

# GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH

*discovering thoughts and inventing future*

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09 Portraits to  
Shape Your  
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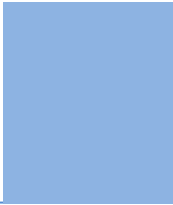




# Global Journal of Management and Business Research

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### *From the Chief Author's Desk*

**W**e see a drastic momentum everywhere in all fields now a day. Which in turns, say a lot to everyone to excel with all possible way. The need of the hour is to pick the right key at the right time with all extras. Citing the computer versions, any automobile models, infrastructures, etc. It is not the result of any preplanning but the implementations of planning.

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This Global Journal is like a banyan tree whose branches are many and each branch acts like a strong root itself.

Intentions are very clear to do best in all possible way with all care.

Dr. R. K. Dixit  
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# Coaches Female Strengths And Weaknesses

Petrica Dana Maria<sup>1</sup> Mester Dinu Grigore<sup>2</sup>

*GJMBR Classification*

*FOR: 15034,15035*

*JEL: L26,L25,M12,015*

**Abstract**-Becoming an entrepreneur will require financial sacrifices and lifestyle changes for those who undertake it, and without careful management it may become a life-consuming obsession. But going it alone also offers flexibility, particularly for women with families, that is not available in the corporate world. Entrepreneurs who set their own hours are better able to care for elderly relatives or attend school events at time that would be in the middle of the corporate working day, leaving the entrepreneur to complete his or her business tasks when family demands subside. But aspiring entrepreneurs must be under no illusions about the financial risks they are taking and the impact such a decision will have on their lifestyles.

**Keywords**-entrepreneurs, women style of negotiation, positive attitudes, performance.

## I. BECOMING AN ENTREPRENEUR

In the current period, the maintenance of a house can be done very rarely from a single salary. While men are not the only ones that earn the bread in the house, there are increasingly more women in managerial positions, or women who lead their own business. We will debate latter this position, analyzing the reasons that cause them to become entrepreneurs. The biggest advantage to running your own business is the opportunity it gives you to set working hours. With the need to take care of children, pets or elderly relatives who can not take care of themselves, this becomes extremely important. Secondly, an extremely important thing is that you can do what you love. From this idea, get started as a hobby and not because you are tired of the current situation; to a quote Sharon Fordham, chief executive of an impressive online company, "everything that matter is where you are going, not where you came from." There are many moments, especially when put up a business, in which personal life has suffered greatly. To become entrepreneur requires a certain amount of sacrifice: to give up a lot of free time, to pray and to borrow money from everyone who listens, to mortgage your house, and so on. Often, when the decision to start a business is not very good analysis of both partners of a couple, their relationship is sacrificed too. Considering all these risks, if you do not have a passion, becomes very tempting to give up when it encounters such obstacles. Passion beyond Reason must then exist. Many aspiring entrepreneurs, start wearing business optimism and passion but forgetting to take into account the costs involved in such a decision. So often invest too many resources in general space and personal irrational chose, hoping in big revenue

that is usually only half done. A tip from Ellen Weber, vice president of international consulting firm, gave it the status of women aspiring entrepreneur, the Annual Conference of Femi Contractor, read: "One way to test the viability of your business idea is to get you asked yourself if the business could survive with only half the projected profit in the business plan." Having a viable idea, rational and started from personal passion for that activity, there is virtually no impediment to get started on your own. Literature comes to the aid of those who have the courage to start on this path, offering a wealth of useful tips for effective management of resources, both financial and especially the human ones.

## II. HUMAN RESOURCES MANAGEMENT BY THE ENTREPRENEUR

In recent years, all successful managers recognize the importance of the various human resources in a company. Has greatly expanded the role of human resources, the organization mode of recruitment, seeking people with knowledge both for the field, but with an open personality, positive, eager to assimilate and integrate new knowledge into organizational culture. Numerous studies have demonstrated the direct relationship that exists between the performance of a company and the management of emotions. We know the type of negative peers, who have never anything good to say, always complaining, always sigh and ill prepared, no matter that lies at the weekly meetings to lunch at the cafe shop. Without necessarily aware of this, "negative ones" leave their mark on those who come into contact, sometimes making it look bad even the best news. Sigal Barsade, professor of management at Wharton, emphasizes that "Emotions travel from person to person like a virus", so the mood of employees, their emotions and their disposal general have a great impact on job performance, decision making, creativity, turnover, teamwork, negotiations and leadership. A negative employee can absorb all the energy of a brainstorm session; using "just a few critical responses." Emotional moods will be transmitted independently of individuals. Endowed moods and bring their personal experiences at work because they bring their brains with them. Even if some believe that failing to hide his emotions well, these are compromised by facial expressions, body language, or sometimes just on. Some emotions, which we do not realize that we have them, can influence our behavior and thoughts. Knowing these aspects of personality effects of an employee, a entrepreneur must train their team of positive people, because they fellowships energy they are transmitted more efficiently, seeing the bright side can extract the gain from that situation and are ready to face a new problem, aware of a solution. Of course there are very good professionals, but who suffer from this negative tendency. They can not be changed by the

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entrepreneurs who come into contact with them, but the latter must have emotional intelligence, so not to get influenced by those around negative mood.

### III. ADVICE FOR ASPIRING WOMEN ENTREPRENEURS

In the world there are many associations of women entrepreneurs, which organize conferences and courses for those who want to start their own business. An important emphasis is on trying to find that idea that comes to meet a need that is not satisfied on the existing market. The spotlight must remain constant need consumers to shape the product or service so as to better satisfy the need for which is requested. As an entrepreneur you must not ever lose your vision, target it goes. Outside the corporate environment, those who want to open their business needs to carefully determine the purpose and implementation strategies, they need the ability to transmit what follow both employees and partners, customers and suppliers to be able to make financial and personal sacrifices, not least the ability to take risks that are present in relatively safe environment of employment in a corporation. At a session of entrepreneurship, Ellen Yin, patron of a bar-restaurant in Philadelphia, has revealed the story of her business. Yin, who initially worked as a consultant in the pharmaceutical industry wanted her own restaurant. To lead on the plane, she had to make some adjustments according to what was asked, so she had to find a head chef who would become her partner, as the owner to lease space for restaurant called this. She found a chef willing to take an associate position but he was not experienced in cooking dishes that Yin was willing to serve in the restaurant. Also she underlined the importance of the ability to send others to the list of priorities that are to make sure that all team fighting for the same objectives. Entrepreneurs must be ready to seize, to work, to make sure that things are done as it should. However, it is at least as important as when your goal should not ignore the reality around criticism of the more experienced and market signals. An important thing to remember is that a successful business means not necessarily a business that makes the most money. Often a job in a large corporation can make more money than their own business. If an entrepreneur decides after a few years to be reinstated in the world corporate, the experience and entrepreneurial spirit shown by the setting of a business, recommends him or her as an employer with risk-taking ability and many skills learned.

### IV. MEN, WOMEN AND MONEY

While increasingly more women are heads of family and those that bring money into the house, however, is currently kept a notable difference between the amount that wins a man and a woman for the same work conducted. And now American women earn 75 cents for every dollar won by American men. Where is this difference coming from?

In their book, "Women do not ask: Negotiation and the gender divides," Linda Babcock and Sara Laschever show different negotiating styles of the two sexes, which is the basis of this differentiation. Women simply do not negotiate as often, strong and efficient as men. This has profound

implications for economic, social and professional, explaining the continued existence of gender differences, even after they were eliminated by legislation. To support this we will take the above few examples to illustrate.

One year after graduation Faculty of Letters, was a survey of graduates and while the majority of their courses were boys, the girls were just assistants. To study the matter in detail, Dean has been consulted in this matter. Dean's explanation reflected very different style of negotiation of the two sexes. Faculty offers the opportunity to take courses to everyone who came up with a better idea of course, the ability to teach and some of that budget process. Males were those who came with such requests, women simply did not ask. To further support these hypotheses, questionnaires were applied on the 100 subjects, men and women, who were asked to indicate the last negotiation that they took part. While women had difficulty remembering and most have reported a story some months or years old, especially when purchasing a car, the men recounted recent events, such as: negotiating with his wife for watching TV, with colleague to share the tasks of a project. This survey showed that men consider negotiation as part of their daily life, a common process that involves frequent. At first glance all this seems to have insignificant impact on the lives of both men and women. But if we make a brief analogy, how the two will negotiate salary, we see significant footprint that leaves a single negotiation. Thus, suppose that a company offers a salary of 1,500 um for a young graduate of the Faculty of Economics. To interview two people appear, one woman and one man. While the man negotiates his salary and receives 2000 um, the woman accepted the 1500 um salary. Even during those two, in years would evolve in pace with wage increases of 3% (which is unlikely given the fact that man will know to ask for rights in another way), at the age of 60 years difference between the two is considerable, without taking into account that man can save additional money received from the bank, thus earning and interest. Prove as, after negotiating one other, the man has a financial background to make it safe for pension period, or allow them to support children, while the woman who carried out the same work under the same conditions, does not have these financial resources. However, paradoxically, it is recognized that women have certain advantages which make them much better negotiator than men are. Many courses are negotiating and slogan: "Let women learn to negotiate."

Although adoption of aggressive bargaining positions, such as preferred by men can lead to winning a short term negotiations, attitude of women in the negotiation process, namely focusing on cooperation and building a relationship can be a huge advantage. Recently it was recognized that addressing corporate to finding positive effects for both parties at the expense of trying to win simply, lead to results that are objectively superior to all those from other aggressive negotiating techniques. We can thus say that women often negotiate but when they do they have their strengths that make them invincible. This dilemma of economic differences between the approaches of the two sexes has been discussed and studied widely, both by economists, human resource specialists and psychologists.

Approach at least as interesting is the Utei Ehrhardt, BA in psychology, in his book "Good girls go to heaven; bad girls go wherever they want." Under this approach, a very big impact on what we do, what we think and what it has become the cultural baggage that each of us shall inherit the family. Thus it is considered that many young women learn from the family that "a good girl" should not offend anyone, and then live their entire life trying to please everyone forgetting their own needs. In the sphere of professional life, these women have the courage to ask what they deserve, to negotiate rights making efforts more often than their male colleagues, but who can ask what is their and of course as the first. Reached as to the assumption that woman undervalues her's work results.

#### V. CONCLUSION

In a society that promotes gender equality, with law prohibiting gender discrimination, yet with a different psychological structure, the emergence of women in economic life treat different appearance compared to men.

When you manage to overcome some mental barriers created by culture inherited from the family, women can easily reach in leading positions of some corporations, or to open and manage their own affairs, having those advantages which bring success. Both economic and political life offers enough female personalities, stories of success to come in support of what was said. In recent years the number of women who were involved in business in various fields has increased significantly. Many of the areas that until recently were the exclusive playground of men have become a source of money for women. What are the secrets of successful women? Strategic thinking, organizational spirit, courage and strength of conviction and conscience of their particular values are features that can positively influence the professional development of women.

#### VI. REFERENCES

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- 2) Articles from Sigal Barsade, professor of management at Wharton
- 3) Articles from Ellen Yin, owner of a bar-restaurant in Philadelphia



# Drinking water supply management in municipal corporations of Maharashtra

Sanjay Rode

GJMBR Classification FOR: 14020  
JEL: O49,P28,Q21,Q28

**Abstract-** This paper measures the demand and supply of drinking water in Municipal Corporations in Maharashtra. The demand for drinking water is continuously increasing due to growth of population, industrialisation and commercial units. Drinking water is not provided on a sustainable basis in the municipal corporations. Water has price in terms of time, space, quality and quantity. But water tariffs are not high and uniform across the municipal corporations. They do not have funds to invest in water supply projects. The whole water supply systems are not efficiently and regularly managed. The alternative policies such as roof rain water harvesting, reducing leakages, increasing tariff and metering, water use laws, and private investment in water supply will reduce the future drinking water supply deficit.

## I. INTRODUCTION

Safe drinking water is essential for human existence. Hence, the right to adequate drinking water is considered as fundamental human right (Ramachandraiah C. (2001), Kanmany J.C. (2003)). The proportion of urban population of India is projected to increase from 28 per cent of the total population to about 38 per cent in 2026. The current state of supply of core services in the urban areas, viz, water supply, sewerage, solid waste management and street lighting, is inadequate by any standards. The higher growth of urban population will add further pressure on provision of these services (MoF 2009). The growth of urbanisation is higher in Maharashtra. The government has promoted industrialization due to such policy automobile, engineering, electronic, information technology (IT) and biotechnology industries have grown fast. Such industries have created huge employment opportunities in the state. Therefore immigration of the indigent rural labour and qualified professionals from other states took place. Along with the production and manufacturing, the growth of services sector also occurred in the state. The BPO, call centres, banking, insurance companies have opened their corporate offices and grown significantly in terms of numbers. The abandoned industrial sights are getting converted into residential locations. Township planning and low cost affordable housing is developed for growing population. Urbanisation is putting more pressure on the existing civic amenities in all the municipal corporations. The policy of 24\*7 drinking water supply is beyond the limit of all the Municipal Corporations in Maharashtra. Drinking water is provided for few hours with lower pressure. The water received by the households is depending on the time, number of connections in the area, water leakages, repairing

season etc. There are large inequalities in the drinking water supply where richer households are getting more water and poorer are getting less. The reasons are faulty pipeline, inadequate distribution system, transmission and distribution losses, storage capacity etc. The richer households have more water storage facilities but the poor households are struggling to get basic necessary water supply. If the distance of drinking water tap is more then it is a forceful activity for women and children to carry water. Most of the women are working in industrial and services sector units. Children are studying in various municipal and private schools. Women and children do not have time to stand in a long queue and carry drinking water from longer distance. It is not only affecting on their day to day activities but such time has high opportunity cost for future development. The study of Mehta L.et.al (2007) shows that better and easier access to water makes more time available for economic activities and keep children in school thus improving human capital. It also helps for income generation. Most of the women can take part in income generating activities because piped water availability in the house increases time for household chores, leisure and learning. Women involved in the informal sector have to work hard to get enough drinking water. They have to wake up early in the morning, stand in a queue and carry drinking water from longer distance for whole family. If the distance is higher and beyond the limit, then household has to pay an extravagant price for safe water. Reliable safe drinking water supply is a scarce commodity across the Municipal Corporations in Maharashtra. Safe drinking water can be brought at substantial cost. The amount for water which a poor family use is depending on the family members including children's, family income, habits and cleanliness, distance and price of water etc. If the price of safe drinking water is higher then poor household reduces its use. After all, the poor households are spending large proportion of their income for few litres of drinking water every day, which is necessary to sustain life in the cities. The poorer households are affected more because of the lower quality and quantity of water supply. They have to pay higher direct and indirect cost due to water washed and water borne diseases. The direct cost include transportation, consultation fees, medicines, loss of wage but the indirect cost such as travel time, standing in a long queue, time spend in hospital, travel and visiting time of relatives is also important. If the recovery period due to the water washed and water borne diseases is more or repeated visits are occurring then poorer households have to borrow money from different sources. Such burden of diseases on poor household is difficult to measure. The poor households are not insured against such

diseases. Drinking water supply project is highly capital intensive activity. The initial cost comprises as building dam, pipeline, storage and filtering system, water distribution system, metering and bill collection system etc. Municipal corporations do not have money to invest in water supply projects. The grants received from the central government under JNNURM are not enough. Water tariffs in various municipal corporations are different and they are too low. Water bills for actual use of water are not paid regularly by the consumers. Water supply is not charged according to the actual use and water meters are not installed. Lack of complete coverage of safe water supply on sustainable basis is an important challenge for Municipal Corporations in Maharashtra. The first part of the paper deals with research methodology and drinking water supply system. The second part of the paper deals with drinking water demand estimation in Municipal Corporations in Maharashtra. The third part of the papers deals with regression results and policy implications.

