaces and conversation areas (Rai, 2012).

Technology paves way for information dissemination in a faster pace in today's workplace. They are highly frustrated

with old technology and slow communication and they need instant results (Weyland, 2011). The Gen Y employees are engaged well if the company provide them the updated technology and systems.

It is pertinent that social media has been the life blood of millennials and it has become a part and parcel of one's life without which it is difficult to survive. However, Social media has become a vital source for internal communication between the employees in an organisation (Rai, 2012). Infosys Company has come out with employee social media usage policy with Internal Bulletin Boards, InfiBlog, InfiWiki and Asian Paints Company with Blogs (Rai, 2012). Social Networking sites like Facebook, LinkedIn, Orkut, Big Adda has enlarged their interaction not only personally but also professionally by sharing the text based contents, pictures, videos and graphics and collaborating it (Rai, 2012). Apart from these, fun and exciting atmosphere is looked on by millennial (Weyland, 2011). They ought to have luxurious workplace like breakout areas, creative rooms; even sleep rooms which energise them (Weyland, 2011).

### **1.6. Nature of Working Style in Gen Y context**

The nature of working style is the attributes of an employee that he deals with different sorts of work. The working style of previous generations were focussed on processes not on results, dependent in decision making, less freedom in their work and followed rules and regulations. The nature of working style of Gen Y seems to have significant variations on a par with the back generations. The nature of working style of Gen Y are meaningful and challenging work, multitasking, responsibility, job autonomy, freedom, flexibility, appetite for work and pressure, problem solving skills, and collaborating teams. Generation Y employees take along all their positive skills and traits to the workplace. They always strive for meaningful and challenging work (Baruch, 2004). The major aims of Gen Yers are to play meaningful roles in meaningful work that helps others (Elkins et al., 2007). Hence, salary and status has not been preferred high by the Gen Y employees, rather, they rely on a meaningful work environment.

Generation Y are found to be multi-tasking in their work with high degrees of intelligence, confidence, and independence (Martin, 2005). According to the Bureau of Labour Statistics, 70 % of generation Y already possess part time jobs and work multiple jobs over their life time. Gen Y employees prefer doing the job around the clock if they

are given a responsibility (Weyland, 2011). The young employees look for independency and autonomy in their work in making their choice of when and where to work (Weyland, 2011).

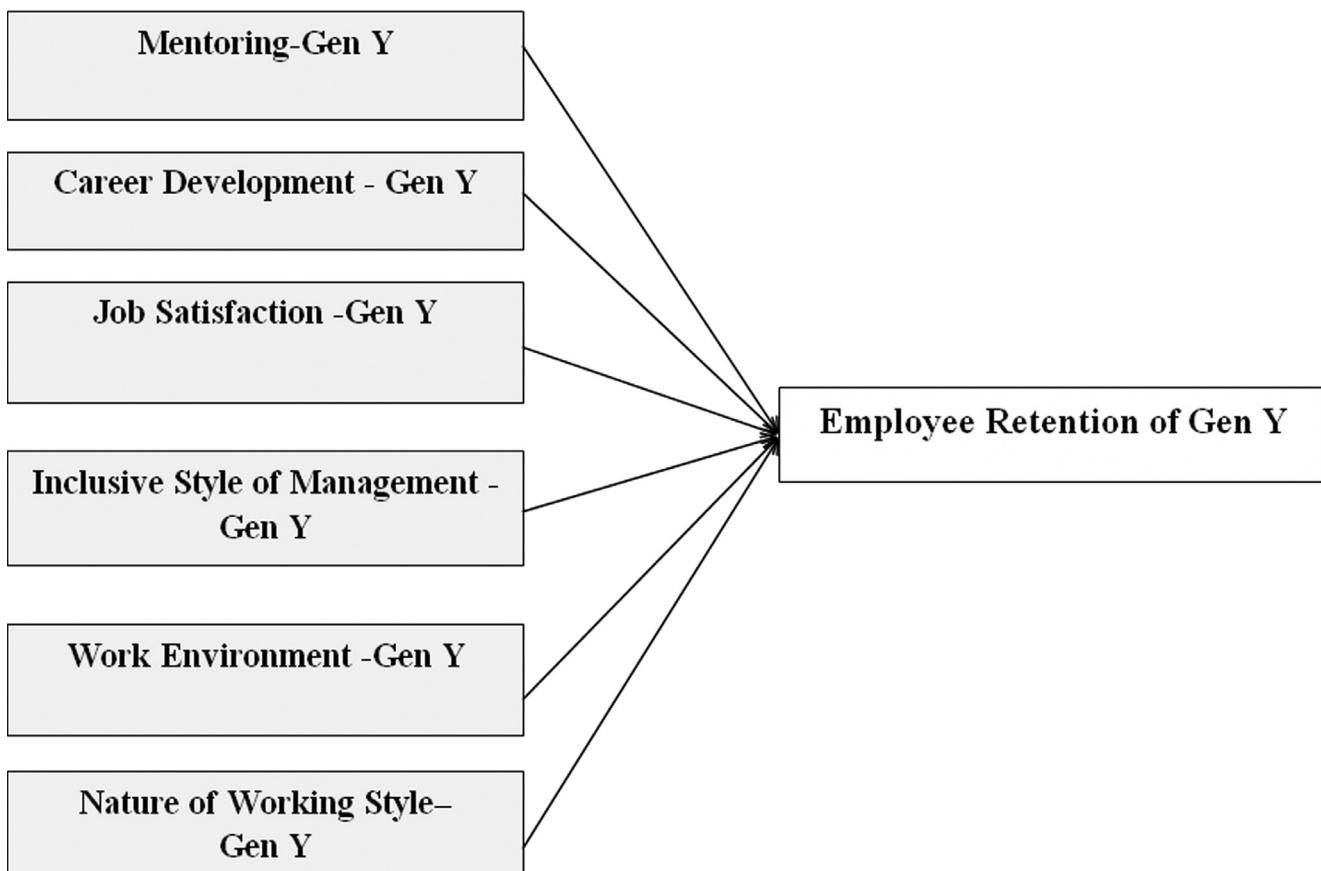
Gen Y people expect freedom and flexibility to make their work done in their own way and at their own pace (Martin, 2005). Gen Y prefers their own strategies to deal in their work task. They have a strong appetite for work and pressure and are result oriented (Shih and Allen, 2007). They need to be motivated and empowered in all manners. The unlimited exposure to video games by millennials has shaped their problem solving skills (Beck and Wade, 2004). They prefer to work in teams and collaborate through text messaging, instant messaging and blogging with their peers (Skiba, 2006).

In a nut shell, the paper has arrived at the conceptual framework based on literature review and the step ahead

includes, constructing an instrument to measure these specific characteristics of Gen Y which have entirely evolved into new phenomena and practice. These characteristics have an entirely new face as perceived by the young generation. These characteristics need to be studied in detail and the level of influence and role played by them on employee retention is to be determined. The results would have significant steps and suggestions to organisations as their workforce is rapidly transforming into Gen Y performers.

## 2. Model of the Study

The comprehensive literature review on Gen Y expectations and Gen Y enablers has helped the researcher to arrive at a conceptual model depicting these six variables influencing the employee retention of Gen Y employees. The model depicted in figure 1 is evaluated based on empirical data and the specific impact of each of these variables is measured.



**Figure 1 – Conceptual framework for Employee Retention of Gen Y Workforce**

### **3. Objectives of the Study**

The objectives of the study are as follows:

- To find the existing level of factors influencing retention of Gen Y workforce,
- To explore the association between various factors influencing retention and employee retention among Gen Y workforce, and
- To examine the impact of the identified factors, on employee retention of Gen Y.

### **4. Research Methodology**

The study is descriptive and causal in nature. It describes in detail the existing level and nature of the different variables influencing retention of Gen Y workforce. It also focuses on analysing the cause and effect relationship between these six variables and employee retention. Data was collected from 100 Gen Y employees in senior level, junior level and middle level. The area of the study was confined to Coimbatore in IT sector.

Employee retention questionnaire, formulated and validated by Bernsen et al. (2009) was used for data collection. Further constructs were measured with the variables extracted from relevant literature and were validated by content analysis. Random sampling technique was used in selecting the respondents from the employees list, available with the organisations. Pilot data was used to test the reliability and the Cronbach alpha value was found to be 0.858.