## II. DATA AND METHODOLOGY

Data for this study is mainly brought from various sources. For Greater Mumbai, the ward wise data of population, industrial and commercial units is available on the Municipal Corporation website. The MMRDA reports are referred for water supply schemes and investment. The city development reports of Pune and Pimpri-Chinchwad are referred. The environment status report and storm water plan report of Pune city has given the major insight to study the drinking water supply system. Thane district has six municipal corporations. The Thane, Navi Mumbai, Ulhasnagar, Mira-Bhayandar, Bhiwandi-Nizampur and Kalyan-Dombivali Municipal Corporation's city development report is referred. In Maharashtra, there are Amravati, Kolhapur, Nanded-Waghala, Nagpur, Nasik and Nagpur Municipal corporations. The city development report of these municipal corporations is also referred. For this study, the water supply schemes of United Kingdom, World Bank projects particularly Nepal, Sri Lanka, are also studies. The Asian Development Bank's project proposals by various SAARC countries are also referred. The proposals on drinking water supply submitted by various municipalities to HUDCO are studied. Few water conservation experts are interviewed.

We have calculated water demand for domestic, industrial, commercial and institutional units based on the water demand norms. Total deficit of water is calculated as total demand of drinking water minus total supply of drinking water within a particular year for each Municipal Corporation. We have used Tobit and ordinary regression model for each and group of municipal corporations. The data is processed in STATA@10 software.

## III. DRINKING WATER SUPPLY SYSTEMS

Mumbai city is grown from seven islands that are Mahim, Warali, Parel, Girgaon, Mazgaon, Little Colaba and Upper Colaba. Over the period of time, these islands were acquired by series of reclamations. Due to wide business

opportunities in Mumbai city, the communities like Gujarathi, Parsi, Boharas, Jews and Bania came to Mumbai. The continuous expansion of infrastructural facilities and establishment of mills, commercial units in the city, the massive employment was generated. Many people from western Maharashtra, Kokan and other states came to Mumbai in search of employment. Therefore continuous migration was resulted into congestion in the city. The population of Mumbai city was ten thousand in 1661 and it increased up to sixty thousand in 1675. For drinking water, the city population was depending on number of tanks such as Mumba Devi, Manamala, Babula, Govaliam Gilder, Banganga etc. The people of city were fetching water from the wells and shallow tanks. These sources tended to dry up in summer and quality of water used to get deteriorate. The local residents had complaint against the shortage and bad quality of water. Therefore this was the beginning to search sources of water to meet the city's demand. Further expansion of education facilities and technical advancement in the city, the larger work force was attracted from all over the country. There was urgency to establish water supply system to Mumbai city. The valley of river Mithi located near Vihar village was chosen for creating water source to Mumbai city. The work was started in the year 1856. The Vihar lake was completed in the year 1860. This was the first piped water supply to the Mumbai city. The quantity of water supplied was 32 Million Litres a Day (MLD). The population of the city was 644405 in 1872. During the year 1872, the height of Vihar lake was increased in order to supply more water to city. The water supply from this lake was increased up to 68 MLD. Because of acute water shortage in 1879, Tulsi dam was constructed across the Mithi river. Through this dam additional 18 MLD water was brought to the city. In order to provide the additional water supply, an emergency measure was undertaken in 1891. Pawai lake on a tributary of Mithi river was developed. It added 4 MLD water supply. Instead of continuous efforts and investment in water supply system, the potable water was not sufficient to growing city. Tansa scheme of water supply was developed in four stages. The first stage was completed in 1892 by constructing a Masonry dam. The quantity of water supply added to the city was 77 MLD. In 1906, the population of Mumbai city was 977822. During 1915, Tansa-II was developed. It added 82 MLD water supply. In spite of tapping all these resources, the water supply to the growing population in the city was not adequate. Therefore Tansa-III was developed after raising the dam height on river Tansa. It additionally supplied 98 MLD water to city. After independence, the Tansa-IV was completed. The storage capacity was increased by providing 38 flood gates. The water supply was further increased by 198 MLD. In 1948, total water supply for the two million populations was 541MLD. Dam on Vaitarna and tunnel between Vaitarna and Tansa lake was completed in the year 1957. It supplied additional 490 MLD water to Mumbai city. In 1967, the water supply added by Ulhas river was 90 MLD. During 1973, additional upstream dam was constructed on Vaitarna river. It provided additional 554 MLD water to city. Bhatsa water resource was developed in



three stages. Bhatsa-I was completed in 1981. It supplied additional 455 MLD water to city. In 1989, additional 455 MLD water was supplied to city by Bhatsa-II. During 1998, drinking water was insufficient for city therefore Bhatsa –III

was developed. It supplied additional 455 MLD water. The total water supplied by all sources is 3350 million litres per day (MLD). Following table shows the water sources and water yield from various sources.

*Table 1 Water sources to Mumbai city.*

Sources	Yield (MLD)	Percent
<b>Tulsi</b>	18	<b>0.54</b>
<b>Vihar</b>	110	<b>3.28</b>
<b>Tansa</b>	417	<b>12.45</b>
<b>Upper Vaitarna</b>	1025	<b>30.60</b>
<b>Bhatsa</b>	1650	<b>49.25</b>
<b>Mumbai-III</b>	150	<b>4.48</b>
<b>Sub-total</b>	3350	<b>100</b>
<b>En-route supply</b>	120	<b>-3.58</b>
<b>Total water supply</b>	<b>3230</b>	<b>96.42</b>

*Source: Kashid, Sukhdeo (2003)*

For Greater Mumbai, the Bhatsa scheme is important because it supply 1650 MLD drinking water. The second source is Upper Vaitarna where city gets 1025 MLD water. The lowest water supply is available from the Tulsi lake and it is 18 MLD. Water is also supplied to en-route villages. It is 120 MLD. Therefore the total water available for the entire city is 3230 MLD. It is continuously provided through out all seasons to the Greater Mumbai. Water supply gets fluctuate because of rainfall in the catchments area. If the rainfall in the catchments area is low or drought like situation arises, then Brihanmumbai Municipal Corporation (BMC) and Government of Maharashtra (GoM) announces the water cuts in the city. The municipal corporation confirms the water level in the various lakes. If it is satisfactory then water is regularly supplied to the city. The level of the water is regularly observed during the monsoon and summer season.

In Thane district, each municipal corporation has its own independent source of drinking water supply. Thane Municipal Corporation (TMC) was use to get the drinking water supply from the state owned organisations such as Maharashtra Jeevan Pradhikaran and Maharashtra Industrial Development Corporation (MIDC). But in 2002, the municipal commissioner of Thane took up a first step of setting up of a 100 MLD water supply project from Bhatsa dam. The project was self funded by Thane Municipal Corporation. Water from such dam began to flow in to the city from 2003. The cost of the project was much cheaper as compare to the other water supply projects. The second big step in this direction took place in 2003 when the state government proposed to turn STEM into a joint stock company between the TMC and two other civic bodies as well as Zilla Parishad, Thane. The TMC has a biggest share of assets in the first joint stock water firm of a country. The corporation effectively took up the responsibility and made STEM turn round the corner. Thane city is getting around 127mld water from such firm. The third major step towards

making the city self reliant in water supply took place in late 2007 when commissioner decided to launch the 110 MLD water project. Other than these schemes, Brihanmumbai Municipal Corporation (BMC) is supplying 30 MLD as a raw and 30 MLD as pure drinking water. MIDC is also supplying 75 MLD drinking water to Thane Municipal Corporation. From all sources, Thane Municipal Corporation gets 362 MLD drinking water supply on a regular basis. The new drinking water supply project has further added 110 MLD water. TMC began to make the city independent of state owned water suppliers.

The New Mumbai Municipal Corporation (NMMC) has its own new water supply system. The Government of Maharashtra has transferred the water supply system to New Mumbai Municipal Corporation in 1998. But such water supply system was inadequate and insufficient for rising population of a planned city. Therefore in 2005, NMMC decided to purchase the water from Morbe dam. The official ownership of the Morbe dam is transferred from the government of Maharashtra to NMMC. A Kalyan-Dombivali Municipal Corporation is depending on the Ulhas and Kalu river for drinking water. Around 255 MLD water is supplied from such scheme (NIUB 2008a). The residents of the Mira-Bhayandar get only 91MLD drinking water supply. Before two years ago, MIDC promised 30MLD drinking water supply but Mira-Bhayandar Municipal Corporation has received five to eight million litres a day drinking water supply (NIUB 2008b).

In Ulhasnagar, the water supply system is very old. In 1948, the drinking water was supplied to military camp from Badlapur barrage head work. It was 18 diameters tapping from 24CI line. Total water supply was 1.59 MLD through Balkan-si-Bari GSR. Total nine distribution mainlines were laid from supplying water to camp one to five. Total water supply was inadequate to the rising population. Therefore in 1967, a special pipeline of 15 MLD was developed at Shanti

nagar. Similarly pump house of 0.9 million litres capacity was constructed for supplying water to camp number four. In 1978, the water demand was higher for growing population. The old water supply system was not yielding adequate water. Therefore water from the Badlapur barrage system was stopped. Total water was supplied from the Shahad water works and Barvi dam. The population growth for a year 1991 was forecasted as 3.66 lakh. The water supply for the growing population was designed as 55 MLD. In 1995, Kirloskar Company prepared a 51crores water supply scheme to the Ulhasnagar city from Barvi and Shahad reservoirs. Such water supply is managed by the MJP and MIDC. Total 112 MLD water is supplied to the whole Ulhasnagar city. Thane district gets water from the Andhra dam. Barvi dam is located in the Ambernath tahasil. Water from both the dam is sent in Ulhas river. Such water is provided to Kalyan-Dombivali, Thane, Mira-Bhaynder and Ulhasnagar Municipal Corporation (BMRDA 1995). In Pune city, drinking water supply system is very old and it exists since 1750. Pune city received first piped drinking water supply from Katraj via Amboli odha, Shanivarvada. After the first scheme, the Swargate water work came in existence in the year 1873. Such scheme is planned to treat raw water and supply to Pune city. Such water supply scheme is on Mutha right back channel and it is picked up at Swargate. Total water supply was inadequate for rising population and commercial activities in the city. Therefore when Pune city reached at a status of the municipal corporation in the year 1950, a project of 45 MLD was developed on the Mutha right back channel. Such scheme has provided water to the Pune city and Cantonment. Other than two major water supply schemes, Pune city gets drinking water from the Holkar water works. It is constructed in 1919 on Mula river. It is supplying 22 MLD water to Pune city and Khadki Cantonment. The Warje water work is constructed in 1999 which added 23 MLD drinking water. Such scheme is built on Khadakwasla dam. The capacity of Khadakwasla dam is 56 million cubic meters. The Wagholi water work is built on the Pavana dam in the year 2000. It added 23MLD drinking water. Such scheme is planned to provide water to the villages on the boundary of Pune city. Due to merger of the villages in the Pune Municipal Corporation, the villagers are obliged to provide the drinking water. Total installed capacity of five water supply schemes for Pune Municipal Corporation is 793 MLD.

For Pimpri Chinchwad Municipal Corporation (PCMC), Pavana dam is a major source of drinking water. It is constructed in 1972. Intake works are constructed in the river bed 150 meter upstream of the existing Punawale weir near Ravet village. It is six kilometre away from the city. Around 91 percent of the stored water is utilised for the non irrigation purposes. Drinking water is mainly supplied to Talegaon, Dehu Road cantonment, and Pimpri Chinchwad township. Every day 350 MLD (51 per cent) raw water is lifted from Pavana dam and supplied to Pimpri Chinchwad Municipal Corporation area. The Pavana dam has capacity of 241 million cubic meters. A Kolhapur Municipal Corporation gets 128 MLD drinking water supply from two independent sources. Nearly 120 MLD water is obtained

from the corporation and 8 MLD obtained as ground water source. The ground water is supplied through 809 wells. For the piped water Kolhapur city is depend on three rivers. The Bhogavati river is a first source and it is eight kilometre away from the city. Secondly, Panchganga river via Bawada, which is six kilometres away from the city. Third source is via Singapore, which is eleven kilometres and the Kalambatank is three kilometres away. At present, Kolhapur Municipal Corporation is unable to run Bawada water work. Therefore there is shortage of drinking water in the city.

In Nagpur Municipal Corporation, old Gorewada scheme of drinking water was developed in 1911. The band of river Pali is located eight kilometres of North east of Nagpur city. In 1921, nearly 16.50 MLD drinking water supply was planned from Ambazari and Gorewada. For 145000 populations, drinking water supply was inadequate and a daily litre per capita was only 114. In order to solve the water scarcity in 1941, Kanhan river thought as a new source of water for rising population. But it added only 37.5 MLD drinking water to the total stock. The litre per capita daily was increased up to 149 but water supply was inadequate. The population of Nagpur city became almost double within two decades. During August 1961, the municipal corporation decided to develop Kanhan source for drinking water. It added 35 MLD drinking water which was not sufficient. Drinking water was the need of 644000 and still rising population. The litres per capita daily came down up to 124. Therefore third time in August 1981, the Kanhan source was repaired. It added only 45 MLD drinking water. Total stock did not increase much and therefore litres per capita daily were remained low. The dam on river Pench-I and Pench-II was developed. It added further 245 MLD drinking water to total stock. In 2001, the population of the Nagpur city was 2150000. In the same year, the number of commercial units that is hotels, restaurants, small and large industrial units, cinema halls and garages was increased. Therefore nearly 100 MLD drinking water supply was developed through Pench-III dam. But it was still insufficient. From the Old Gorewada, another 16 MLD drinking water was withdrawn. From different sources, Nagpur city gets 470 MLD drinking water supply.

For Amravati Municipal Corporation, the river Wardha is a major source of drinking water. A Nal-Damayanti dam at upper Wardha is constructed at Simbhora. It supplied around 95 MLD drinking water. Other than this dam, bore and tube wells are the sources of drinking water. The plant is functioning below the overall capacity of 95 MLD. In Nanded city, water supply system is developed over the long period of time. In 1936, first drinking water supply was planned to city. Such scheme was designed for the projected population of fifty thousand for the year 1966. The head water work was located at old Dunkin near Govardhan Ghat on the bank of river Godhavari. The water treatment plant with a capacity of 9 MLD was located at Fort. Due to rising population and industries, such water was inadequate. Therefore in 1969, the second drinking water supply scheme was designed and commissioned for a population of one lakh. Butrising demand for water forced Municipal Corporation to construct bandara on river Godavari at

Govardhan Ghat in 1976. At present, Godavari river is a major source of drinking water to Nanded City. City gets 27.50 MLD drinking water from Vishnupuri dam. Such dam is located nine kilometres away from the city. Apart from this source, Municipal Corporation pumps water from Godavari river in the city through Jack wells dug on the banks of the river at new pump house. Other than this source, the municipal corporation has 91 bore wells. They are located at different locations but they provide water to local population in specific pockets. The total quantity of water drawn from various sources is 54.40 MLD. For Aurangabad city, there are two water supply systems. An old water supply pipeline of 700 mm diameter provides 42 MLD drinking water. The new water supply pipeline line of 1400mm diameter provides 88 MLD water in the city. Therefore total 130 MLD water is provided to the Aurangabad city. At present, Nasik Municipal Corporation gets 280 MLD drinking water supply. Such water is provided from the two sources. The Gangapur dam water is a first source. It is 1200mm diameter pipeline. The municipal corporation has developed their own source of drinking water over the period of time.

All the municipal corporations are regularly supplying water to respective area. Water supply get fluctuate due to small repairing, joining pipeline etc. If there is drought like situation arises in the state then all the Municipal Corporations cut the drinking water supply at some extent. It is precautionary measure adopted by the municipal corporations. If the monsoon arrives on time and there is enough water in the lakes, then water supply is regularly maintained.