Descriptive Statistics was applied to find the mean scores and standard deviation of these variables. Correlation was used to find the association between these variables and employee retention. The impact of various factors influencing the retention of Gen Y was analysed by employing regression analysis. The respondents were the generation Y employees belonging to the age group of 20 to 35 years. The data collected at junior, middle and senior level found to be 27%, 35% and 37% respectively.

### **5. Analysis and Discussion**

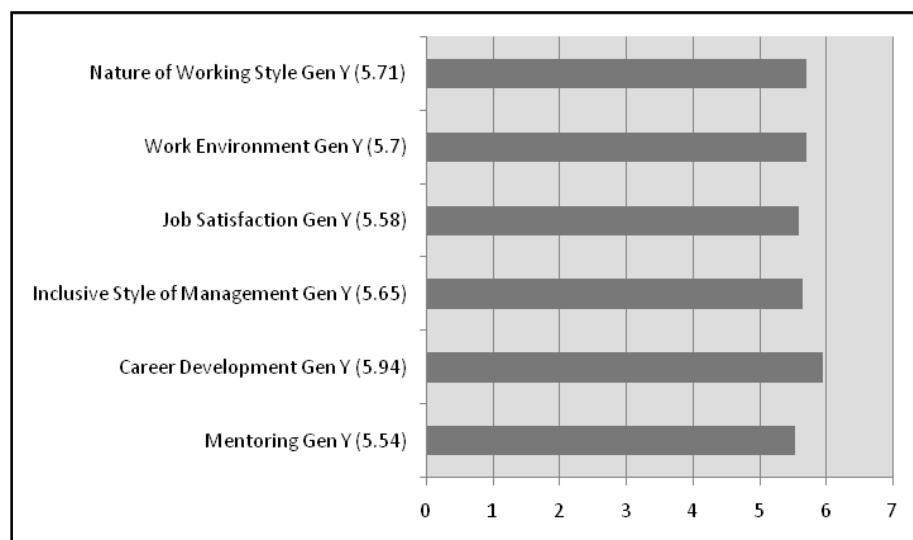
As discussed above, the significant factors influencing employee retention of Gen Y is deduced using a thorough

literature review. The role played by these factors on employee retention is presented as a conceptual framework which requires empirical proof. Statistical analyses applying SPSS are used to arrive at each of the objectives intended.

#### **5.1. Level of factors that influence retention of Gen Y**

Descriptive statistics was employed to find the mean score of various factors in employee retention. Figure 2 depicts the level of interest or the expectation of Gen Y with these factors. The factors are measured in a scale of 1 to 7, higher the score depicts the utmost importance given to the factor for retention of Gen Y and lower the mean score implies least importance to the factor. It clearly emanates from the figure 2, that Gen Y gives importance to the career and development with the mean score of 5.94. It depicts that Gen Y seeks for constant progress in their career as they are keen in both self-development and professional development supporting these author reviews of Logan 2008 and Sayers 2007. The results of authors, Shaw (2008) and Weyland (2011), are analogous with this study eliciting Gen Y crave for rapid advancement in their learning and development, training and leadership programmes which shape them. It is the Gen Y's attitude of overly ambitious dreaming and risk taking makes them to have huge expectations in enhancing their career.

The next level of importance given by Gen Y are the nature of working style with mean score as 5.71, it is because that Gen Y indulges in a job which is meaningful, challengeable and seeks for autonomy to do the work in their own pace and style supporting the views of Baruch (2004) and Weyland (2011). The main reason is that lesser supervision and more freedom in their work lead to independent decision making and their multitasking nature tends to look for challenging jobs. They quit a job if they are unsatisfied with the work as they are loyal to meaningful job rather than the company. If their job did not add any enrichment or value to them they would move in to another company. In a nutshell, today's millennials look for rapid advancement in their career growth and independency in their work tasks.

**Figure 2 – Prevailing level of factors influencing Gen Y retention**

### **5.2. Association between employee retention and factors influencing retention**

Correlation determines the association of various factors with employee retention. It has been found that nature of working style factor is highly correlated with retention of an employee whose Pearson correlation value is 0.487 from table 1. It depicts that Gen Y adheres to flexibility in their work without robust supervision and need to work in their own style and pace. Apart from these, they thrive for risk taking jobs and strong appetite for challenging work (Shih and Allen, 2007; Baruch, 2004). The independency and flexibility provided by Gen Y parents in their childhood has undoubtedly made Gen Y to expect the same from their respective enterprise.

Also, work environment ( $r = 0.467$ ) from table 1, found to have a higher association with retention; depicting that it is statistically significant. Gen Y seeks for an environment with fun and a good work space obviously connected with social media. It is because they take digital breaks when the work is hectic. As they are technologically connected with iPod, internet from their childhood, there is no doubt that they rely on digital technologies even at the work place. Their workplace should be a platform to socialise and collaborate for exchange of ideas. Hence, nature of working style and work environment found to have greater association with retention which elicits that these two factors are closely associated with employee retention of Gen Y.

**Table 1 – Correlation between different factors and employee retention**

		Mentoring Gen Y	Career Development Gen Y	Inclusive Management Gen Y	Job Satisfaction Gen Y	Work Environment Gen Y	Nature of Working Style Gen Y
Employee Retention	Pearson Correlation	0.409	0.332	0.309	0.441	<b>0.467**</b>	<b>0.487**</b>
	p value	.000	.000	.000	.000	.000	.000

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

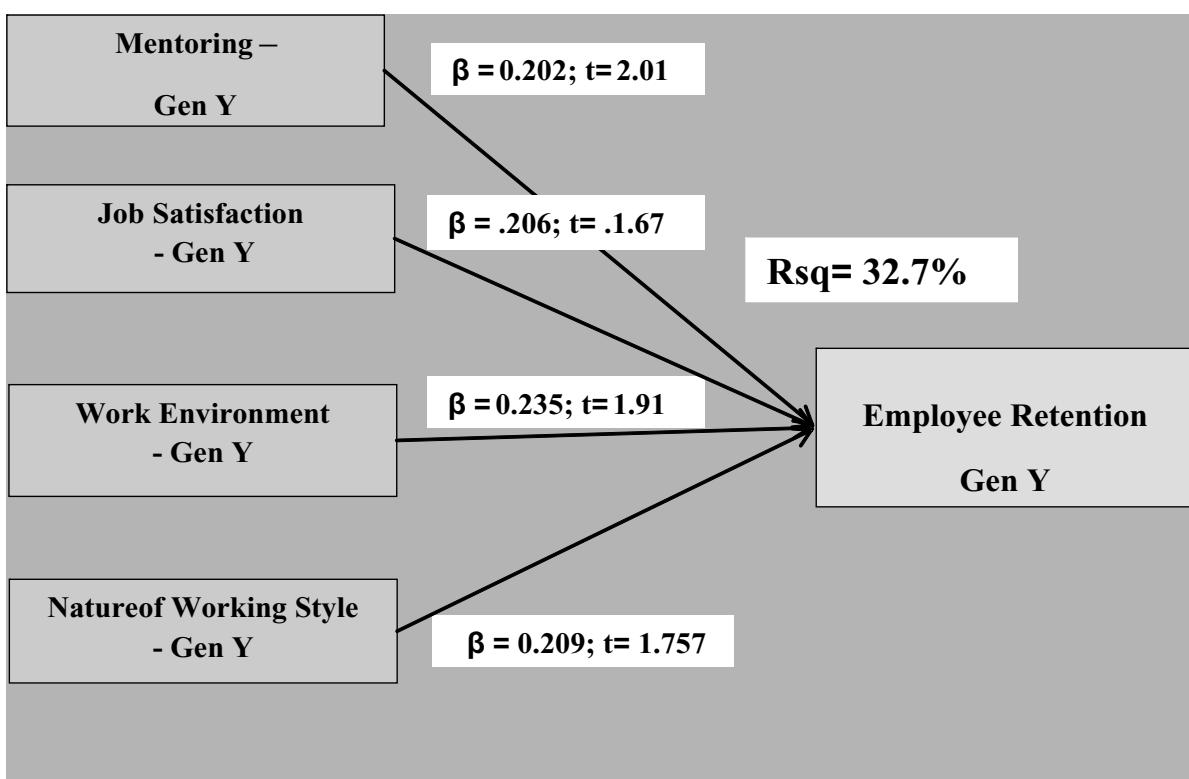
The above analysis helps to segregate those factors that are highly correlated ( $>0.4$ ) with employee retention of Gen Y workforce, namely, mentoring, job satisfaction, work environment and nature of working style of Gen Y. These factors are taken for further analysis of identifying their specific impact on retention, using regression analysis.