#### IV. WATER DEMAND IN URBAN LOCAL BODIES

We have calculated the drinking water demand in all the municipal corporations and regions for the year 2008-09. Such water demand is comprises as water used by different units for different purposes. The number of units and standard use of water is available in the literature. Therefore, we have calculated future growth of units in each Municipal Corporation and region and calculated with water supply norms. Such water demand is presented in the following table.

*Table 2 Water demand according to the regions in Maharashtra (2008-09)*

Regions	Type of municipal corporation or area	Water demand (MLD)
<b>Greater Mumbai</b>	Zone 1	603
	Zone 2	766
	Zone 3	854
	Zone 4	789
	Zone 5	454
	Zone 6	501
	<b>Total</b>	<b>3967</b>
<b>Thane district</b>	Thane	378.77
	Kalyan-Dombivali	238.16
	Ulhasnagar	121.31
	New Mumbai	228.53
	Mira-Bhayandar	121.87
	Bhiwandi-Nizampur	117.69
	<b>Total</b>	<b>1206.33</b>
<b>Pune Metropolitan Region (PMR)</b>	Pune	531.94
	Pune cant	13.30
	Khadki cant	12.35
	Rest of PMR	23.43
	Pimpri-Chinchwad	239.32
	<b>Total</b>	<b>820.34</b>
<b>Rest of Maharashtra</b>	Aurangabad	208.52
	Nasik	299.40
	Amravati	113.20
	Nagpur	438.34
	Nanded-Waghala	110.00
	Kolhapur	115.50
	<b>Total</b>	<b>1284.96</b>

Source: Computed from data

The water demand in the Greater Mumbai is 3967 MLD for the year 2008-09. The water demand from the zone three is 854 MLD. Such area has higher density of population, small and large industries, hotels and slums. Therefore water is demand by different units for different purposes is higher. In the Zone five, water demand is only 454 MLD. It is lowest as compare to all other zones in the city.

In Thane district, the water demand of the Thane Municipal Corporation is highest and it is 378.77 MLD. It is followed by the Kalyan-Dombivali Municipal Corporation, where water demand is 238.16 MLD. In Thane Municipal Corporation water demand is higher due to rising population. Thane city is well connected to the financial capital of country through road and railway network. It is also an immediate proximity to Mumbai city. Most of the industrial sites are getting converted in to residential areas in Thane city. Thane Municipal Corporation (TMC) has restructured its water supply system in the new residential areas. TMC has built new MBR and put additional new water supply system. Small industrial units in Wagale estate and surrounding area require water but it is in small quantity. The water demand in the Ulhasnagar and Mira-Bhayandar is almost similar. The lowest demand of drinking water in Thane district is observed by the Bhiwandi-Nizampur Municipal Corporation. It is mainly because density of population is very low. Most of the cotton and garment units are located in the Municipal Corporation area. They hardly use drinking water for different purposes. The water demand by six municipal corporations in Thane district is calculated as 1206.33 MLD for the year of 2008-09.

Water demand in the Pune Municipal Corporation is consists of water demand by Pune municipal Corporation area, Pune and Khadki cantonment and rest of Pune Metropolitan Region. The water demand in this Pune Municipal Corporation is 581.02 MLD. The water demand in the Pimpri-Chinchwad municipal corporation area is 239.32 MLD. It is an industrial area in Pune Metropolitan Region. Density of population is very low; therefore water demand is also low. In Pune city, numbers of malls, theatres, shops, garages, hotels are demanding more drinking water. The water demand by the population is continuously rising in the corporation area. The total water demand in Pune Metropolitan Region is calculated as 820.34 MLD.

Among the six municipal corporations in Maharashtra, the water demand of Nagpur Municipal Corporation is 438.34 MLD. Since 2001, population industrial and commercial units are significantly grown in the city. In each Municipal Corporation area, population, industrial, commercial units, institutions are different. The water demand by the Amravati and Kolhapur Municipal Corporation is low. In Nanded-Waghala Municipal Corporation, the water demand is calculated as 110 MLD. It is lowest among all the Municipal Corporations. The total water demand in all the six Municipal Corporations in rest of Maharashtra is calculated as 1284.96 MLD.

#### V. WATER USE BY DIFFERENT UNITS

Drinking water is not only used for drinking and cooking purposes but it is used for variety of purposes by different units. We have identified some units and their water use in different Municipal Corporations or regions. It is shown in the table.

*Table 3 Water demand according to units (MLD)*

Type of unit	Greater Mumbai	Thane District	Pune Metropolitan Region	Rest of Maharashtra
<b>Population</b>	3463.64	859.9	672.00	975.40
<b>Small and large Industries</b>	297.41	310.83	41.14	121.00
<b>Hotels, Restaurants Shops</b>	101.8	6.09	61.14	11.00
<b>Garages</b>	13.92	10.90	10.93	76.60
<b>Theatres and malls</b>	1.18	3.49	0.52	4.18
<b>Public and private Hospitals</b>	10.45	2.49	1.71	1.60
<b>Fire stations and hydrants</b>	55.95	6.71	8.10	1.70
<b>Educational institutions</b>	21.56	1.66	24.28	83.42
<b>Parks and gardens</b>	0.64	3.92	0.43	10.10
<b>Total</b>	3966.55	1205.99	820.25	1285.08

*Source: Computed from data*



The demand of drinking water by population is 3463.65 MLD in Greater Mumbai. The demand is higher due to density of population. The water demand by slums is also higher in Greater Mumbai where sixty percent population live in slums. In Thane district, the water demand by population is 859.9 MLD. Among the six Municipal Corporations, the water demand by population is 975.4 MLD. Water demand by the industrial units is highest in the Thane district and it is 310.83MLD. In the Kalyan-Dombivali, Bhiwandi-Nizampur, Ulhasnagar and Navi Mumbai Municipal Corporations, there are many small and large industrial units located. They are demanding drinking water for various purposes. Water demand by the hotels, restaurants and shops in Greater Mumbai is 101.8 MLD. The number of shops, restaurants and hotels and their use of water for drinking, cleaning and washing are higher. In Thane district, water demand by shops, restaurant and hotels is only 6.09 MLD. Water demand for garages is 76.60 MLD in the six Municipal Corporations of Maharashtra. In Greater Mumbai it is only 13.92 MLD. In Mumbai, Public transport is available but the use of private vehicles is higher in Mumbai city. Therefore vehicles require much of water for cleaning and washing. But it is much less as compare to Municipal Corporations in rest of Maharashtra. The water demand by theatres, Cinema Halls and multiplexes is 3.49 MLD in Thane district. In Municipal Corporations in rest of Maharashtra, it is 4.18 MLD. It is higher because water is provided at lower tariff. In Mumbai city, the water demand is only 1.18 MLD because higher tariff is higher and it is continuously increasing. Water demand by the public and private hospital is calculated as 10.45 MLD in Brihanmumbai Municipal Corporation. The numbers of public and private hospitals are more and their use of water for different purposes is also higher. In Thane district, it is only 2.49 MLD.

The water demand by the fire stations and hydrants is 55.95 MLD in Greater Mumbai. It is only 6.71 percent in Thane district. This is mainly because every municipal corporation has only one fire station. Water demand by the schools and colleges is 83.50 MLD in six Municipal Corporations in rest of Maharashtra. In Greater Mumbai, water demand by educational institutions is only 21.56 MLD. The reason is that in Mumbai, there is no adequate space for schools and colleges therefore there are no gardens for schools and colleges. Water is only used for drinking, toilets and cleaning purposes. In Brihanmumbai Municipal Corporation, parks and gardens are concerned then the water demand is 0.64 MLD. The drinking water demand for parks and gardens in rest of Maharashtra is 10.10 MLD. The total water demand in the Greater Mumbai is calculated as 3967 MLD and it is highest as compare to all other Municipal Corporations and regions in Maharashtra. In Thane district, Municipal corporations have 1206MLD drinking water demand. The water demand in Rest of the Municipal Corporations in Maharashtra is 1285MLD.

## VI. WATER DISTRIBUTION SYSTEM

Drinking water which is brought by the pipelines requires treatment before it gets distributed to the consumers. Water

treatment is necessary because of water contamination by various sources at the different points. In Greater Mumbai, the raw water is regularly treated and then it is transferred to Bhandup and Pawai master reservoirs. The Bhandup Master Balancing Reservoir supply water to eastern and western suburbs. It provides water to A, C, D, K and H ward. The H east ward is partly served by this reservoir. The Pawai reservoir supply water to F/N and F/Sward. It is also provided water to M, N and L ward. They are partly served by this reservoir. Water distribution system is very complex in the Greater Mumbai. The water transmission (650 kilometre) and service pipes (3200 kilometre) are covering entire city. Water supply to each ward is difficult to measure and it changes according to total water availability. The water pressure is also gets affected due to total stock, leakages, repairing etc. The numbers of household, commercial, small and large industrial units are also matters (MCGM 1995). Drinking water supply distribution system for Pune and Pimpri-Chinchwad Municipal Corporation is different. In Pune city, water supply operation is divided into seven zones. Each zone has its specified area and water supply service. In some part of the city water is pumped and in some part water is distributed through gravity. It is also depending on the zone reservoirs. Water is distributed through pipes consist of different diameters. The lowest size of the pipe is 80mm and highest diameter is 1600mm. Total length of the network of pipeline in the city is 647.18 kilo meters. Total length of the distribution of drinking water pipeline is 2474 kilo meter. It also includes the 24 kilo meter transmission line. In Pune city, water supply pipeline is mainly located near road. Some roads have more than one water supply pipeline. The reason is that they are put at different time. Total length of roads in Pune city is 1750 kilo meter (ESR 2008, PMC 2006). In Pimpri-Chinchwad Municipal Corporation, the distribution network covers length of 722 kilo meters. It is 95 percent of road length. The water supply system in Pimpri-Chinchwad Municipal Corporation covers whole developed area including slums. The newly added areas are catered by the tanker supply. Total water storage capacity is 74million litres and it is only 32 percent of installed capacity of the system. Therefore the reservoirs in Pimpri-Chinchwad Municipal Corporation are filled more than two times a day. The water supply is distributed by gravity and pumping zone in the city. The gravity zone covers west side of Mumbai-Pune highway and railway line. There are 24 Elevated Service Reservoirs (ESR's) in the gravity zone. The pumping zone comprises areas north of ridge and slopping towards the Indrayani river. They are subdivided in to eight water districts. Each water district is served from the local ESR. There are total 15 ESR's in pumping zone. It is also depending on the water supply system in that particular ward. In Pune city, water supply operation and maintenance, pumping of water treatment, distribution is taken care by municipal corporation staff. Due to wide service area and connections, total 1650 person's including technical staff is employed by the Pune Municipal Corporation. In Pimpri-Chinchwad municipal area, water supply distribution network and service area is small. Therefore only fifty persons are

employed. The contractors are involved in distribution and maintenance at the boundary level (PCMC 2006). In Thane Municipal Corporation, the length of the water supply is 42 kilo meters. The distribution network is spread on 369 kilo meters. The whole Thane Municipal Corporation area is divided into three major zones and 44 water districts. Each zone has provided the water by separate source. It is further supplied to the ESR in respective area. The central zone has 13 water districts. It gets 100 MLD water from STEM. The northern zone gets 100 MLD water from STEM and it has 14 water districts. Eastern part of the Thane city gets water from MIDC source. It has seven sub districts. All the zones are regularly supply water to different water districts (TMC 2006). In New Mumbai Municipal Corporation, the drinking water is supplied from Morbe dam. The supply system network is spread in CBD Belapur, Nerul, Sanpada, and Vashi. Water is regularly supplied to all the households, commercial and industrial units in the municipal area. (NMMC2006). In Ulhasnagar Municipal Corporation, due to topography, the water supply system is divided into 16 water zones. Out of these zones, the southern and northern part of the municipal area is further divided in to seven zones (UMC2006). Water supply in Kolhapur Municipal Corporation is divided in to A to E wards. Drinking water is supplied through the network pipeline which consists of reservoirs and distribution system. The main transmission runs around 57 kilo meters. Drinking water transmission and distribution losses are 20 percent to total supply. The city has five ground level storage reservoirs with a capacity of 15million litres and 16 Elevated Storage Reservoirs (ESR's). It has storage capacity of 22.05 million litres (KMC 2006). In Nagpur Municipal Corporation, there is old Gorewada and another two working pumping schemes. At Pench-II, there are three working pumps but their capacity is very high. At 17 location's, there are 28 service reservoirs. Such service reservoirs are supplying the water to the entire city. These service reservoirs are divided into seven water supply zones. Pure water is supplied to the Master Balancing reservoirs. There are only two MBR's such as Seminary Hills and Guest House. These two major reservoirs supply water to 28 reservoirs. The seminary Hill reservoir receives water from Pench WTP and old Gorewada WTP. There are two GSR's with a capacity of around 27.97million litres. It also includes the old GSR of 3 million litres capacity. The old GSR gets water from old Gorewada water treatment plant whereas the new GSR gets water from Pench I and II. Both these reservoirs are supplying the water to different regions (NMC 2006). In Amravati, the water treatment plant is maintained by the Maharashtra Jeevan Pradhikaran (MJP). The raw water is pumped in Master Balancing Reservoir (MBR). In the AMC, there is only one MBR. The water is further pumped in to the ESR. There are three GSR's and eight ESR's in the AMC. Total length of the pipe line is about 550 kilo meters (AMC 2008). In 1977 additional distribution system of Nanded town was completed due to growth of population in the city. Similarly in 1979, ESR's was constructed at Chouphala of 2.27 million liters. During 1983-85 number of water supply related tasks were completed. New ESR at

Gandhi Putala (18.20 MLD), railway station (6.8 MLD), work shop (22.70 MLD) was developed. In 1997 new pump house at Kotithirth was developed. In 1997, new WTP with capacity of 60 Million litres is also established. From 1998 onward numbers of water supply projects are planned. The first 13 ESR's and 2 MBR's were completed. The entire water supply scheme is planned to supply at least 135 litres per capita daily water to urban population. The open bore and tube wells are constructed in an authorised and unauthorised layouts and slums to cater the local needs. Some pipe network has not reached in such area. The ground water resource needs to be protected for present as well as future generation. In Nanded Municipal Corporation, water treatment facilities are located at three places. The Kabra nagar WTP is located 9 kilo meter away from city and it is commissioned in 1997 on Vishnupuri dam. It is a sand filter and Chlorination type of treatment with installed capacity of 60 MLD. But at present, it is used as 24 million litres. The CIDCO, WTP is located five kilo meters away from city and the source of water is Vishnupuri dam with special installed capacity of 12 MLD. It has used capacity of 10 MLD. It is sand filter and Chlorination type treatment plant. The last Dankin WTP (New and old) is located in the Nanded city. The installed capacity is 27 MLD but only 20 MLD capacity is used for water transmission. The water is distributed separately for two different zones. They are serviced through 10 Elevated Storage Reservoirs (ESR's). The total capacity of all reservoirs is 15.35million litres. The distribution system in the Nanded city is 526 kilo metes. In 1936, total 30 kilo meters distribution system was laid. In 1966 to 1975 total 300 kilo meters pipe line was laid. During 1980 to 1996 another 30 kilo meters was laid and rest was laid in 1997 to 2004 (NWMC 2006). In Aurangabad Municipal Corporation, the water supply was inadequate for rising population. Total 675 kilo meter pipeline is distributed in the city to supply water (AMC 2006). At present, Nasik Municipal Corporation provides drinking water through 1200mm diameter ms pipeline. After filtration, water is supplied to CIDCO and Satpur area. Water pumping main is located in Gangapur dam and it supply water to Nasik, Gandhinagar, Panchavati and Nasik road WTP (NMC 2008). In each municipal corporation water supply network is developed over the period of time and it is bigger in Size.

## VI. WATER TARIFF

Drinking water is a merit good. All individuals in each Municipal Corporation have a right to an adequate, reliable, affordable supply of potable water. Water supply must be priced in such a way that which will cover the capital cost such as operating and maintenance cost. Drinking water has economic value in terms of space, time, quantity and quality. But its uncertainty and quality increases further cost. Water tariffs are different in different Municipal Corporation. The water pricing is depending on density of population, small and large industries, commercial units and how the raw water is purchased.

Table 4 Water Charges for Different Purposes in Greater Mumbai (per 1000 Litres)

No.	Category	2007	2006	2002
1	Slum area, Stand post, Residential chawls	2.50	2.25	<b>2.25</b>
2	Dharmashala, Asylum, Women's hotels, Balwadi, hotels, All residential premises, Bungalows, Row houses, Offices of trade unions, Educational institutions, Gardens.	3.50	3.50	<b>3.50</b>
3	Halls for religions and social functions, Hospitals, Dispensaries, Piggeries, Coaching classes, Playgrounds Swimming Pools.	10.50	10.50	<b>10.50</b>
4	Industrial establishments, Dhobi-ghats, Ice factories, Photo studio, Xerox shops.	18.00	18.00	<b>15.00</b>
5	All shops, Mall, Stores, Parlors, Training Centres, Schools, Colleges, restraints, All hotels, Cinema halls, Multiplex-warehouses, Petrol pumps, Workshops, Garages, Swimming pools, Ice cream factories, Studios.	38.00	25.00	<b>22.00</b>
6	<b>All three star hotels, Aerated water factories, Manufacturers of bottled water.</b>	<b>38.00</b>	<b>38.00</b>	<b>38.00</b>

Source: Brihanmumbai Mahanagar Palika, Hydraulic engineer's Department

In Brihanmumbai Municipal Corporation area, water for residential chawls, slums is charged for Rs.2.50 per thousand litres in 2007. But for all residential premises it is Rs.3.50 per thousand litres. Drinking water for hospitals, playgrounds, and swimming pools is costlier and it is Rs.10.50 per thousand litres. The water rates for such use are not increased since 2002 by Municipal Corporation. Water for shops, malls, parlours, cinema and multiplexes and swimming pools is Rs 38 per thousand litres. Such water tariff is higher and Municipal Corporation has increased tariff in the city. Certainly, the poor people are not visiting to these places. Water for three star hotels and manufacturers of bottled water is available at Rs38.00 per thousand litres. The water tariff is same over the period of time. In Thane Municipal Corporation, water from the source is available at different prices. The STEM and raw water received from BMC is charged at Rs.4 per thousand litres. The water received from the MIDC is Rs.7.50 and pure water received from BMC is charged at Rs.8 per thousand litres. The water received from the PISE is cheap and the rate is Rs.2.50 per thousand litres. In Thane city, water meters will get installed in few months. The civic body charges water at a flat rate on monthly basis. It is irrespective of the quantity of water used. The charges for water are set to be Rs.5 for every thousand litres for first 18000 litres per month per flat. It is Rs. 6 per thousand litres for consumption between 18000 and 24000 litres (Rode S.2009b). In NMMC, tariff for water is based on consumption categories ranging from Rs.3.75 to Rs.4.65 for domestic metered connections. Water tariff for the non metered connection is Rs. 60 to Rs.100 per month. The rate of tariff for the commercial consumers is Rs.30 per thousand litres. The NMMC does not supply water to industries in MIDC area. It supplies water to slums through public stand posts.

Few wells are provided in slum pockets of Airoli, Digha, TTC and Dahisar ward. In Pune municipal corporation area, thousand litres of drinking water is provided at Rs.3. For Pune and Khadaki cantonment, it is Rs. 5. For commercial and industrial unit, the rate is Rs.21 per thousand litres. Households in slum have to pay Rs.365 per annum. Water for stand post is free of charge. In PCMC, domestic water supply connections are charged at Rs.3.30 per thousand litres. Non domestic connections are charged Rs 28 per thousand litres. Unmetered domestic connections are charged a minimum of Rs. 792 per annum. Commercial and industrial unmetered connections are charged of Rs. 652 per annum to Rs.11358 per annum depending on the diameter of connection. In PCMC the water charges are different for different apartments and years. In 2004-05, per apartment the water tariff rate was Rs.872 but in 2007-08 it was reported as Rs.1160. It means every year per apartment, one percent water tariff has increased (Rode S. 2009a). In Kolhapur city, the water tariff for domestic purposes is Rs7 per thousand litres and for commercial connections it is Rs. 20. For industrial purposes water charges is Rs. 4 per thousand litres. Such water tariff rates get revised every year. In Amravati, for residential purposes, the water tariff rate per thousand litres is Rs.10.20. Water for non residential purposes is charged as Rs.46.20. For institutions, it is Rs.19.65 paisa per thousand litres.

## VII. REGRESSION RESULTS

The water demand is increasing in all the municipal corporations but it is difficult to identify which units are contributing to such increase in water demand. Population and commercial units are important but some units are also showing the decline in the use of water. Therefore in order to examine the correlation with the units, we have used Tobit and ordinary least square regression model

(Wooldridge, J.M. 2003, Greene 2003, Baltagi Badi H. 2008). The Tobit model is defined as follows,  
 $Y_i = x_i'\beta + \varepsilon_i$

Where  $Y_i > 0$

The results are presented in the following table.

Table 5 Regression results for Municipal Corporations and regions

Variables	Greater Mumbai Municipal Corporation		Thane district		Pune Region		Metropolitan		Rest of Maharashtra	
	(Tobit)		(OLS)		(OLS)				(Tobit)	
	Co-efficient	Z test	Co-efficient	Z test	Co-efficient	T test			Co-efficient	Z test
<b>Population</b>	0.00* (0.00)	257.69	0.29*** (0.11)	2.58	1.00* (0.00)	2143.75			1.93* (0.00)	401.85
<b>Hotel and restaurants</b>	0.20* (0.00)	21.89	208.88* (18.66)	11.07	3.17* (0.05)	58.29			-	-
<b>Cinema house and theatres</b>	0.02* (0.00)	9.62	-	-	1.32* (0.20)	6.59			-	-
<b>Educational institutions</b>	0.00 (0.00)	0.93	94.22** (32.50)	2.90	4.42* (0.04)	94.00			-	-
<b>Small and large Industrial Units</b>	0.03* (0.00)	4.59	0.99* (0.00)	771.11	-	-			-	-
<b>Fire stations</b>	-0.02* (0.00)	-4.05	-	-	-	-			-10.04* (3.33)	-3.02
<b>Constant</b>	0.49 (0.28)	1.75	-59.36 (0.67)	-87.64	-0.20 (0.26)	-0.79			-2.30 (1.54)	-14.95
	L R Chi <sup>2</sup> =221.75 Prob>chi <sup>2</sup> =0.00 Log Likelihood = -330.54		R square =1.00 Adjusted R square =1.00 Root MSE=0.04		R square =0.99 Adjusted R square =0.99 Root MSE=1.88		L R Chi <sup>2</sup> =221.75 Prob>chi <sup>2</sup> =0.00 Log Likelihood = -330.54 P pseudo R <sup>2</sup> =0.25			

- Figures in Parenthesis shows standard errors
- \*Significant at 1 percent \*\*significant at 5 percent  
\*\*\* significant at 10 percent

Water demand by population is positive and significantly correlated in all the municipal corporations. It is observed that because of urbanisation, population in all the municipal corporations is growing. Therefore rising population requires more water for different purposes. The demand of water to the hotels, restaurants is positively co-related in the Brihanmumbai Municipal Corporation, Thane district and Pune Metropolitan Region. The population in the municipal corporations often visit to such places. Therefore water is used for cleaning, washing, drinking and food preparation etc. Water demand of cinema and theatres is positively correlated in Greater Mumbai and Pune Metropolitan Region. In both regions, people visit cinema houses to watch movies. They use different recreational facilities at such places. The water is used for drinking, food preparation, cleaning and toilets etc. Water demand by educational institutions is positively correlated in the Pune Metropolitan Region and Thane district. The demand of water by educational institutions is statistically insignificant in Greater Mumbai. The water demand by the industrial units in Brihanmumbai

Municipal Corporation and Thane district is positively correlated and statistically significant. The water demand by the fire hydrants/stations is negatively correlated in Brihanmumbai Municipal Corporation and Municipal Corporations in rest of Maharashtra. The possible reason is that, there are few fire related cases reported in municipal corporation area.

Therefore water demand by fire hydrants/stations is low. It is negatively correlated and statistically significant.

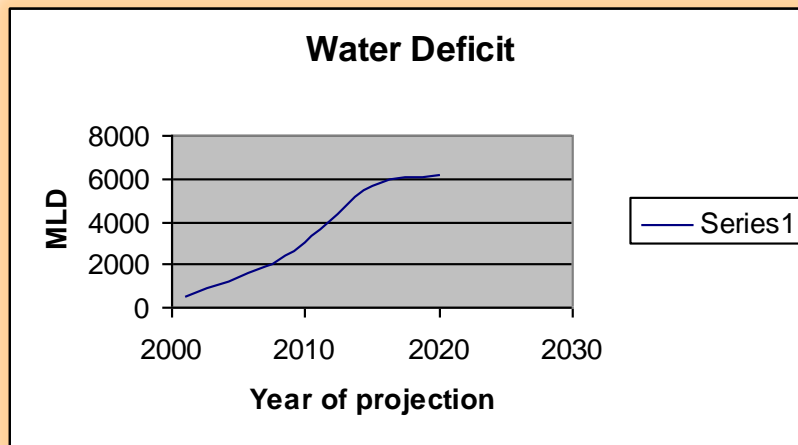
#### VIII. FUTURE WATER DEMAND AND SUPPLY ESTIMATION

Water demand is increasing in the each municipal corporation area due to the growth of the population and commercial units. But the supply is stagnant and it increase at once. It is the local urban body which decides on the available and distribution of drinking water supply. But it is difficult to ensure the adequate water to the population on a sustainable basis. We have calculated the growth of the different units and the requirement of drinking water. The water demand is sharply increasing in the Mumbai city but supply is stagnant. The deficit of drinking water is increasing and it is calculated as more than 6000 million litres till 2021. The supply of drinking water schemes are planned till 2021. Municipal Corporation will able to keep



the deficit of drinking water at constant rate but it will not decline.

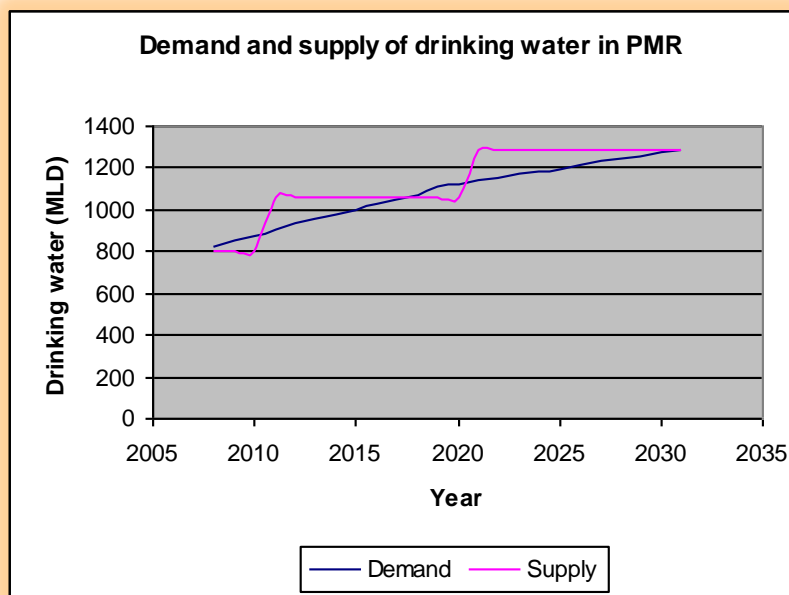
Figure 1 Water deficit in the Greater Mumbai



The water supply projects are announced and completion of such projects is expected till 2021. We have calculated the water supply and demand situation in Pune Metropolitan Region. In Pune metropolitan region, water demand and

supply is increasing. The numbers of water supply schemes are planning along with the growth of the population in the region.

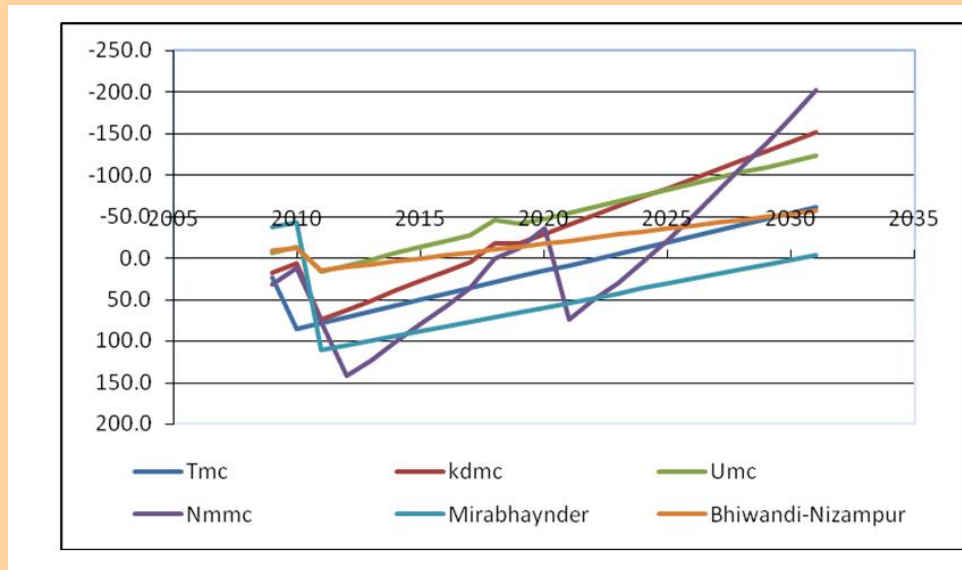
Figure 2 Water demand and supply in PMR



Therefore deficit of the drinking water is not observed in the city till 2031. But it is also depend on how the water supply schemes get completed. If they are not completed on time then water demand will rise but supply will not. Similarly, there are different small and large industries located in Pune metropolitan area. They have their own arrangement of water supply. In Thane district, Thane Municipal

Corporation is completely becoming independent in terms of water supply. The demand of drinking water is continuously increasing but supply schemes are not announced. The deficit of drinking water till 2031 is 50 MLD. It is small deficit in drinking water and it is required to adjust with new water supply scheme.