### 5.3.The impact of significant factors influencing Employee Retention

The extent of impact of those factors identified using correlation in the above analysis were used as independent variables and were tested for their impact on employee retention which is the dependent variable using regression. The independent variables are mentoring, job satisfaction, work environment and nature of working style. The coefficient of determination value found to be 32.7% depicting it is statistically significant. Work environment ( $\beta = 0.235$ ;  $t = 1.91$ )from figure 3, found to have a greater impact in staying in a particular company. The path validity t value is higher than the significant value of 1.9 depicting the path from work environment to employee retention is

valid. It is because of the high sophisticated living rendered by the parents during their infancy stage paves Gen Y to look for a sophisticated work space. Gen Y look for comfort and ease at work with breakout areas, creative rooms, even sleep rooms (Weyland, 2011). Apart from these, they have digital breaks with social medias where they share personal and professional experience.

Mentoring ( $\beta = 0.202$ ;  $t = 2.01$ ) from figure 3, depicting that the path validity is significant; illustrating that good rapport with the supervisor and instant feedback are essential for them supporting the reviews of Crumpacker and Crumpacker (2007) and Cennamo and Gardner (2008). The main agenda constitutes that Gen Y has a get-now attitude with everything done right now and they no longer wait for more time. It is because of this nature they look for frequent feedbacks within a week; constant praise and applause from their mentor. Gen Y is distinct from previous generations, where Gen X waits for promotions, fringe benefits and pensions. But Gen Y are fastlearners, quick earners, rapid workers and swift gainers.



**Figure 3 – Level of impact of the factors on employee retention**

## 6. Conclusion

The study has revealed the enablers looked upon by Gen Y employees fulfilling their urge of sky rocketing expectations. This study depicts that good mentoring support and luxurious workplace are the important factors for retaining Gen Y in a particular enterprise. So the organisations are in dire need to propound strategies on mentoring; work environment to increase the employee retention. This study will have practical implications in automobile sector where the generation Y employees are more in number. As Gen Y tend to behave more like investors than assets, seeking the best return on their investment of time and energy with an employer, it is high time that the management had to redesign the organisational processes, structure and methods according to the style and approach of Gen Y.

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# Self Efficacy Beliefs and Campus Placement Outcome

Nitin Kulkarni and A.H. Chachadi

## A b s t r a c t

*Employment is considered as a natural outcome of any professional education program. Students develop many skills over their undergraduate program in engineering hoping to land in a job of their choice. Soft skills and hard skills developed over their education, help in building their self esteem. It is generally believed that a student who has high self esteem has a better chance to get placed. This study tries to relate self efficacy beliefs measured using seven of the most commonly considered employability attributes and subsequent campus placement performance in two engineering institutes of North Karnataka region, over a 3 year period. Also, interestingly, it was observed that, over rated or inflated self efficacy beliefs of students have led them to more failures in campus placements than success.*

**Key Words :** *Employability, Self esteem, Self efficacy beliefs, placement outcome*



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**I**ndia with 3383 Engineering institutions, churning out over 1.6 million engineering graduates each year (AICTE, 2013 report), appears like a great source of much needed engineering talent essential to build our nation. These engineering graduates holding a degree in 36 or more engineering streams, pose a mammoth challenge to be gainfully employed. According to one report published in the National Daily, Economic Times by Chaturvedi and Sachitanand (2013), over a million engineers in India are struggling to get placed in an extremely challenging global market.

At the academic level, according to one report from Visvesvaraya Technological University, (a certifying body for all engineering graduates from the state of Karnataka), over the last 3 years (2011-13), 50-60% of students graduate in First class or better. The number of students graduating in First Class with Distinction alone are between 14-20%. The overall passing percentage is between 75-85%. Ideally the academic performance as certified by the university should suffice to land a student

in a job. However, our national average is a dismal 18.43% of graduating engineers fit to take up a software services job. For a job in any of the core companies, only 7.49% of our graduates are employable (Aspiring Minds, 2014).

### **Review of Literature**

Many studies have been published indicating the employer's expectations of fresh engineering graduates to be employable. In a study conducted on the employer's perspective of skills needed to be employed, human skills was considered the most important skill a graduate should have, followed by professional skills, communication skills and lastly technical skills (Kulkarni et al., 2014). By the time the engineering graduates get ready to face the campus placements, would they possess these skills sufficiently to land in a job?

Dynamics of campus hiring in India have changed dramatically over the last decade. An academic degree, which once upon a time was enough to get a job, isn't sufficient anymore. Students are expected to develop an imposing and impressive personality over and beyond the degree. Students are expected to take ownership of their careers to develop and sustain their employability. Career counselors and human resource practitioners have been concerned for a long time about employees' psychological career resources or career meta-competencies that enable them to take ownership of their careers and be proactive in managing their careers and improving their employability (Baruch, 2004; Coetzee, 2008; Fugate et al., 2004; Sinclair, 2009). In view of this, present research paper has focused on career meta-competencies, like self-esteem and associated self-efficacy beliefs. Self-esteem can predict employability significantly (Fugate et al., 2004; Hewitt, 2002; Kerka, 1998). However, there seems to be a lack of research in the context of engineering graduates of North Karnataka, on how their self-esteem relates to their employability outcomes at campus placements.

**Employability:** There are many definitions of employability based on various perspectives. Most of these definitions concern employability from the individual's perspective. A general definition of employability is the perceived ability of a person to land in a job. Employability as an outcome has been referred to, in various contexts in the literature, such as, in research studies investigating how graduate students should enter the labour market (Harvey, 2001; Knight and Yorke, 2007). Many studies have also focused

on getting the unemployed back to work (Finn, 2000; McArdle, Waters, Briscoe, and Hall, 2007). More recently, employability has been increasingly used in the context of how employed people are to stay competitive in the labour market (e.g. ForrierandSels, 2003a; Fugate, Kinicki, and Ashforth, 2004; Garsten, 2004).

Employability is a concept which has gained quite a traction in recent years in India as the number of job opportunities have increased and so are the number of aspirants seeking those. In the context of fresh engineering graduates, it broadly consists of good attitude towards work, willingness to unlearn and relearn quickly, being a good team player, professional outlook and appearance, good fundamentals, written and verbal skills and others. This study encompasses measuring some of the key parameters to employability and students' self efficacy beliefs about them.

### **Objectives of the Study**

Objectives of the study are to,

- identify various academic and non-academic parameters contributing to the employability of engineering graduates,
- measure the self efficacy beliefs of engineering students based on the above identified parameters.
- measure the impact of their self efficacy beliefs on campus placement outcomes.

### **Methodology**

Engineering students studying in the final year of undergraduate engineering degree were chosen from two of the North Karnataka tier II city. The study was conducted over 3 cohorts comprising students from 2007-11, 2008-12, and 2009-2013 batch of engineering. For the first cohort (2011), 494 students participated out of population of 640. In the case of second cohort (2012), 463 student samples were used from a population of 660. The third cohort (2013), 371 students participated out of a total population of 660. There was no gender based segregation done. The data collection was completed right before the campus placement season for the respective cohorts. That is in the summer break of 6<sup>th</sup> and 7<sup>th</sup> semester. The third cohort, (2009-13) data was collected to use as a test case to confirm the findings of the first two cohorts. All the sample sizes complement the

requirement of accepted significance level set at  $p=0.05$  for this study.

Though placement outcomes depend on host of parameters, this study is focused on the following 7 control parameters to measure the student efficacy. Later, their placement records were superimposed on the survey data using unique University Seat Numbers (USN). In the survey which was prescribed using Google forms, students were asked to answer 7 questions pertaining to various parameters listed below. The maximum point a student can earn is 21 and the least is 6.

**1. Academic Performance-Cumulative Grade Point Average (CGPA)** - This is synonymous to academic performance in engineering, based on the Cumulative Grade Point Average over 6 semesters. CGPA is infact one key criterion used as a qualifier for attending the campus placements. Companies visiting campuses to hold recruitment drives seek fresh graduates with 6.75 as the cutoff CGPA with some exceptions. Also, many companies offered relaxation to students who have scored 7.75 and above, allowing them to attend direct personal interviews, without written tests. In general, it is presumed that CGPA is the indicator of technical proficiency of a student. Higher the CGPA, better is the technical caliber of that student. In this study, CGPA is the lone measure of academic performance of the students.

**2. Campus Placement Preparation (CMP):** Typical campus placement processes include various screening steps and each step can be an elimination round. It is imperative that students understand company specific selection process, and prepare accordingly. In fact many colleges conduct pep talks right before the campus recruitment either by their staff or by hiring consultants. This is to sensitize the students about the selection process and provide tips to prepare for the same. CMP intends to measure student's efficacy on their preparation for the upcoming campus recruitment activity. Students can opt for a formal training program if engaged at the institution level or they can rely on self study. For this study, CMP considers the preparation for both hard and soft skills needed to be employable through campus recruitment process.

**3. Ability to communicate in English (ENG):** Engineers though are hired mainly for their technology competence, it is imperative that professional success can be achieved only by developing effective communication skills (Watson and Alexander, 2005). It is not uncommon for the hiring managers

who complain about the inability of engineering graduates to communicate issues in, one-to-one and one-to-many situations. Not just spoken English but a flair for written communication in English is required for fresh engineering graduates (Blair, 1996). Engineering solutions are better communicated across to various teams only through effective communication, both verbal and written (Palmer and Salvin, 2003). Though there is no formal English coaching as a part of engineering education, fresh graduates are expected to perform at a professional level in terms of their ability to communicate in English. This can be a real challenge for students who have done schooling in vernacular language and have learning challenges with English as a medium of education in Engineering. According to one study, employers complain that their young engineers hired have a good understanding of technology but lack in much needed oral and written communication skills (Liebowitz, 2004).

**4. Gap/Break in education between 12<sup>th</sup> and Engineering (BRK):** Many students realize the impact of missing years between education only when they get to the stage of facing campus recruitments. Many companies now seek students with no break in education from schooling to graduation. This gap in education can be a non-qualifier despite having all other counts of eligibility in students favour.

**5. Extra-Curricular activities (EC):** Though not many studies have been published on the impact of Extra-Curricular activities on students of professional education like engineering, it is believed to contribute to the social and leadership skills of students. Participating in Technical Paper Presentations, conducting Seminars, Guest Lectures, Technology Clubs in related subjects like - Photography, Film, Radio station, Weather station - add to the overall personality development of engineering graduates. It is the soft skills that get honed by participating in Extra-Curricular activities. Students also understand the importance of connecting theory to ideation of workable engineering solutions.

**6. Cultural Activities (CUL):** These activities are intended to promote holistic growth of a student and develop overall personality. These activities not only unlock students' potential in the area of art, music, drama and through other such creative means, but provide an opportunity to look at a given problem from different perspectives, which is the basis of innovative solutions. Many institutions spend substantial sums of money on such activities hoping to

reap the benefits of the same in the form of quality engineers and employable graduates.

**7. Industry Visits and Internships (IND):** By far this parameter is the most important and is most relevant to engineering students. Industry visits enhance the ability to understand and apply the theory and question the assumptions made in the classrooms by experiencing them. In essence, Industrial visits and Internships help connect classrooms to Engineering practices. Industry visits and internships together simulate professional engineering practice. Also, industry visits help in providing hands on education in solving complex engineering problems. It helps to develop communication skills and helps in making students confident of using their technical ability in the real world.

### Measures

**Academic Performance (CGPA):** Marks scored by a student are the direct measure of how ‘smart and knowledgeable’ that student is. Is it really? But many campus hiring businesses seek a first class graduate. A student with aggregate score of 60 percent or higher is sought. This is especially true of services organizations, as they need to sell these resources to their clients for billable hours and clients prefer ‘first class’ graduates.

60% is equivalent to 6.75 CGPA – Cumulative Grade point Average, set by AICTE (All India Council for Technical Education). It is used as the threshold to separate eligible candidates from ineligible ones.

For this study, students have been grouped into three CGPA categories. 6.74 or below – coded as 1, 6.75 to 7.74 – coded as 2, 7.75 and above- coded as 3.

### Campus Interview Preparations (CMP):

The average number of hours a student spends on preparing for campus placements is the second criterion we measured. Apart from the technology fundamentals, students are expected to perform well in Analytical skills, Reasoning, Comprehension, Grammar, General Awareness and much more. Many companies allocate weights internally to normalize student placement scores. Based on the information shared by many HR managers, weights in the range of about 55-60% is given to Technology fundamentals and remaining for General Aptitude/Analytical capabilities. Most of the students need to consciously prepare for campus placements and hence it is used as one of the key measures for success.

Students who spend time of 0-2hrs.per week are coded as 1, 2-4 hrs.per week as 2 and beyond 4 hrs.per week as 3.

### Knowledge of English (ENG):

Many students in the north Karnataka region hail from vernacular schools. Their medium of study is normally their mother tongue and transaction in English may seem overwhelming. Many students spend time on improving their written and verbal skills over their engineering education. However, for many, it is still a challenge. We measured the self-evaluation of their level of competency in English communication.

Students, who rated themselves as below average are coded as 1, at average as 2 and proficient in English as 3.

### Break in Education (BRK):

Many students loose a year or two after their 12<sup>th</sup> grade to prepare for premium engineering institutions like IIT's and NIT's. However, many realize little late in their engineering that some companies have policies against hiring students who had break in their education. Many companies do permit students up to 1 year break to participate in their campus hiring process.

For this study we have coded students with a break of 2 years or more as 1, 1 year as 2 and no break as 3.

### Extra-Curricular activities (EC):

Extra-curricular activities are a means to improve a student’s ability to effectively apply Technology, Delivering engineering solutions, Effective communication, Marketing business / technology ideas successfully, Teamwork and such. Activities under EC include- Technical paper presentation, Participation in Seminars and Student Conferences. We measured students for their participation in Extra-Curricular activities over three levels. Students who have taken partin 1 or less in their engineering study till date as 1, 2-4 times as 2, more than 4 times as 3.

### Cultural Activities (CUL):

Year on year, institutions spend lakhs of rupees to hold annual fests and other cultural events. Students can take best advantage of these by participating to develop competencies such as, Problem solving, Leadership skills, Dealing with ambiguity, People management, Event planning and so on. Students were asked to rate their participation in such Cultural Activities held either in their institutions or elsewhere. If they had participated in 1 or less over their

engineering study till date, it is coded as 1, 2-4times as 2, 4 or more times as 3.

### **Industry visits and Internship (IND):**

Industry visits help connect theory to practice. It brings in freshness in application of basics of engineering into solving a problem. Industry visits could be formalized by the institutions or it can be undertaken on individual basis.

Internships are a little involved engagement with the industry. They help students learn in a professional business environment, working on business challenges with well-established processes under supervision. In this study, we have coded students with no Industry/Internship participation till date, as 0, with 1-2 as 2 and with 3 or more as 3.

### **Hypotheses Formulation**

North Karnataka region, where this study was held, proficiency in English language has always been a challenge due to socio-demographic factors. English language proficiency is one of the important determinants of graduate employability (Morshidi et al., 2004a, 2004b). Indeed, good English language proficiency gives an added advantage to the job applicant. In other countries that use English as a second language, English language proficiency is also found to have a favorable impact on one's employment outcomes (for instance, Dabalen et al., 2001; Lan, 2003).

The other significant determinants of employability are, Poor communication skills and Academic performance (Lim and Bakar, 2002; Morshidi et al., 2004a, 2004b; Saodah et al., 2006; Hariyati et al., 2006). These findings suggest the importance of including these socio-demographic variables in predicting the employability of graduates. It is also imperative that institutions need to make all out efforts through curricular and Extra-curricular programs, to help students develop their self esteem which has a direct bearing on the employability potential (Fugate et al., 2004; Hewitt, 2002; Kerka, 1998).

Many factors contribute to a successful campus placement outcome. Engineering students have to be prepared with hard skills (Technical skills) but also in human skills, professional skills and communication skills. Hard technical skills are the outcome of academic programs and are usually reflected by the academic scores like CGPA of a student.

However, other skills like human skills, professional skills and communication skills are the outcomes of participating in experiential learning, projects undertaken, entrepreneurial initiatives, industry visits, curricular and extra-curricular activities.

Many colleges employ training as a means to enhance some of these skills in their students with a desire to bridge the perceived performance gap during campus placements. Little is done to understand how training helps in building the much needed competencies like, communication in english, analytical skills, logical and reasoning skills, industry exposure, leadership skills, results orientation, problem solving skills and such. However, validating the effectiveness and tangible outcomes of such training programs have often relied on evidence of the correspondence between training and job content (Goldstein and Ford, 2002). Students have different learning styles and Earley (1994) observed that individualists learn better in self-focused training modes and collectivists did better in a group training setup.