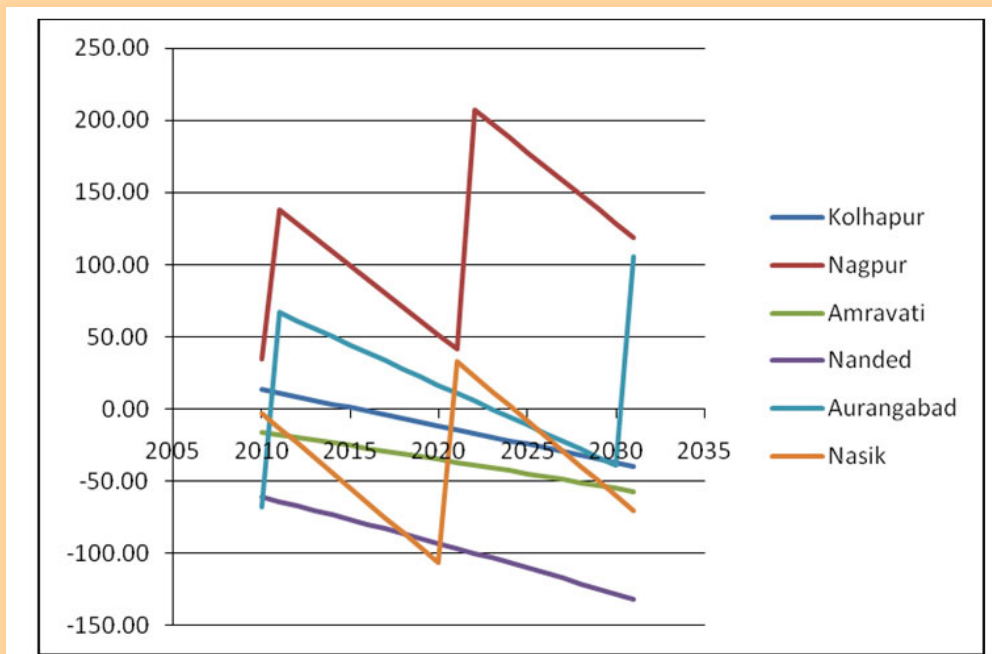
Figure 3: Deficit of drinking water in municipal corporations in Thane district (MLD)



Water deficit in New Mumbai Municipal Corporation is rising fast and in the year 2031, the water deficit will be 200 MLD. It is a planned city and therefore population, commercial units, malls and theatres are continuously increasing. The New Mumbai Municipal Corporation has to increase the supply of water in future through announcement of water supply projects. Water deficit in the Ulhasnagar Municipal Corporation is also increasing and in the year 2031, the water deficit will be more than 125 MLD. Water deficit in Kalyan-Dombivali Municipal Corporation is also increasing and it will be more than 150 MLD till 2031. Water supply schemes are not announced by the Municipal Corporation and few schemes are not enough to cater the

need of rising population. In Mira-Bhayandar, water deficit is not observed till 2031. The water supply schemes are planned according to future growth of population. In Bhiwandi-Nizampur Municipal Corporation, the water demand is rising but the deficit is very low. In such municipal corporation, density of population is very low. Such Municipal Corporation area is not well connected through rail and highway. Therefore water demand is very low. But in future monorail is planned from the corporation which will increase population and other units. Therefore water demand may increase in future. We have also estimated the water demand of six Municipal Corporation of rest of Maharashtra.

Figure 4: Deficit/surplus of drinking water in Municipal Corporations in rest of Maharashtra (MLD)



Water supply is surplus in Nagpur city. In 2011, water supply schemes will add 200 MLD water to total stock. In Future, water supply is planned according to the rising population and other units. Therefore there is surplus in the drinking water supply in the Nagpur Municipal Corporation. It is similar case for the Aurangabad Municipal Corporation. The water supply scheme of 2031 will add 150 MLD water. Therefore surplus of 100 MLD is observed at the year of 2031. At present, drinking water deficit is not observed in Kolhapur city. In the year 2031 the water deficit is observed as up to 50MLD. For Kolhapur city, not a single water supply scheme is planned. For Amravati Municipal Corporation, the deficit is not observed at current period. But in future water deficit will increase. There is not a single water supply scheme which is planned for city. The water deficit in the year 2031 is observed as more than 50 MLD. In Nanded city, in current year more than 50 MLD drinking water deficit is observed. In the year 2031, the water deficit is observed as more than 140 MLD. For Nanded city, not a single water supply scheme is planned. In Nasik Municipal Corporation, water supply schemes are announced but the rising population and the industrial and commercial units, the announced water supply schemes are not enough. Therefore the water deficit of 50 MLD is observed at the year of 2031.

#### IX. POLICY IMPLICATION

India has made gains after independence but the fact remains that more people are vulnerable to water related diseases. (Biksham G. and Hajara S. 2005). In Maharashtra, demand for drinking water is continuously increasing. The growth of population in urban centres is more because of higher employment opportunities and infrastructure services. Population growth is a challenge because it is not growing uniformly across the state. Some municipal corporations are facing the problem of provision of urban services to its population. Population is increasing but the supply of drinking water is constant. The future growth of schools, shops, commercial, industrial units, garages is very high. The deficit in drinking water will increase. Therefore municipal corporations must plan water supply with rising population and commercial units. In Pune Metropolitan Region, Aurangabad and Nagpur municipal corporation water supply is planned according to the future water needs. In order to tackle the water supply deficit, the municipal corporations must make the roof rain water harvesting system compulsory. Rainwater harvesting is an old method of capturing run-off rainwater from the terrace. It is important to examine whether the rainwater harvesting technique is efficient, functional, and sustainable. Rainwater harvesting system increases ground water level and it provides ready and natural source of water. It is also helpful to reduce the salinity in groundwater. Tanks, lakes and wells are the natural sources of water. Time has come to use these natural sources more effectively and efficiently because of higher water demand. Tanks in the corporation area can be repaired and reused. Water for toilets must be provided through wells and ponds. Municipal corporations must reduce the leakages and theft of water in their area.

Wastewater can be treated and reused for different purposes. It can be recycled from the different residential buildings, commercial establishments, factories, and institutions. Such recycled water can be used for flushing, gardening, car washing etc. The water demand can be managed through increase in water use efficiency, recycling and promotion of water saving technologies (Reddy V.R. 2001). In the present juncture, the city population is using potable water for flushing, gardening etc. There are alternative sources of water and they can be substituted for different use. In each Municipal Corporation, water leakages are occurring at several points due to various reasons. The major loss of water is seen at the time of water treatment, distribution and pumping. In Brihanmumbai Municipal Corporation, unaccounted water is almost 20 percent. 15 percent leakage is considered as acceptable in a distribution system because further reductions are not cost effective. Such reduction in the leakages through immediate measures will add 162 MLD water in the city (Rode S. 2008). When water is supplied to consumer, it is wasted during washing cloths, drinking and brushing etc. It is visible that most of the people keep tap running while brushing. Rich people regularly like tub and shower bath. Women keep tap running while washing clothes. People drink half glass of water and half glass is thrown in the drainage. Potable water is wasted during all these activities. Proper awareness and advertisement could save drinking water wastage. There is need to prepare small advertisements of running tap, washing cloths, potable water thrown in drainage etc. Television programs and small advertisements can save few million litres of potable water in the state. Municipal Corporations can reduce water theft through proper laws and legal actions. Water theft across the pipelines can be reduced through protective walls and compounds. Sometime the water supply is by and large limited by natural availability, technologies for harnessing, recycling and reusing can enhance supplies but only to a limited extent. The crux of water management lies in managing demand (Krishnan R. 2003). Water tariff can satisfy three objectives. It helps to discourage water use for particular activity or category. It is a useful method to reduce the water wastage. Higher water tariff is useful to generate more money for future projects and maintaining present water supply system. At present, water supply systems are not effectively managed. Total collection of money of water bills is low because of irregularity of water bills, errors in readings and invisible water reading. There is need for efficiency in water supply system. The water tariff needs to be revised in all the municipal corporations. Present flat system of tariff needs to be replaced with marginal pricing of water. It will help to achieve long term efficiency in deploying water resource. In the short period it will affect water demand but it will promote efficiency in the long term. In a competitive economy, prices of goods and services are always decided on the basis of demand and supply. The water charges can be framed on the basis of standard use of water. Such water tariff must be high enough to meet the different expenses. Regular revision of water tariff structure will certainly help to increase the financial resources. If the cost of water is not

covered, municipal corporations may drag on the limited resources. (Shah C.H. 2005). The water supply system can be made efficient, transparent, and functional. The resources can be used for further investment. There is also need to provide technical training to Municipal Corporation staff about the computerized billing system and simple method of water bill collection. The public water supply needs modernization and technical up gradation. At present, investment and building a new dam is time-consuming process and sometimes it takes 10 to 15 years. It needs to take clearance from forest and environment department. Rehabilitation of project-affected villages/people is another problem. Because of all these reasons, cost of the project continuously increases. Sometimes the new water supply schemes cannot be managed because they are the most capital intensive and expensive ones. Major costs incurred are costs of planning, water storage and rehabilitation of villages; establish production capacity, maintenance of storage, new pipeline, transmission and distribution network. The water supply scheme has fixed cost and returns are low over the period of time. The schemes are announced when there is acute shortage of water supply. It takes maximum time to get funds, clearance from various departments and actual work of the project and supply of water. After a huge investment in water supply schemes, the recovery is very low because of low tariff, water wastage, leakages etc. The whole water supply system suffers from mismanagement and lack of modern system and equipments. In order to avoid all the above problems, government can introduce the public private partnership in water supply system. There are many advantages of this partnership, it can help to complete time bound projects, meeting water quality standards, resource mobilization, and ensuring speedy recovery. Public private partnership is helpful to build reservoir and treatment plants. Through this partnership better water supply management, modern techniques for repairing, and leakages can be managed. This partnership is useful to provide regular, reliable and affordable water supply to all citizen. There is need of private sector participation in water related investment. Such investment can be converted as technological investment in water supply system (Thomas Wiperman, 2007). The private sector should not allow fixing the tariff structure. Municipal Corporations must monitor the service of the private companies. Water supply system needs more capital and such capital can be generated through private companies. There is need to see the entire water supply system in terms of the modern water supply distribution system. It will help households to improve health and education through reduction of diseases burden. Progressive and sustained expansion of access to safe water supplies among disadvantages urban dwellers will contribute greatly to reducing under five mortality (Fotso J.E. et al. 2008). Such efforts are also important for sustainable drinking water supply in the municipal corporations.

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# Performance Appraisal Systems in Private Universities in Nigeria: A Study of Crawford University, Igbesa- Nigeria

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**Abstract**-Performance appraisal system is important to original work performance, it determines the organization's success or failure. The aim of this study was to evaluate the effectiveness of performance appraisal system at private universities in Nigeria. The focus of the study was on the employees of covenant universities. The study evaluated the purpose of performance appraisal in private universities and identifies relevant factors for achieving an effective performance appraisal. A cross- sectional survey was selected for this study because it was easy to undertake compared to longitudinal survey and the results from the same can be inferred to the larger population. The study population was for all the employees of Crawford university. The whole populations of staff were selected as respondents. A structured questionnaire was used to collect the data for analysis. The analysis of collected data was done by the help of SPSS and presented using descriptive statistics, frequency tables and percentages . The findings from the study have established that performance appraisal system is the only tangible metric way by which an organization can know the level of performance of its diverse employees. Although most employees are aware of the type of performance appraisal system used in the private universities, such systems are not based on any serious formal purpose for which they were designed. The effectiveness of performance appraisal systems in private universities are only based on training to the employees involved in the rating/ appraising process and are multi- rating systems. Conclusively because the performance appraisal systems used in private universities are not effective and that they exist just as a matter of formalities, the private universities cannot measure employee's performance, hence making it difficult to achieve the intended human resource management objective.

**Keywords**-performance appraisal, systems, organizational work, private universities, training, employees, human resource management.

## I. INTRODUCTION

Armstrong (2001) notes that issues of accuracy and fairness in performance appraisal is one of the key research interest. In the fields of WRM. Performance appraisal may be used as a means of measuring performance. The purpose of measuring performance is not to indicate only where things are not going according to plan but also to identify why things are going well so that steps can be taken to build on success. The goal of performance appraisal is to access and summarize past performance, and develop future work, performance goals and expectations. It

is a process of systematically evaluating performance and providing feedback on which performance adjustments can be made. Cash (1993) indicates that from the employee's view point, the purpose of performance appraisal is in four fold: tell me what you want me to do, help me improve my performance, reward me for doing well. Performance appraisal therefore is an important human resource function, which provides management with a systematic basis for effectively recognizing and evaluating the present and potential capabilities for human resource. Performance appraisal should be a continuous function. The supervisors should continuously determine how effectively their subordinates are performing different tasks. Employees should be appraised at least once a year, as this will contribute to increased employee efficiency, productivity and morale. Private universities in Nigeria have administrative and professional faculty performance appraisal system designed to provide documented, constructive feedback regarding performance expectations, spur growth and development as well as provide a fair and equitable means to determine rewards for contributions to the university, the "senior staff" and faculty. Staffs are measured by their breadth of knowledge, understanding of roles and contributions to the university's strategic plan. The appraisal process therefore offers a valuable opportunity to focus on work activities and goals as well as identify and correct existing problems, and to encourage better future performance. Thus the performance of the whole organization is enhanced (Roger, 1995: Akinyele & Obamiro 2005). According to Davis (1995), performance management is a joint process that involves both the supervisor and the employee, who identify common goals, which correlate to the higher goals of the institution. If employees are effectively appraised, then the organization will experience increased productivity and improved quality of output. When people are treated with care, shown trust, listened to and encouraged to do better they reciprocate by being responsible and productive. For effective development and utilization of the human talent, performance appraisal plays a key role since it enables an organization to identify objectively the employee's strengths and weaknesses. The organization will then be able to counsel the employees to improve the weak areas. This will help all the employees to contribute positively to the attainment of the institution/ organizational objectives. Performances appraisal in most Singapore's companies involved supervisors merely filling out confidential forms for the last two years. The national production board of Singapore started promoting open

appraisal systems through a series of seminars. In spite of this, it appeared that several organizations continued to have closed system of performance appraisal system. Ghorpade (1995), indicates that performance appraisal in Japan are so integrated into original life that it is difficult to isolate and talk about appraisal system and mechanisms. The appraisal of individual performance is undeveloped in Japanese organization and teamwork and original identity are promoted. Performance feedback is smooth and indirect. The Japanese make more great investment in people and in the skills necessary to be effective with others. It is also used for linking training, development, performance planning, and a tool to encourage employees. Conger (1998), carried out an exploratory study to review the purpose and practices of performance appraisal. The study indicated the trend in US, as giving high focus on documentation, development and linking performance appraisals with pay and promotion purpose. In Korea, performance appraisal is used for development and promotion purposes. At university of Minnesota, performance appraisal policy statement indicates that, employee's performance appraisal is done on an annual basis. This is in a form of a written evaluation prepared by the responsible administrator. The policy establishes general procedures for such evaluations and delegates oversight on specific formats and detailed procedures to the senior administrator of the campus. The criteria for such reviews will vary according to the nature of the unit in which it is located, <http://www.umn.edu/ohr/policies/performance> organization do utilize performance appraisal systems that suit their original strategies; therefore appraisal systems vary from institution to institution.

## II. WHY PERFORMANCE APPRAISAL

Meyer (1972) states that performance management is a joint process that involves both the supervisor and the employee, who identify common goals, which correlate to a higher goal of the institution. Levinson (1902) stresses the importance of the processes of identification of the employee with manager. He also states several barriers which may come in the way of such legitimate process of identification as; lack of time, intolerance, of mistakes, complete rejection of dependency needs repression of rivalry, and unexamined relationship. Levinson also suggests that to help the development of the process of identification it is necessary for the manager to also examine his own process and needs of interacting with the subordinates. Performance appraisal has become a key feature of an organization drive towards competitive advantage through a continuous performance improvement and that it has resulted in the development of integrated performance management system (PMS) based on a competency framework (Strebler, 1997; Akinyele & Obamiro 2005). Quchi (1979) indicates that many companies in Nigeria conduct performance appraisals, regardless of their level of sophistication. But a number have not actualized the process. They are still learning the ropes, start by delinking the results of the appraisal from salary reviews. Put in place structures to manage the process. Get policies

and procedures manuals and train the entire organization on target setting, monitoring and review. The directorate of personnel management, Nigeria (2002) states that conducting employee performance on regular basis will balance the employees work overload or under load, thus ensuring appropriate employment placement. Mbiti (1974) gave the human temperaments as the reasons why we need to appraise employees. He classifies employee into four major vegetations and rejecters. Mbiti describes vegetations as people who care for nothing except their pay at the end of the month. They have no initiative; they will take the slightest excuse to be off duty; because this gives them pleasures than writing. They require constant supervision without appraising them; they will try to hide amongst others while they do nothing. Design an acceptable, easy-to-use but reliable appraisal instrument. Insist on support and sponsorship by the highest office in the organization. One will most likely succeed where the process is tied to perform, improvement and employees development. Appraisals should not have footnotes in corporate calendar. Companies that have moved to quarterly appraisals get more objective results.