To enhance student learning, irrespective of students' styles, most institutions have been spending lakhs of rupees on extra- curricular, cultural activities and industry visits. In fact, according to one latest report published in a daily, *The Hindu*, dated 27 February 2014, college fests have crossed budgets of up to Rs. 1.20 crore! And on an average, colleges are spending anywhere between Rs.60 lakhs and Rs.1 crore on various fests. These fests in general entail various technology events, alongside cultural programs. Through these fests students pick up most of the soft skills and business skills needed to be professionally successful.

The academic rigor as mandated by the university body, related extra-curricular activities, cultural events and industry interface through visits and internships, help develop overall personality of an engineering student. Though the outcomes of such off-class learning need further research, it is believed to bolsters the resolve of a student to get placed on campus drives. The outcome of such campus placement is the measure of his/her self efficacy beliefs. This present exploratory study, intends to measure the self efficacy of engineering students right before their campus season. Bandura (1995:2) describes self-efficacy as the "beliefs in one's capabilities to organize and execute the courses of action required to manage prospective

situations." Self-efficacy beliefs can influence factors such as motivation and commitment levels as well as an individual's willingness to take on difficult tasks. Now, self efficacy can be typified by having an internal locus of control – i.e. the belief that they are in control of their own destiny (Rotter 1966: cited in Buchanan and Huczynski 2004:850) and a malleable (rather than fixed) self-theory – i.e. the belief that an individual can take action to enhance his/ her own competence (Yorke and Knight 2004). With employment in sight, students must have a belief in themselves and internalize the essential competencies needed, with their own abilities and thus control and enhance their potential campus placement outcomes.

This study measures the self efficacy of engineering students with respect to their employability potential, right after their completion of 3<sup>rd</sup> year (6<sup>th</sup> Semester) and right before the beginning of campus placement season. Following Null and Alternate Hypotheses have been formulated under this study.

1.  $H_0$ : CGPA scores of students have no effect on the campus placement outcomes.  
 $H_1$ : Students with higher CGPA scores tend to fare better in the campus placements in comparison with students with lower CGPA scores.
2.  $H_0$ : Participation in Extra-curricular, Cultural activities, Industry visits and internships have no impact on the self esteem of students.  
 $H_2$ : Participation in Extra-curricular, Cultural activities, Industry visits and internships boosts self esteem of students.
3.  $H_0$ : Self efficacy beliefs have no significant influence on the employability of a student.  
 $H_3$ : Self efficacy beliefs have a significant influence on the employability of a student.
4.  $H_0$ : Over inflated self efficacy beliefs have no impact on campus placement outcomes.  
 $H_4$ : Over inflated self efficacy beliefs lead to higher failure rates in the campus placements.

## Data Analysis and Interpretation

Pearson's correlation analysis is used to find the strength of correlation between various parameters under study for the three cohorts. Table 1 below shows the values of Pearson's correlation. It is quite observable that CGPA is found significantly associated to the campus placement outcomes ( $r=0.299$  to  $r=0.346$  at  $p<0.01$ ). This suggests that in itself CGPA can be a better measure of the campus placement outcome. Parameters like self perceived campus preparations in terms of number of study hours per week ( $r=0.309$ ), perceived command over English ( $r=0.311$ ), participating in Extra-curricular activities ( $r=0.160$  to  $r=0.377$ ), Cultural activities ( $r=0.535$ ) and Industry visits and Industry internships ( $r=0.456$ ) seem to have a strong association with CGPA. It also indicates that across board, students who have performed well in academics (represented by CGPA) tend to perceive themselves better prepared in all other placement parameters. Students who spent more time in preparing for the campus placements also seemed to be more confident as shown by the fairly strong association ( $r=0.106$  to  $r=0.136$  at  $p<0.01$ ).

Engineering students are educated to be technology leaders. Apart from creating knowledge, how well they communicate their technology ideas across is one key success component. Technical paper presentations, seminars and tech conferences promote such competencies in students. The association of Extra-curricular activities with participation in Cultural activities and Industry visits/internships is reasonably strong ( $r=0.133$  to  $r=0.233$  at  $p<0.01$ ). The competencies needed for getting placed in campus interviews can be learnt by participating in Extra-curricular, Cultural activities, and Industry visits and Internships which are evident from the strong  $r$  value ( $r=0.188$  to  $r=0.252$ ) with placement outcomes.

As we can see from the  $r$  values for the campus placement outcomes of  $r=0.105$  to  $0.346$ , show that all the chosen parameters have a significant association with a student getting placed in the campus recruitments.

**Table 1 -Pearson Correlations:**

		What is your current CGPA in BE?	Approximately how many hours in a week you spend on campus placement preparations? (Includes analytical, logic, problem solving, language readiness)?	How good are you in your verbal communication in English?	How many years of break you have between 12th.and engineering?	Do / Did you participate in Extra-Curricular activities like, paper presentation, Technical events?	Do / Did you participate in cultural activities in the college?	How many industry visits you have made so far (including internships during vacation)?
What is your current CGPA in BE?	Cohort 2013 (test data)	1						
	Cohort 2012	1						
	Cohort 2011	1						
Approximately howmany hours in a week you spend on campus placement preparations? (includes analytical, logic, problem solving, language readiness)?	Cohort 2013 (test data)	.290**	1					
	Cohort 2012	-.013	1					
	Cohort 2011	.309**	1					
How good are you in your verbal communication in English?	Cohort 2013 (test data)	-.014	.009	1				
	Cohort 2012	.072	.062	1				
	Cohort 2011	.311**	.061	1				
How many years of break you have between 12th.and engineering?	Cohort 2013 (test data)	.216**	.009	-.013	1			
	Cohort 2012	.134**	.206**	.063	1			
	Cohort 2011	.157**	.087	.028	1			
Do / Did you participate in Extra-curricular activities like, paper presentation, Technical events?	Cohort 2013 (test data)	.088	.043	.109*	.116*	1		
	Cohort 2012	.160**	.136**	.083	.079	1		
	Cohort 2011	.377**	.077	.022	-.054	1		
Do / Did you participate in cultural activities in the college?	Cohort 2013 (test data)	-.040	.095	.206**	-.038	.179**	1	
	Cohort 2012	.000	.239**	.097	.056	.223**	1	
	Cohort 2011	.535**	.106*	-.003	-.147**	.090*	1	
How many industry visits you have made so far (including internships during vacation)?	Cohort 2013 (test data)	.107*	.044	-.089	.077	.024	-.030	1
	Cohort 2012	.052	.122*	.066	.075	.167**	.184**	1
	Cohort 2011	.456**	.063	.078	-.001	.133**	.138**	1
Placed or Not placed	Cohort 2013 (test data)	.346**	.240**	.090	.134**	.252**	.079	.068
	Cohort 2012	.299**	.195**	.006	.105*	.188**	.111*	.105*
	Cohort 2011	.327**	.183**	.207**	.038	.211**	.273**	.262**

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

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

Measuring self efficacy has a risk of respondents overrating on some measures based on their perceptions. Many a time a student may feel very confident of getting placed in the campus recruitment but the outcome could be otherwise. It is interesting to know that other than CGPA all other parameters are subjective in nature. Naturally, perception of the individual varies and hence needs to be measured and analyzed to see why many students are unable to get placed despite the fact that they see themselves to be quite 'fit.'

It is also important to make students aware of self-efficacy and the impact that their individual beliefs have on their employment outcomes (as well as their degree classification). Furthermore, knowledge of the importance of self-efficacy is arguably akin to what Meyer and Land (2003:1) describe as a threshold concept i.e. "a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress." In other words it is only through becoming aware of their own self-efficacy beliefs, and the impact that these can have on their employment prospects, a student will be able to maximize the development of his/her employability attributes.

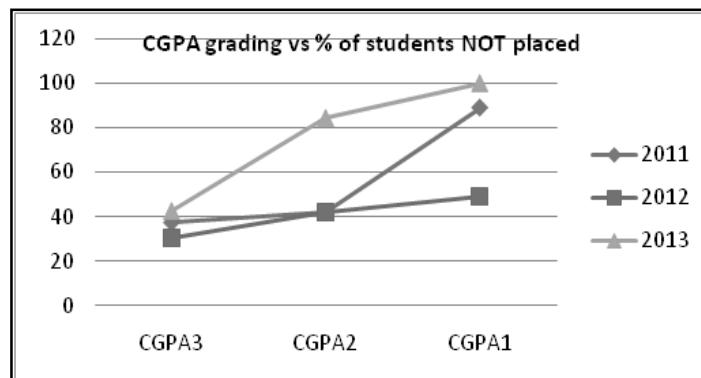
In the following tables and graphs, students' self efficacy beliefs, against various measures have been depicted. As and when cumulative measures are plotted against the

placement outcomes, an interesting pattern can be seen. Students show a tendency to overrate their efficacy beliefs with reference to the last three measures viz. –Extra-curricular activities (EC), Cultural activities (CUL) and Industry visits and Internships (IND). These inflated scores though represent higher self efficacy beliefs, but has led to above average failures to securing a campus job in that score band.

As CGPA is a measure of the technical capabilities of a student, it has a direct and influential bearing on the campus placement outcomes. However, in itself, CGPA is not enough to guarantee a job. Students who are bucketed into 3 categories of CGPA and the percentage of students in those categories, who could NOT be placed with CGPA alone as a measure, are given in Table no. 2. As predicted, the percentage of NOT placed students' increases with lower CGPA scores. Both from the Correlation table table no. 1 and table no. 2, we can conclude that CGPA to placement outcomes are significant at  $p=0.01$ , and the first null Hypothesis-'CGPA scores of students have no effect on the campus placement outcomes,' cannot be accepted. Alternate hypothesis which states that 'students with higher CGPA scores tend to fare better in the campus placements in comparison with students with lower CGPA scores' has to be accepted.

**Table 2 - CGPA grading and corresponding percentage of students not placed.**

	Percentage students NOT placed		
	2011	2012	2013 – Test data
CGPA3	37.39	30.39	42.37
CGPA2	41.88	42.08	84.28
CGPA1	89.02	49.23	100



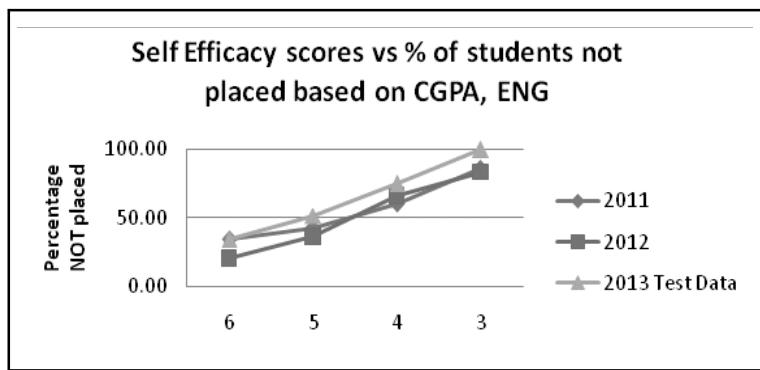
**Graph 1 -CGPA grading vs % of students NOT placed.**

CGPA + ENG - By adding the scores of students' self perceived command on English communication, we get

almost a similar picture. Students with lower self efficacy scores have NOT got placed in the campus recruitments.

**Table 3 -Self Efficacy scores and percentage of students not placed based on CGPA, ENG.**

Total Score	Percentage students NOT placed		
	2011	2012	2013 Test Data
6	34.07	20.20	34.51
5	42.45	36.59	51.66
4	60.18	66.23	75.00
3	86.21	83.33	100.00
	100.00	NA	100.00



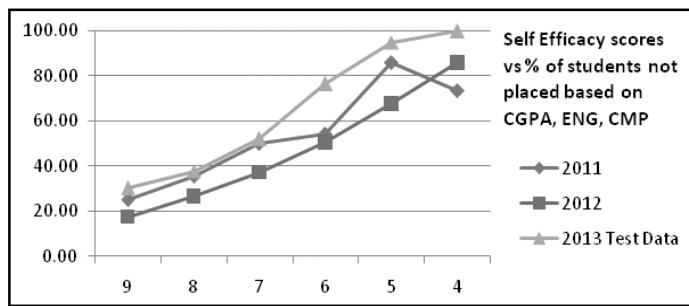
**Graph 2 -Self Efficacy scores vs % of students not placed based on CGPA, ENG.**

Table no. 4 gives the cumulative scores of CGPA, ENG and extent of Campus preparation – CMP.

Graph no. 3 shows the corresponding outcomes based on the scores of students.

**Table 4 -Self Efficacy scores and percentage of students not placed based on CGPA, ENG, CMP.**

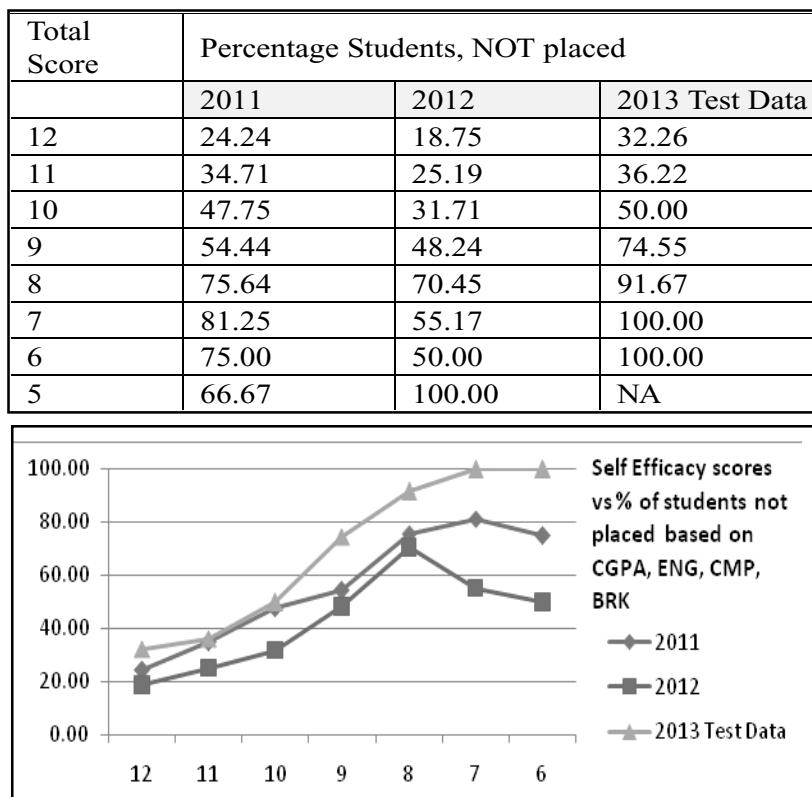
Total Score	Percentage students, NOT placed		
	2011	2012	2013 Test Data
9	25.00	17.54	30.30
8	35.43	26.43	37.69
7	50.00	37.24	52.24
6	54.26	50.65	76.47
5	85.94	67.57	95.00
4	73.33	85.71	100.00



**Graph 3 -Self Efficacy scores vs % of student not placed based on CGPA, ENG, CMP**

Table No. 5 shows the scores of students based on their perception on CGPA, ENG, CMP and Break in Education – BRK.

**Table 5 - Self Efficacy scores and percentage of students not placed based on CGPA, ENG, CMP, BRK.**



**Graph 4 - Self Efficacy scores vs % of students not placed based on CGPA, ENG, CMP, BRK**

Table No. 6 and Graph No. 5 show the students' perception on CGPA, ENG, CMP, BRK and perceived performance in Extra-Curricular activities – EC.