Managers may easily get away with subjectively if discussions on performance are not based on recorded facts and figures. This needs to be discouraged, the training required must come often as the appraisal, where there is likelihood of bias, encourage a third party to attend such performance discussions. Phil long (1986), gave the following point as the reasons for performance review. Administrative uses; performance appraisal system is the link between the rewards employees hope to receive and their productivity. The linkage can be thought of as follows.

## III. PRODUCTIVITY- PERFORMANCE- APPRAISAL- REWARDS

The manager's role is to evaluate subordinates performance, which leads to manager's making compensation recommendations for employees. Development uses; performance appraisal can be a primary source of information and feedback for employees, which is key to their future development. When supervisors identify the weak areas and the training needs of the employee, this informs the employees what skills to develop and work out development plans. This reinforces individual behaviour. The combination of administrative and development purpose of performance appraisal reflect in a specific way, human resources management plays a larger role in integrating the individual with the organization. It is therefore, necessary to have a formal appraisal programme with clearly stated objectives. Mzenge (1983) revealed that performance reports in Nigeria play a relatively minor role in influencing decisions regarding the general management of the human resources. Mzenge found appraising to be base on personality traits, while actual job performance and ability to achieve goals given little emphasis. Thus it is important that performance appraisal roles be understood by the original managers. Gary (1991) establishes that change in behavior cannot be brought about in human beings through punishment or negative reinforcement, but only through positive reinforcement, influencing would involve

providing encouragement and reinforcing success so that the person take more initiative and is able to experiment and risk taking. These are encouraged through positive reinforcement.

McGregor (1957) indicates that managers experienced the appraisal of others as a hostile and aggressive act against employees which resulted in feelings of guilt of employees. He asserted that the tension between appraisal as a judgment process and a supportive development process and a supportive development process has never been resolved and is likely to continue for some time to come. McGregor further says that making judgment about an employee's contribution, value, worth, capability, and potential has to be considered as a vital dimension of a manager's relationship with employees, as it will influence the employee's performance or output. He said that the ongoing relationship and appraisal activities and decisions should be interpreted by an employee as feedback. This will have a potentially strong impact on an employee's view of self- belief and self esteem. Edwards Dewing, a pioneer in TQM, identified performance appraisal as one of the seven deadly diseases of U.S management, while most managers still recognize the benefits of performance appraisal, TQM challenges some longstanding assumptions about how it should be conducted. Most companies have modified their appraisal systems to better acknowledge quality of performance in addition to teamwork and process improvement (Fowler, 1990).

Harper (1993) suggests dropping the word "appraisal" because it puts employees in the defensive. He further recommended a shift towards future oriented review and development which actively involve employees in continuously developing ways of improving performance in line with needs for attainment original objectives.

The outcome could be a set of objectives to be achieved by individual employees such objectives may be concerned with immediate performance against current tasks and standards, but they might also be concerned with a variety of work and personal changes. He said that once employees are encouraged to pay attention to their progress at work then the organization must be able to respond to their medium and long term career aspirations, and the manager's role will resolve the inevitable tension that will result between individual goals and the manager's interpretation of organization goals. Clinton (1992) notes that formal performance appraisal programme sometimes yield disappoint results. The primary reasons includes, lack of top management information and support, the main objective of the study was to evaluate the effectiveness of strategic marketing practice on the performance of oil and gas marketing companies in Nigeria.

Unclear performance standards rater bias, too many forms to complete, and use of the programme for conflicting purposes.

If the support of top management is lacking, the appraisal programme will not be successful. To underscore the importance of the responsibility, Top management should announce that effectiveness in appraising is a standard in which the appraisers themselves would be evaluated. Also if the appraisal programme is used for salary review and at the

same is used to motivate used to motivate employees the administrative and the development purpose will be in conflict. This might have little influence on the employees future job performance.

The content of performance evaluation influences employee performance and satisfaction specifically, performance and employee satisfaction are interested when the evaluation is based on behavioral result oriented criteria when career issues are discussed and when the employee has the opportunity to participate in evaluation.

#### IV. STATEMENT OF THE PROBLEM

The success of every institution depends on the quality and commitment of its human resources. In order to ensure continued efficiency and effectiveness of members of staff that each organization has to carry out employee performance appraisal from time to time so as to keep them in check and replace, motivate, retain or take any other appropriate action. There has been little research in this field of performance appraisal. Most studies discusses performance appraisal that allows employees to develop their skill and to meet business goal. Morrisay (1972) suggest a few other techniques like a you-we technique, second-hand complement, advice request technique, one uses you to compliment and we to criticize (you are doing a great job, we have a problem) the second hand compliment is communicating to the subordinate a compliment received from a third party.

Richi (1996) introduced a skill- based method of performance management that creates a work environment that allows employees to develop the skills they need to meet business goals. The skill-based management measures skill and tracks and combines them into job descriptions, identifies employee skills gaps and then provides resources to upgrade abilities, Murray (1980), proposed using customer satisfaction measures as a basis of performance reviews and management rewards which rewards in more objective performance reviews, more effective employees, more satisfied customers and better business performance. The majority of empirical studies on performance appraisal systems focus on the search for the perfect form in which subjective traits are replaced by objective and job-relevant measurable behaviours.

Organizations using a performance appraisal system to evaluate their employees, struggle with issues of implementation, adoption and linkage with other human resource systems. To make a performance appraisal a viable management tool, from a broader perspective, organizations and researchers must invest time in performance appraisal skills, in developing systems evaluation which take into account reliability, validity, and managerial goals and designing systems to meet

specific organization conditions and expectations. In addition research in this three areas will help to develop more acceptable and successful performance appraisal system (Devries 1983)

There has been a proliferation of private universities in Nigeria in the recent past and most Nigerians are finding them a cheaper alternative than sending their children



abroad. Most of these institutions are relatively young. Besides there is a lot of competition among themselves as well as with established conventional public universities. To ensure they become more competitive these institutions need to retain high caliber staff both teaching and non-teaching staff through effective performance appraisals. Crawford University has a fairly competitive performance appraisal system which utilizes the ranking method. The assessor is furnished with a checklist of pre-scaled descriptions or behavior, which are then used to evaluate the employee. However, no empirical study has been conducted to determine the effectiveness of the appraisal system at the Crawford university, through there is a general dissatisfaction by staff members with the manner in which they are evaluated or appraised. Hence, the study seeks to evaluate the effectiveness of the current performance appraisal system. This study was therefore set to determine and assess the effectiveness of performance appraisal system in this institution. The study is important because for private universities to achieve its objectives, its must have effective performance contracts with the employees are expected to commit themselves.

It is therefore very important for an organization to have an effective performance appraisal system. It has been noted that employees working in private universities serve in the same capacities for a longer period even after a performance appraisal has done. This leads to highly skilled employees leaving these organization since the mode of acknowledging their good work and rewarding them accordingly is not considered.

Effective performance appraisal system therefore helps to retain qualified and competent staff. The researcher was therefore to determine the effectiveness and the purpose of performance appraisal system in private universities. Most managers do perceive a performance appraisal system as an annual routine exercise. This has made employees attach no value to the performance appraisal systems, thus take it as an organizational routine activity. The study aimed at benefiting private universities in Nigeria. It will also provide a basis for further academic research on the topic.

#### V. OBJECTIVE OF THE STUDY

The main objective of the study was to evaluate the effectiveness of performance appraisal system in private universities in Nigeria.

The specific objectives were:

- 1) To determine the main purpose of performance appraisal in private universities.
- 2) To analyze the factors that contribute to effective performance appraisal system.
- 3) To assess the awareness of the performance appraisal by the employees of the university.

The research questions included:

What are the main purposes of performance appraisal?

- 1) What are the factors that contribute to an effective performance appraisal system?
- 2) What are the factors that contribute to an effective performance appraisal system ?

- 3) What is the level of awareness of existence of performance appraisal in the university?

#### VI. METHODOLOGY

A cross-sectional survey was selected for this study because it was easy to undertake compared to longitudinal survey and the result from the sample can be inferred to the larger population. In addition, some extraneous factors could have manifested in the observed change other than the independent variable concerned.

The target population in the study was the employees of Crawford University. The university is one of the privately registered mission universities in Nigeria. The university employees various staff with different specialties and at little levels.

Employees at the Crawford University have a total population of 100 staff in the total. Because this population was not very large, the researcher chose to study the entire population, because the entire population was studied, this formed the sample for the study with need to use any sampling method.

A structural questionnaire was used to collect data from the respondents. The questionnaire was developed to capture the information on the level of respondents, knowledge on the main purpose of performance appraisal system and an assessment of the awareness of performance appraisal by the university. The questionnaire was pre-tested with 5 respondents in Covenant University, Ota, to authenticate reliability. The pre-testing was done to avoid any possible influence on trial respondents before the actual survey.

The analyzed data was presented using descriptive statistics, frequency tables, percentages and, pie charts. Descriptive statistics allow the generalization of the data to give an account of the structure or the characteristics of the population as represented by the sample. Effective performance appraisal system was tested to determine its effectiveness in achieving its purposes of providing linkages between employee performance and organizational goals and the factors that contribute to an effective performance appraisal system, the level of awareness of the performance appraisal system used was tested using chi-square.

#### VII. DATA ANALYSIS, FINDING AND DISCUSSION

The study presents the finding on the main purpose of the performance appraisal, analysis of the factors contributing to an effective performance appraisal and an assessment of the awareness of performance appraisal. According to main purpose of performance appraisal and their frequencies.

Table 1 : Purpose of Performance Appraisal

Purpose	1	2	3	4	5	Total
<b>Renewal of service contract</b>	3.5	5.9	5.9	55.3	29.4	100
<b>Promotion</b>	7.1	0.1	2.4	36.5	47.1	100
<b>Training needs</b>	1.2	3.5	9.4	42.4	43.5	100
<b>Rewards</b>	16.5	5.9	3.5	31.8	42.4	100
<b>Connecting and redeployment</b>	7.1	5.9	12.9	28.2	45.9	100
<b>Transfers</b>	64.7	9.4	15.3	5.9	4.7	100
<b>New assignment</b>	5.9	7.1	50.6	31.8	4.7	100
<b>Coaching</b>	7.1	8.2	30.6	43.5	10.6	100
<b>Discipline</b>	57.6	7.1	10.6	7.1	17.6	100
<b>Formality</b>	80	10.6	3.5	4.7	1.2	100
<b>Average %</b>	25.07	6.37	14.47	28.72	24.71	100

Source: Field data (2010)

The data was organized in terms of the list of the purpose of performance appraisal system and the respondent's views on individual purpose as presented in the table 1 above.

The table was used to evaluate whether the employees understand the main purpose for performance appraisal. The

response were scaled from 1 to 5, where 1 indicated totally not agree, 2 indicated may agree, 3 indicated partially agree, 4 indicated agree and 5 indicated totally agreed. All the percentages under each indentified purpose added up to 100% .

Table 2: Agreement Level of the Purpose of Performance Appraisal

Purpose	Agreement
<b>Training needs</b>	85.9
<b>Renewal of service contract</b>	84.7
<b>Promotion</b>	83.6
<b>Rewards</b>	72.2
<b>Counseling and redeployment</b>	74.1
<b>Coaching</b>	54.1
<b>New assignment</b>	36.5
<b>Discipline</b>	24.7
<b>Transfers</b>	10.6
<b>Formality</b>	5.9
<b>Average %</b>	53.43

Source: Field Data (2010)

Table 2 above indicates hoe the respondents agree with the purpose of the performance appraisal system. 85% agreed that the system is used in training new assessment, 84.7% generally agreed that the system is used to evaluate the employees who may review the service contract and 83.6% indicated that the system is useful in determining promotion criteria among the employees. These three were therefore

recorded as the main purpose of performance appraisal system in Crawford University. Although the employee identified above major purposes of the performance appraisal system, it is important to note that the purposes of the performance appraisal system is only 53.43% indicating that employees have not been properly sensitized on these purpose of the system.

Table 3: Test of the Main Purpose of Performance Appraisal System

Purpose of PAS	Unstandardized coefficient		Standardized coefficient		
	B	Std. Error	Beta	T	Sig.
For renewal of service contract	0.04	0.10	0.11	0.42	0.68
Promotion	-0.03	0.16	-0.11	-0.21	0.83
For identifying training needs of a member of staff	0.01	0.19	0.02	0.06	0.96
Employees counseling and redeployment	0.05	0.12	0.16	0.38	0.70
Transfers	0.05	0.12	0.16	0.39	0.70
New assignment	-0.16	0.13	-0.40	-1.31	0.20
Coaching	0.08	0.11	0.24	0.79	0.43
Rewards	-0.04	0.07	-0.17	-0.58	0.56
Discipline	0.04	0.06	0.18	0.68	0.51
For formality	0.28	0.07	0.66	4.17	0.00
Improving performance planning	-0.03	0.16	-0.07	-0.20	0.84
Transparency	0.03	0.14	0.08	0.20	0.84
Clarifying	0.05	0.13	0.14	0.38	0.71
Regular open communication	-0.03	0.15	-0.07	-0.18	0.86
Identification of individuals roles	0.01	0.18	0.02	0.04	0.97
Providing feedback	0.00	0.00	-0.02	-0.29	0.77
Utilizing results	-0.03	0.19	-0.08	-0.15	0.88
Accountability	0.01	0.10	0.03	0.10	0.92

Source: Field Data (2010)

In order to test the main purpose of the performance appraisal system(PAS) which is the first objective of the study, the researcher used a regression analysis model to test the dependency between whether the respondents were aware of an existence of performance appraisal system and their views on the purpose of the system as was designed in the tool for data collection. Awareness of the performance appraisal system was the dependent variable whereas the purposes of the system were the independent variables. Tables 3 above show the results of the regression model analyzed from the data. From the results in the table, it can be observed that the highest co-efficient is 0.66 coinciding with formality as the leading purpose of performance appraisal system in Crawford university. This result indicates that 66% of the respondents who are aware of the performance appraisal system. See it to be just a formality without any important objectives. This finding indicates that the university administration should do a lot of training of the performance appraisal system among the employees can understand and appreciate the critical purpose of the system,

some of the key issues to be addressed include the following; that the renewal of employees, contract must be pegged on the performance appraisal system, that the promotion in the university must be based on merit and that the merit indication must be obtained from the system. The university must develop objective oriented training needs assessment to have a continuous training needs assessment to have a better out and results based management. The performance appraisal system should be used as a source of such information that would be selectively identified the unique training needs and match them with the specific employees to the training. Rewards are the human resources element that must be awarded to the employees to the heightened their moral which is a function of the high expected output. In order to attain objective and transparent rewards, the performance appraisal must be dependent on to generate the required information and decisions. Organizations today face a lot of discipline related challenges. Some of the discipline cases go unattended because the organizations do not have information about.

Perpetrators of such offence –performance appraisal system thereby is very handy in identifying, executing and evaluating such disciplinary cases. As the business environment becomes complex and less demanding, organizations must have appropriate response mechanism to handle those scenarios. Some of the way in which one can adopt is to evaluate and assign employee new assignment through effective counseling and coaching. This complex requires effective decision that can be obtained from an effective performance appraisal system.