**Table 6 - Self Efficacy scores and percentage of students not placed based on CGPA, ENG, CMP, BRK, EC,**

Total Score	Percentage Students, NOT placed		
	2011	2012	2013 Test Data
15	23.81	20.69	20.00
14	35.93	30.00	34.78
13	43.33	35.64	41.43
12	42.86	35.23	45.56
11	60.56	44.47	59.31
10	73.85	55.81	77.78
9	91.82	69.23	88.24
8	100.00	68.75	100.00
7	50.00	NA	NA
6	100.00	100.00	NA

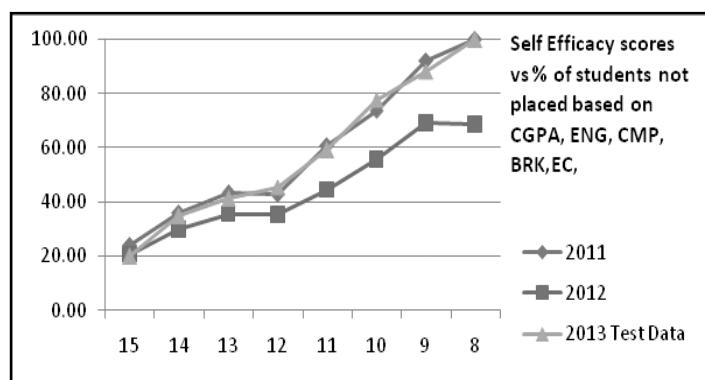
**Graph 5 - Self Efficacy scores vs % of students not placed based on CGPA, ENG, CMP, BRK, EC**

Table No.7 and Graph No. 6 depict the students' cumulative score with the consideration for CGPA, ENG, CMP, BRK, EC and participation in Cultural Activities – CUL.

**Table 7 - Self Efficacy scores and percentage of students not placed based on GPA, ENG, CMP, BRK, EC, CUL.**

Total Score	Percentage Students, NOT Placed		
	2011	2012	2013 Test Data
18	0.00	20.00	12.00
17	0.00	13.33	16.67
16	33.33	26.79	24.00
15	42.50	30.69	29.79
14	33.90	30.26	34.00
13	45.71	39.68	42.96
12	62.50	47.58	51.47
11	86.05	65.46	82.93
10	92.50	69.71	85.71
9	72.22	72.73	81.82
8	100.00	75.00	100.00

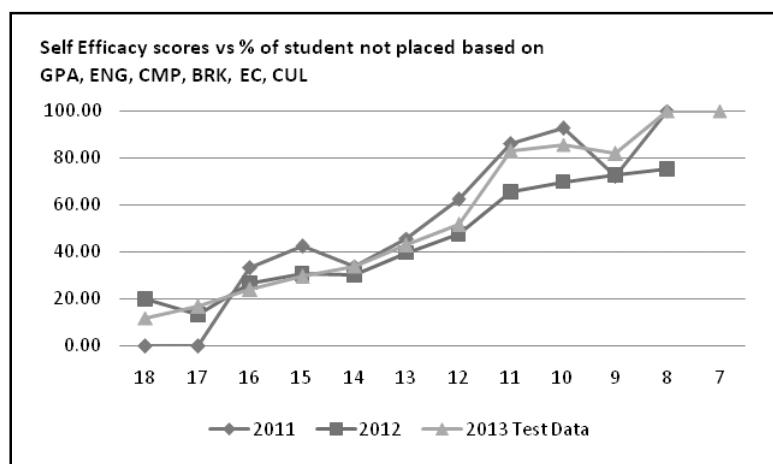
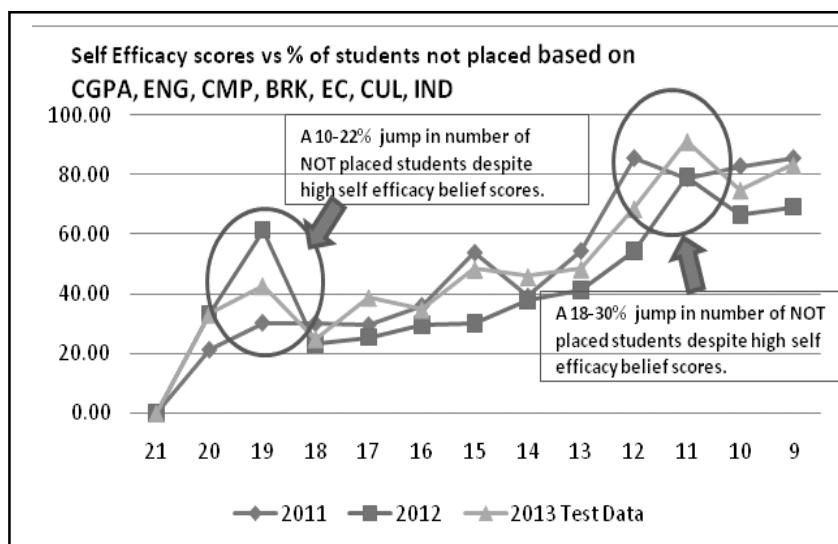
**Graph 6 -Self Efficacy scores vs % of students not placed based on GPA, ENG, CMP, BRK, EC, CUL.**

Table No. 8 and Graph No. 7 show the overall scores of students and percentage of students who are NOT placed incampus recruitments. The overall scores include, CGPA, ENG, CMP, BRE, EC, CUL and IND – Industry visits and Internships.

**Table 8 - Self Efficacy scores and percentage of students not placed based on CGPA, ENG, CMP, BRK, EC, CUL, IND.**

Total Score	Percentage Students, NOT placed		
	2011	2012	2013 Test Data
21	0.00	0.00	0.00
20	21.43	33.33	33.33
19	30.43	61.54	42.86
18	30.23	23.53	25.00
17	29.63	25.53	38.89
16	36.11	29.85	34.88
15	54.00	30.26	48.33
14	39.22	38.10	45.90
13	54.55	41.30	48.48
12	85.71	54.55	68.75
11	78.95	79.31	91.30
10	83.02	66.67	75.00
9	85.71	69.23	83.33



**Graph 7 -Self Efficacy scores vs % of students not placed based on CGPA, ENG, CMP, BRK, EC, CUL, IND.**

## Key Findings

From graph no.1 till Graph no. 4, we see that, lower the self efficacy scores, the numbers of NOT placed students is almost linear. That means the self efficacy scores hold a positive relationship with the placement outcomes. As the cumulative scores increase, so is the percentage of students who have been placed on campus. Hence we cannot accept the second Null Hypothesis: 'Participation in Extra-curricular, Cultural activities, Industry visits and internships have no impact on the self esteem of students' - and have to accept the Alternate Hypothesis that, 'participation in Extra-curricular, Cultural activities, Industry visits and internships boosts self esteem of students.' As the cumulative scores are the direct measure of the strength of self efficacy beliefs of students, and correspondingly the number of successfully placed students also are on the increase, it contradicts the third Null Hypothesis which states, -'Self efficacy beliefs do not have a significant influence on the employability of a student' and supports the Alternate Hypothesis, which states that, 'Self efficacy beliefs have a significant influence on the employability of a student.'

When the self efficacy scores of Extra Curricular activities are added to the total scores, the students' seem to rate themselves higher, especially those in the score band of 12-14 and 8-9, with no corresponding increase in the placement numbers (This can be seen by increased number of NOT placed students in these bands) - Ref. Graph 5.

Likewise, if the self efficacy scores of CUL – Cultural activities are added to the total scores, we see the same trend of over-rating their participation, which is evident at both the extremes of the graph. This means, students in the higher self efficacy score band have a tendency to over-rate their cultural activity participation and similarly, it is observed students with lower self efficacy scores also have a tendency to 'make-up' for lost academic performance. However, in both these bands of self efficacy scores we see increase in the percentage of NOT placed students -Ref. Graph 6.

Interestingly, in Graph no. 7, which is the sum of self efficacy scores of all parameters, we clearly see that students in the cumulative score band between 18-20 and 10-12 have over rated themselves on Industry visits and Internship measures as well. This over inflation of their perceived performance with reference to their perceptions about EC-Extra-curricular, CUL-Cultural Activities and IND-Industry Visits and Internships, is prominently used by students at both ends

of the spectrum. Students with better overall scores of 18-20, presume their experience with EC, CUL and IND to be lot more valuable and hence they rate themselves higher. Likewise, students with self efficacy scores of 10-12, also have over-rated their participation but without proportional increment in their placement performance. The data suggests that these two bands have seen over inflation of self efficacy scores to the extent of exhibiting a jump in 10-30% increase in NOT being placed.

For the cumulative self efficacy score as shown in table 8 and the corresponding graph no. 7, p-values are calculated using Chi-Square test. And for the given data p value was lying between 0.01 to 0.05. Hence the fourth Null Hypothesis which states, -'over inflated self efficacy beliefs have no impact on campus placement outcomes'-is no more relevant and hence the Alternate Hypothesis accepted. This means, there is a statistically significant increase in the failure rates of students who have a tendency to over inflate their self efficacy beliefs.

## Discussion

It was observed in this study that, CGPA, a measure of the engineering knowledge of a student, was indeed a better predictor of student's employability in the campus placements. It can be observed that students from all three cohorts exhibited similar campus recruitment successes with CGPA taken as the single parameter of their employability. This strengthens the general belief that students holding better academic scores can and will do better in campus recruitment drives. This finding also goes in line with understanding that higher the CGPA, better is the job performance (Cohen, 1984; Lavigna, 1992; Muchinsky and Hoyt, 1973; Samson *et al.*, 1984).

The institutions, where this study was conducted, primarily get ITeS companies for mass recruitment of engineers. These companies tend to consider engineering students from all disciplines as long as they satisfy the CGPA cutoff limits. For many non-circuit branch students, their performance in such mass campus recruitment drives, lynces on the written test and the interview performance. We also can observe that CGPA has a strong association with students' ability and motivation to educate themselves to perform better. However, students also tend to over-rate their self efficacy beliefs as if to compensate for their lack of performance in some key areas. This, they do by proclaiming their participation and learnings seemingly of better value,

through extra-curricular activities, cultural activities, industry visits and internships.

This type of over rating of their perceived self efficacy beliefs can be easily grasped, if one understands the campus interview process. It consists of a series of Aptitude and Technical tests, followed by Technical and Personal interviews. Each of these designed to dig deep to understand the 'real' caliber of the student. This explains as to, why though the student feels confident about his/ her ability to get through, fails to get a job. This phenomenon quite interestingly can be observed at both higher and lower score bands in this study.

There probably is a notion that lack of certain key employability competencies like Leadership, Communication, Problem solving, Dealing with ambiguity, can be compensated by merely claiming to be participating in the campus activities. This shall surely be noticed by the hiring managers. Thus many students though score high in these self efficacy beliefs, fail to get jobs. It perhaps is that, they over rated themselves without deserving it.

### **Conclusions and suggestions**

Based on the test statistic value, which is significant enough to contradict all the four Null hypotheses, and in turn support the alternate hypotheses, we can draw following conclusions.

This study concludes that CGPA is a better predictor of a student's ability to get through in the campus recruitments. Students do understand the importance of preparing for campus recruitments either through a formal training program or on their own. It is also observed that students who have invested reasonable time in preparing for campus placements have fared better in campus placement outcomes.

English is a second language for most of the students where this study was held. Students who had finished their schooling in vernacular language feel the need to be good in English communication. Though most of the outwardly communication is verbal, written skills in English are checked through tests. Students are to be encouraged to speak in English on campus and must be reading English business / general news on a regular basis.

Though break in education is something that cannot be undone, it certainly has its effect on the campus placement outcome. In fact, break in education criteria is checked as a part of eligibility rather than a selection criterion. However,

many companies visiting campus would permit students with a break up to one year to take part in their hiring process.

Students realize the importance of extra-curricular activities over a period of time. However, students who realize the significance tend to participate in these activities to develop presentation skills, effective communication, to overcome stage fear and to learn the importance of teamwork. Students must be encouraged to participate in at least one such extra-curricular activity in a year. Extra-curricular activities like technical projects, B-plan competitions can help students to develop their self confidence through experiential learning.

Cultural activities serve to develop critical competencies like team work, problem solving, etiquettes, dealing with uncertainty, public speaking, time management and more. Many institutions spend lakhs of rupees on such cultural extravaganza, with an intention to build such skills in the participating students. However, the onus of learning in such cultural activities rests with the students. Cultural activities boost the self esteem of students.

For engineers, industry visits and internships are the closest opportunities to experience Industry environment. Industrial visits arranged regularly can help boost morale and applicability aspects of the theory learnt. Internships strengthen key functional skills of engineering students as they take on responsibility under the watchful eye of a supervisor. Industry visits and internships certainly add value to a student's employability if done the right way.

### **Limitations and Future work**

This study focuses on students from two engineering institutions in a tier 2 city of North Karnataka. There are many generally accepted factors which have significant impact on employability of an engineering student like – social background, gender, financial well-being, family support, environment, living conditions and such. However, this study intends to limit the campus placement outcomes to the chosen seven factors which are relevant in their engineering education. Incidentally, this is one of the few studies undertaken in the North Karnataka region, which tries to measure the relationship between the self-efficacy beliefs and employability.

Looking at the challenge of improving fresh graduate's employability, an all-round approach is needed, which includes various perspectives – student, parent, social, academic, employer and many more. Another study to

understand the employer's perspective of employable engineering graduate, using a multi-level, multi criteria decision models is underway. By augmenting such various studies, a fairly good understanding of drivers of employability can be understood specific to that region. These drivers shall bring in a paradigm shift in the way engineering education ought to be designed.

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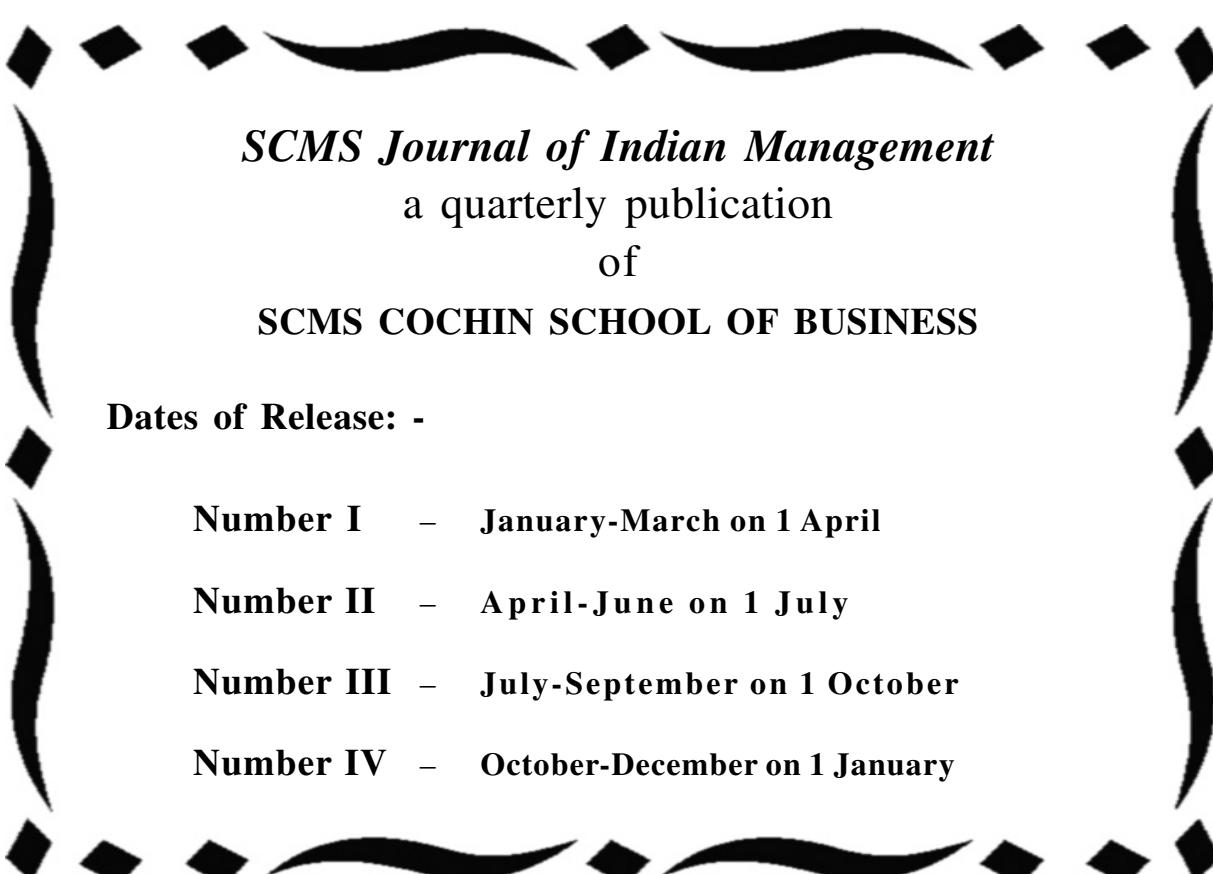
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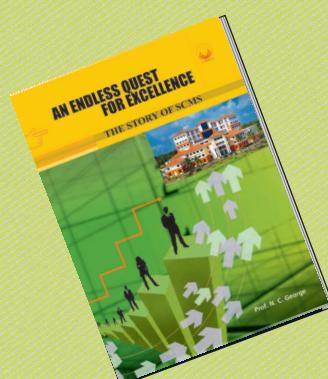
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