#### VIII. FACTORS CONTRIBUTING TO AN EFFECTIVE PERFORMANCE APPRAISAL SYSTEM

To address the second objective of the study which was to analyze the factors that contributes to effective performance appraisal, the researcher identified the following to be the main factors that contributes to an effective performance appraisal system in Crawford university: frequency of the

appraisal, organizational objectives, training the appraisals, accurate record keeping employee performance measurement, self appraisal approach, employee performance review, employee strength and weakness, performance appraisal, system as an employee motivator, performance appraisal system should be able to provide feedback to employees, performance appraisal system should be void of biasness and lastly the process/procedures for the system should be ratable. This factor was explored through the frequency table and regression models as the method of arriving at the conclusion of this objective. The research scale up the factors using Likert scaling system 1-5 according to the design used in data collection, 1 represented not effective, 2 represented least effective, 3 represents fairly effective, 4 represents effective and 5 represents very effective(see table 6 below)

*Table 4: Percentage Frequency of Factors Leading to Effective Performance Appraisal System*

<b>Factors for effective PAS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Frequency of use</b>	3.5	8.2	11.8	71.8	4.7
<b>Organizational/employee objective</b>	2.4	5.9	17.6	50.6	23.5
<b>Training of the appraisers</b>	9.4	4.7	60	12.9	12.9
<b>Accurate record keeping</b>	3.5	3.5	7.1	32.9	52.9
<b>Employees performance measurement</b>	3.5	2.4	24.7	60.2	7.1
<b>Multi-rater system</b>	4.7	5.9	23.9	50.6	15.3
<b>Self appraisal</b>	4.7	7.1	17.6	14.5	27.1
<b>Employees performance review</b>	4.7	1.2	56.5	28.2	9.4
<b>Employees strength and weakness</b>	4.7	1.2	56.5	28.2	9.2
<b>Employee motivator</b>					
<b>PAS provide feedback</b>	7.1	4.7	48.2	23.5	16.5
<b>Void of biasness</b>	4.7	5.9	27.1	35.3	27.1
<b>PAS provide process/procedure</b>	1.2	8.2	68.2	17.6	27.1
<b>Average %</b>	4.4	5.2	33.0	36.9	22.1

*Source: Field Data (2010)*

In order to determine the respondent's inclination level, the researcher further summarized the table 4 above by adding both the effective and very effective frequencies to help

understand the respondents, inclination toward the effectiveness of the system, see table 5 below.

Tables 5: Frequencies of Factors from Effective Performance Appraisal System (%)

Factors for effective PAS	Effective (%)
Accurate record keeping	85.8
Employee motivator	78.8
Frequency of use	76.5
Organizational/employee objective	74.1
Self appraisal	70.6
Employees performance measurement	67.3
Multi-rater system	65.9
Void of biasness	62.4
PAS provide process/procedure	44.7
PAS provide feedback	40
Employees performance review	37.6
Employee strength and weakness	37.6
Training of the appraisers	25.8
Average	59.0

Source: Field Data (2010)

Table 5 above indicate that that the respondents found accurate records keeping to be most important factor used for effective performance appraisal system, (85.8%) other favorite factors with an average of 70% included; Employees motivator, frequency of use, organization/employees motivator, frequency of use, organization employee objective and self appraisal, employees performance measurement, multi-rate system the factors that scored an average of 60% were void of business. Other important funding indicates that was training of the appraiser (28.8) other factors which were low rated to the average of 40% were employee strength and weakness, employee performance review, feedback provision and process/ procedure provision.

The funding indicate that employees seem not to understand the factors they under rated not to be effective. According to

the performance appraisal principles, the least rated factors (employee strength and weakness, employee, performance review, feedback provision and process/procedure provision) are equally very important in the evaluation of an effective performance appraisal system.

The researcher used a linear regression model to find out the relation between the employees awareness of performance appraisal in use and their preferred factors that contribute to an effective performance appraisal system. The employee's awareness of performance appraisal system used was selected to be the dependent variable. Whereas the factors contributing to an effective performance appraisal system were the independent variables as shown in the table 6 below.

	Unstandardized coefficient		Standardized coefficient		
Factors contributing to effective PAS	B	Std. Error	Beta	T	Sig.
Training of raters	0.28	0.06	0.80	4.45	0.00
Multi-rater systems	0.27	0.08	0.72	3.36	0.00
Employee motivator	0.15	0.08	0.48	1.98	0.05
Provides feedback to employee	0.15	0.07	0.44	2.08	0.04
Measurement system	0.13	0.09	0.29	1.54	0.13
Process/procedure for system	0.09	0.08	0.17	1.08	0.28
Employees performance review	0.04	0.07	0.09	0.58	0.56
Organizational objectives	0.02	0.07	0.05	0.25	0.80
No biasness	-0.14	0.09	-0.40	-1.59	0.12
Self appraisals	-0.19	0.09	-0.56	-2.04	0.04
Frequency of appraisals	-0.24	0.07	-0.56	-3.32	0.00
Accurate records of employees	-0.33	0.07	-0.92	-4.77	0.00

Source: Field Data (2010)

Standardized coefficient was used to judge the regression model output. The table indicates that the worst important factor was training of rates which scored 80% and multi rater system which scored 72% respectively. The least factor were void of biasness, self appraisal, frequency of appraisal and accurate records of employees which scored below 0%. The most interesting finding from this study is that the respondents viewed varied significantly when they looked at that factor in isolation with when they look at the factors in relation to their view of the performance appraisal system used in the Crawford University. First accurate record keeping scored the highest percent when looked at in isolation (85.5%) whereas when it was analyzed by the regression of the factors and awareness of performance appraisal system used in Crawford university, it scored the least (-0.92) on the other hand training of the appraisers was the least when it was observed in isolation (25.8%). Through the regression model, training of the appraisers scored the highest value (80%). The research concludes this objective by indicating that the training of the appraisers should always be considered to be the most important factors contributing to an effective performance appraisal system in private university environment.

#### IX. LEVEL OF AWARENESS OF THE EXISTING PERFORMANCE APPRAISAL SYSTEM

To answer the third objective of this study, the researcher considered two important variables, first whether the respondents are aware the performance appraisal system currently in use in Crawford university and whether the system achieve its objectives. Frequency tables were used to gauge the respondents and chi-square test was used to test the objective.

*Table 7: Awareness of Performance Appraisal System Currently Used*

Response	Frequency	Percent
Yes	72.0	84.7
No	13.0	15.3
<b>Total</b>	<b>85.0</b>	<b>100</b>

*Source: Field Data (2010)*

Majority of the respondents 84.7% observed that they are aware of the performance appraisal system in Crawford University.

*Tables 8: Indication whether the system achieve its objective*

Response	Frequency	Percent
Yes	11.0	12.9
No	74.0	87.1
<b>Total</b>	<b>85.0</b>	<b>100</b>

*Source: Field Data (2010)*

Table 8 above indicates that although the majority of the respondents were aware of the performance appraisal system used, the majority of them were not aware of the objective of the system.

The level of awareness of existence of performance appraisal in the university.

The probability of the cases in the frequency table above is given by

$$E1=E2=0.55$$

The sample size was 85

$$\text{The expected frequency } E=0.5 \times 85=42.5$$

*Table 9: Awareness of Appraisal System Currently in Use*

Response	Frequency	Percent
Yes	72.0	84.7
No	13.0	15.3
<b>Total</b>	<b>85.0</b>	<b>100</b>

*Source: Field Data (2010)*

The observed frequency  $O$  are shown in tables 9 above

*Table 10: Chi-square Test of the Level of Awareness*

Response	E	O-E	(O-E) <sup>2</sup>	E <sup>2</sup> /E
Yes	42.5	29.5	870.25	20.47647
No	42.5	-29.5	870.25	20.47647
<b>Total</b>	<b>85.0</b>	<b>0.0</b>	<b>1740.5</b>	<b>41.0</b>
Response	E	O-E	(O-E) <sup>2</sup>	E <sup>2</sup> /E
Yes	42.5	29.5	870.25	20.47647
No	42.5	-29.5	870.25	20.47647
<b>Total</b>	<b>85.0</b>	<b>0.0</b>	<b>1740.5</b>	<b>41.0</b>

*Source: Field Data (2010)*

The calculated chi-square is 41.0 whereas the critical chi at 1 degree of freedom is 3.84. Since the calculated chi is much higher than the critical chi-square, the researcher thereby concludes that the respondents are aware of the existence of performance appraisal system in use in the university.

#### X. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

##### *Summary of the Key Findings*

It's the obligation of the top management in any organization to organize a participatory performance appraisal system that would handle all the appraisal activities in the human resource department in the organization. The need for the appropriate appraisal system cannot be overemphasized in a complex organization. The need for appropriate appraisal system cannot be overemphasized in a complex organization like a university because modern management is today run on a result based management approach. The main objective of this study was to evaluate the effectiveness of performance appraisal system in private universities in Nigeria.

The study came up with a number of important findings that should be taken up by the private university in the design or overhaul of their past-appraisal systems- first the researcher established that the employees were aware of the performance appraisal system used at the Crawford University found it to be just at formality. The system does not address the important purpose upon which it was designed, secondly, the study establish that the major factor that contributes to an effective performance appraisal system



in the private universities. Firstly the provision of training to the employees involved in the appraising, secondly, an effective performance appraisal system should multi-rating, that's, there should be input from all the supervisions on the employees' performance.

Thirdly, most employees are aware of the performance, the performance appraisal system which is conveniently used to appraise them.

#### XI. CONCLUSIONS

Performance appraisal system is the only tangible metric way by which an organization can know the level of performance of its diverse employees. Although most employees are aware of the type of performance application system used in the private universities. Such systems are not based on any serious formal purpose for which they are designed.

#### XII. THE EFFECTIVENESS OF PERFORMANCE APPLICATION SYSTEMS

In the private universities are only based on training to the employees involved in the rating/appraising process and multi rating systems. Conclusively, because the performance application systems used in private universities are not effective and that they exist just as a matter of formalities, the private universities cannot measure employee's performance, hence making it difficult to achieve the intended human resource management objectives.

#### XIII. RECOMMENDATIONS FOR IMPROVEMENT

From the findings and conclusion of this study, the following recommendations are very crucial for developing effective performance application systems in private universities in Nigeria. The performance application system should be based in the following important purpose. They should be the tool used to evaluate employees' performance and decision support system used for renewing employees' contract. This will ensure that the right employees are retained for the right job. The system should be able to guide the universities in identifying employees' training needs, their execution and evaluation on whether they achieve their intended objective. The system should be used to evaluate the employees which are ready for promotion and other motivational rewards. The system should also be used to evaluate the employees who should be coached and prepare them for deployment, transfers on new assignments. During the design of performance application system in private universities, the management should consider all factors of an effective system so as to achieve the goals upon which they are designed. The major factor should include among others: frequency of the appraisal, accurate record system, employees' performance measurement, self appraisal approach, employees performance review, employees' strength and weaknesses, the system as an employee's motivator, the system should be able to provide feedback to employees, the system should be void of biasness and the process and procedures for the system should be ratable.

#### SUGGESTION FOR RESEARCH

The following related areas can be researched on to add up to the knowledge of what this study has achieved. First, there is a need to carry out a comparative evaluation of the effectiveness of performance appraisal system in both public and private universities. Secondly, a research should be done to evaluate the impact of computerizing performance appraisal system both in public and private universities. This will help human resource manager understand the role of modern technology in designing performance appraisal system. Lastly, a study should be done to establish integration of performance appraisal system with other subsystems, financial management system in the organization. Such a study will help organization learn and understand the integration of all the systems meant to run their activities.

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# Iranian Accountants Conception Of The Prevention Methods Of Fraud And Offering Some Recommendations To Reduce Fraud In Iran

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**Abstract-**The purpose of this study is to examine the extent to which accountants, internal auditors, and certified fraud examiners use fraud prevention and detection methods, and their perceptions regarding the effectiveness of these methods in Iranian companies. Research method has been survey was administered to 178 accountants, internal auditors and certified fraud examiners. Findings of this research results indicate that firewalls, virus and password protection, and internal control review and improvement are quite commonly used to combat fraud. However, discovery sampling, data mining, forensic accountants, and digital analysis software are not often used, despite receiving high ratings of effectiveness. In particular, organizational use of forensic accountants and digital analysis were the least often used of any anti-fraud method but had the highest mean effectiveness ratings. The lack of use of these highly effective methods may be driven by lack of firm resources.

**Keyword-**Detection fraud, Accountants Conception, Prevention Fraud Reduce Fraud, Iran

## I. INTRODUCTION

Most industrialized countries have experienced a flurry of occupational fraud cases lately, including the Enron, WorldCom, Societe Generale, and the Parmalat frauds, just to name a few. Occupational fraud may be defined as “the use of one’s occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization’s resources or assets” (ACFE and Peltier-Rivest, 2007).

Any fraud committed by an employee, a manager or executive, or by the owner of an organization where the victim is the organization itself may be considered “occupational fraud” (sometimes called “internal fraud”).

Recent. Recent corporate financial accounting scandals (e.g. Enron, WorldCom, Global Crossing, Tyco, etc.) h concerns about fraud, wiped out billions of dollars of shareholder value, and led to the erosion of investor confidence in financial markets (Peterson and Buckhoff, 2004; Rezaee et al., 2004). One reason that entities of all types are taking more and different steps to fight fraud is that the traditional red flags approach is not considered effective. The well-known red flags approach involves the use of a checklist of

fraud indicators. The existence of red flags does not portend the presence of fraud but represents conditions associated with fraud; they are cues meant to alert an auditor to the possibility of fraudulent activity (Krambia-Kardis, 2002). Numerous commentators have cast doubt on the red flags approach as it suffers from two limitations:

(1) red flags are associated with fraud, but the association is far from perfect, and

(2) since it focuses attention on specific cues it might inhibit internal and external

auditors from identifying other reasons that fraud could occur (Krambia-Kardis, 2002). The new standard continues to require the auditor to plan and perform the audit to provide a reasonable assurance that the financial statements are free of management fraud[1]. SAS No. 110 issued by Auditing Standards Board of the Institute of Chartered Accountants of England and Wales also provides similar standards on fraud detection. Costello (1991) analyses court cases concerning fraud and found that neither the generally accepted auditing standards (GAAS) nor SAS No. 53 constitute the controlling measures of an auditor’s liability. A second reason that organizations are trying more and different ways to attack fraud is that most entities have used an impractical strategy of fraud detection (Wells, 2004). According to the 1996 Report to the Nation on Occupational Fraud and Abuse (The Wells Report), fraud and abuse cost US organizations more than \$400 billion annually (ACFE, 1996). A KPMG Peat Marwick fraud survey of large and mid-size firms found that 62 per cent of those companies had experienced fraud during the past year (KPMG Peat Marwick, 1998). The median loss per fraud incident for firms of all sizes was \$117,000 (KPMG Peat Marwick, 1998). One survey by the Association of Certified Fraud Examiners (ACFE, 1996) found that the median loss per fraud incident for companies with fewer than 100 employees was \$120,000. Although no industry was immune to fraud losses, those with the largest reported median fraud losses per occurrence are real estate financing, manufacturing, banking, construction, health care, and retail (ACFE, 1996). In the Fall 1997 issue of the Auditor’s Report, the American Accounting Association (AAA) encouraged research directed toward assisting auditors and investigators in preventing and detecting fraud. The growth in fraud cases indicates that a strong need exists for research approaches that better enable auditors and investigators to prevent and detect potential fraud. Thus, the purposes of this study are to

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analyze and understand accountants' perceptions of the myriad techniques used to combat fraud, shed light on whether the techniques actually used by firms are considered the most effective and offer suggestions to practitioners as to what prevention and detection techniques are the "best." Organizational management attempting to comply with SOX and similar laws by launching new anti-fraud programs, as well as external and internal auditors, will benefit from this study's findings, when considering which anti-fraud methods to pursue. The benefits consist of less time spent on the use of ineffective techniques and reduction of fraud risk through earlier implementation of more effective fraud prevention and detection techniques.

As we enter new millennium, the recipients of financial statements have become a far sophisticated and informed group. The demand more from an audit function than a mere attestation with regard to auditor responsibility still be account for, furthermore during the last years, there has been a great number of accounting scandals throughout the world; most recent among them are; Enron, WorldCom, Parmalat, and Fannie Mae. These scandals have seriously damaged the confidence in financial reporting, because of fraud. After these huge number of scandals had profound impact on the profession, leading to the disbanding of the Public Oversight Board (Mulligan, 2002) and the collapse of Arthur Andersen, one of the world's largest accounting firms (Bayer). New legislation (e.g. Sarbanes —Oxley Act of 2002) and a new oversight board are just a few of the effects of these scandals.

## II. SYMPTOMS OF FRAUD IN A CORPORATE ENVIRONMENT

Existing fraud-detection literature shows that fraud symptoms can be placed into three broad categories: 1) symptoms that relate to the corporate environment of the firm, which include management style, incentive systems, a firm's overall ethics, industry stresses, and a firm's relationships with outside parties; 2) symptoms that relate to the perpetrator, such as any financial or work related pressures, opportunities to commit fraud, and rationalization of the fraud; and 3) symptoms that relate to financial records and accounting practices

## III. THE COST OF FRAUD

The US Chamber of Commerce estimates that the annual cost of fraud exceeds \$100 billion. This big bill for fraud is not paid by its perpetrators, rather it is paid by innocent parties including consumers, insurance companies and public servants such as external auditors. The cost of fraud eventually bites into the profitability of the victimized organization as well as the stability of the US economy. The impact of fraud can be viewed from both a micro and a macro perspective. (Hubert D. Glover and June Y. Aono, 1995)

## IV. FRAUD DUTY

Fraud involves a misallocation of resources or distorted reporting of the availability of resources. This contradicts the elements of sound and prudent management. Fraud impairs efficiency, productivity and innovation because it siphons away resources to non-constructive activities.

This limits an organization's ability to manage, grow and succeed. For example, the Drexel Burnham Lambert case resulted in the demise of one of Wall Street's most prestigious firms. The glamour associated with Michael Milken, who will undoubtedly survive, is overcast by the thousands of lost jobs. In addition, what about the host of investors who lost their life savings owing to the scandal? Likewise, the MiniScribe case cost jobs as well as the credibility of its auditor Coopers & Lybrand. Corporations cannot remain healthy and remain competitive if fraud continues to go undetected. The resources misallocated threaten the longevity of a firm. Losses incurred owing to fraud can be translated into decreased sales, employment, productivity, and credibility. In fact, the only increase associated with fraud is the cost of legal and insurance protection (Mokhiber, R)

## V. SARBANES-OXLEY ACT

Following some high-profile cases of fraudulent financial reporting, the SEC (2003) adopted new auditor independence rules. Originating from the belief that substantial revenues from NAS could compromise auditors' objectivity, these rules prohibit accounting firms from providing, together with the audit of a public client, certain NAS. While SOX allows the provision of tax services to an audit client by the same firm, the SEC Adopting Release (SEC, 2003) cautioned audit committees to be careful that such services do not impair independence. In fact, the significant concern about auditors' objectivity prompted the U.S. Senate Banking Committee to examine the need for barring certain additional services provided by external auditors, including tax services, to the public companies they audit (U.S. Senate Committee on Banking, Housing, and Urban Affairs, 2003). At the same time, the Conference Board's Commission on Public Trust and Private Enterprises released its 2003 best practice suggestions, which recommend that accounting firms limit themselves to audit and closely related services. While Kinney et al. (2004) provided an interesting empirical linkage between the provision of tax services and public company restatements, there is still no evidence as to whether the provision of tax services to non-public audit clients affects auditors' objectivity. Several factors drive the need to examine this segment of the audit market. While SOX rules apply only to public registrants, the AICPA (2002) is concerned that SOX concepts may cascade to the state level and the audits of non-public companies most often audited by small- and medium-sized firms. Substantial limitations on tax services, offered by accountants to privately owned audit clients, could have serious economic effects on small businesses and accounting firms. Some have argued that limiting an auditor's ability to provide tax services to audit

clients would result in less independent review of tax strategies and less transparency for investors (Ernst & Young, 2003). Auditors today are much more tax focused than in the past, since many firms provide tax awareness programs that alert auditors to instances when clients can benefit from adopting new tax strategies (Temple, 1992). For example, during the auditor's review of the organizational structure and related parties, the auditor might consider the possibility of merging multiple C corporations into one S corporation, adopting an employee stock ownership plan (ESOP), which offers numerous financial and tax advantages, or reconsidering the client's plans for succession and related estate and gift tax concerns.

According to the Small Business Administration (2003), over 99% of accounting firms qualify as small businesses with less than \$3 million in revenues and the great majority of all accounting firms consist of one office. Because auditors in small- and medium-sized firms often assist in tax work, study of auditors' objectivity in this segment of the audit market is important. For example, auditors in small- and medium-sized firms often use tax accrual checklists – a reminder list for auditors to see that the tax consequences of potentially significant events have been considered by the client in making the income tax accrual – and tax-savings checklists an idea triggering device to identify tax planning and saving matter for clients (Primoff, 1992). Hence, this study specifically focused on the provision of tax services to non-public companies by small- and medium-sized firms.

## VI. REASONS FOR COMMITTING FRAUD

The respondents suggested the following factors from their experience as the reasons for committing fraud (Philmore Alleyne, Philmore Alleyne):

- . the moral values of individuals;
- . the need to maintain an increasing social status;
- . persons unhappy with their job;
- . persons with drugs and gambling addictions;
- . people with increasing indebtedness;
- . individuals who "see other people doing it"; and
- . persons who feel that they would not be caught.

The understanding and reaction to fraud was determined not only by the size of the fraud and who committed it, but also against which organization the fraud was committed. One manager from a financial institution said that:

Organizations like financial institutions keep such matters in-house and try to recover losses or minimize erosion of public confidence by not prosecuting perpetrators of fraud. Banks, credit unions and insurance companies are organizations most likely to have fraudulent activity.

## VII. ANALYTICAL PROCEDURES AS A METHOD OF FRAUD DETECTION

In 1987, the Treadway Commission reported, "The potential of analytical review procedures for detecting fraudulent financial reporting has not been realized fully (National Commission on Fraudulent Financial Reporting [NCFRR], 1987)." Based upon a review of actual fraud cases, the Treadway Commission observed that financial statement

frauds tend to be very similar in terms of how they are perpetrated. Most fraudulent cases involve improper revenue recognition, overstatement of assets, and/or improper deferral of expenses. Typically, analytical procedures involve comparing actual financial statement amounts with expected amounts that are derived from the application of a naive or complex prediction model. Since the misstatements resulting from fraudulent misrepresentations result in differences from predicted amounts, they should be potentially detectable with analytical procedures. The central task of an auditor in applying analytical procedures is to develop expectations. The expectations the auditor develops will be based upon both the external information that the auditor encounters and his/her own existing knowledge stored in memory. An auditor's existing knowledge is an important factor in his/her understanding and interpretation of information, and can be expected to influence the auditor's effectiveness in assessing the risk of financial statement fraud. Research on experience and expertise suggests that an individual's knowledge changes as experience increases (Chi, Glaser & Rees, 1982), thus an auditor's performance of analytical procedures may be affected by experience. Previous research in both psychology and auditing has found that as individuals gain relevant experience their knowledge structures change and develop (Chi et al., 1982). Generally the findings indicate that experienced individuals have greater total knowledge (Christ, 1993; Knapp, 1995; Libby & Frederick, 1990; Tubbs, 1992), more understanding of relationships between variables (Chi et al., 1982; Frederick, 1991; Moeckel, 1990), and an ability to go beyond the surface features of information and identify the true, underlying problem (Biggs, Mock & Watkins, 1988; Chi et al., 1982; Christ, 1993; Moeckel, 1990). All of these characteristics of knowledge are potentially important to the task of fraud risk assessment with analytical procedures. Two empirical studies of particular importance to the issues addressed here have both found significant knowledge differences between audit managers and seniors. Christ (1993) studied auditors' planning knowledge (of which preliminary analytical procedures are a subtask) with a recall task. She found significant differences in the knowledge structures of audit managers/partners as compared to senior and junior auditors. Knapp (1995) examined auditors' knowledge of factors that may indicate the existence of financial statement fraud and found significant differences. Managers were able to recall a greater number of "factors that may suggest the existence of fraud in a set of financial statements" than were audit seniors. Given that significant knowledge differences have been identified between experience levels of auditors, this knowledge difference will likely affect auditors' understanding and interpretation of information during analytical procedures and, thus, their ability to effectively assess the risk of financial statement fraud.

## VIII. ROLE OF INTERNAL AUDITORS IN DETECTING FRAUD

There is considerable evidence that fraud is a serious problem and fraud detection is inadequate. The Association of Certified Fraud Examiners (ACFE) issued a report



indicating that fraud has cost U.S. firms over \$600 billion annually (ACFE, 2002). A 2003 KPMG Peat Marwick survey reported that 75% of the surveyed firms had experienced fraud in the last year, with an average loss of \$296 million, up from an average of 62% experiencing fraud with an average loss of \$117 million in 1998. Fraud detection has also been inadequate, as evidenced by recent, very public audit failures. The ACFE Report to the Nation (ACFE 2002) noted that external auditors detected only 11.5% of the frauds reported, while internal auditors detected 18.6%.<sup>1</sup> As the internal defenders of a firm's longevity, internal auditors are "obligated to be alert to the signs and possibilities of fraud" (Hillison et al. 1999, 351). While external auditors focus on misstatements in the financial statements that are material in scope, internal auditors are often in a better position to detect the symptoms that accompany asset theft, as well as financial statement fraud (See SAS 99 2002). Unlike external auditors, internal auditors have a continual presence in the company that provides them with better understanding of the organization and its control system (Perry et al. 1997)<sup>2</sup>. Thus, internal auditors are in a position to take on the elevated role established by the Sarbanes Oxley Act to assist external auditors in their search for internal irregularities (Leib 2004). In addition, their internal presence should assist in establishing fraud prevention measures (Hillison et al. 1999). The Standards for the Professional Practice of Internal Auditing (IIA Standards) requires internal auditors to assess risks faced by their organizations and develop audit plans and internal controls testing accordingly. SAS 99 expands on this role by encouraging internal auditors to "conduct proactive audits to search for corruption, misappropriation of assets, and financial statement fraud." Internal auditors should be expected to assist in the prevention and identification of fraud signals and weaknesses in the control system (Ratliff et al. 1996). Perry et al. (1997, 42) encourage organizations to "heighten the responsibilities of the internal auditor to include the duties of both 'monitor' and 'investigator' so that the organization can be better protected from internal fraud."

#### IX. AUDIT COMMITTEE QUALITY AND INTERNAL CONTROL

Since an entity's internal control is under the purview of its audit committee (Krishnan, 2005), we investigate the relation between audit committee quality and internal control weaknesses. The audit committee not only plays an important monitoring role to assure the quality of financial reporting and corporate accountability (Carcello and Neal, 2000), but also serves as an important governance mechanism, because the potential litigation risk and reputation impairment faced by audit committee members ensure that these audit committee members discharge their responsibilities effectively. We thus expect that firms with high-quality audit committees are less likely to have internal control weaknesses than firms with low-quality audit committees.

On measuring audit committee quality, we focus on the financial expertise in these committees. The Blue Ribbon

Committee on Improving the Effectiveness of Corporate Audit Committees (BRC)'s (1999) recommendation that each audit committee should have at least one financial expert highlights the importance of the financial literacy and expertise of audit committee members.<sup>5</sup> Section 407 of the SOX incorporates the above suggestion and requires firms to disclose in periodic reports, whether a financial expert serves on a firm's audit committee and, if not, why not. Such financial expertise of audit committee members has been shown to be important for dealing with the complexities of financial reporting (Kalbers and Fogarty, 1993) and for reducing the occurrence of financial restatements (Abbott et al., 2004). In addition, DeZoort and Salterio (2001) find that audit committee members with financial reporting and auditing knowledge are more likely to understand auditor judgments and support the auditor in auditor-management disputes than members without such knowledge. Moreover, financially knowledgeable members are more likely to address and detect material misstatements. Audit committee members with financial expertise can also perform their oversight roles in the financial reporting process more effectively, such as detecting material misstatements (Scarborough et al., 1998; Raghunandan et al., 2001). Indeed, Abbott et al. (2004) find a significantly negative association between an audit committee having at least one member with financial expertise and the incidence of financial restatement. Krishnan (2005) presents evidence that audit committees with financial expertise are less likely to be associated with the incidence of internal control problems. Therefore, we have the following directional prediction.

#### X. PUBLIC POLICY AND AUTHORITATIVE STANDARDS

Over a decade ago, the General Accounting Office (GAO, 1989) noted that economic and political factors led to many financial institution failures in the 1980s. The GAO also found that adherence to sound internal controls, effective management practices and solid financial reporting are essential to ensuring the banking system's safety and soundness. However, bank management often failed to implement adequate internal controls to ensure safe and sound bank operations or compliance with laws and regulations. Recognizing the increased risk of fraud and misstatement in financial reporting should affect public policy and regulation decisions, including the issuance of authoritative accounting and auditing pronouncements. Historically, lending has provided the single largest source of bank earnings and accounted for the largest category of assets. Of the banks that failed in 1987, 79% had not implemented adequate and prudent general procedures to guide loan department personnel in the loan underwriting and approval process. Poor loan documentation was cited in 41% of 1987 bank failures, a period in which banks often failed to obtain such documentation as current statements of cash flows, business plans, building inspections, appraisals and Uniform Commercial Code filings. The Tax Reform Act of 1986 contributed greatly to the collapse of many S&L institutions that had invested heavily in real estate and mortgages (Cordato, 1991). As the market value of real

property decreased due to the Tax Reform Act, so did the value of the S&Ls' major assets, leaving some institutions with negative capital balances.

In 1987, the Treadway Commission stated that "regulatory and law enforcement agencies provide the deterrence that is critical to reducing the incidence of fraudulent financial reporting." The SEC's financial fraud enforcement program already has raised corporate and public accounting's awareness of the problem and potential for detection and punishment, demanding that management and the public accounting profession reduce intentional misstatements in financial statements. For public accountants, punishment has mostly led to CPA resignations from practice, and other sanctions and censures (Kunitake, 1987). The SEC has taken similar action against key corporate executives. More recently, the popular press has followed management fraud cases such as Enron and WorldCom that should lead to executive jail time. However, further improvements can and should be made at both the state and federal levels.

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In response to public demand for more reliable financial information, the SOA Act contains many provisions that greatly affect auditor responsibilities, including stricter independence guidelines, increased financial statement disclosures and greater corporate responsibility (e.g. CEOs and CFOs also "signing off" on financial statements). Such large-scale debacles at public companies as Enron and WorldCom also raised the question of whether greater government regulation of accounting rules should exist. In an apparent step in that direction, the Public Company Accounting Oversight Board (PCAOB), an organization deriving its power from the SOA, establishes rules relating to the preparation of audit reports for issuers. Subject to SEC oversight, the PCAOB conducts inspections, investigations, and disciplinary proceedings with accounting firms who audit public companies.

SAS No. 53 (AICPA, 1998), through using the term "irregularities," offered guidance on an auditor's responsibility to plan audits to search for financial statement fraud. A decade later, SAS No. 82 (AICPA, 1997) required auditors to identify the presence of risk factors, primarily by assessing the risk of fraudulent material misstatement in each audit. Crucial to the risk assessment is a bank's move

towards an increasingly risky asset/investment mix. In 1988, the SEC also issued Financial Reporting Release (FRR) No. 28, containing industry-specific disclosure guidance for loan losses to help determine allowances for loan losses for registrants engaged in lending activities. The issuance of the Treadway Commission's Report, SAS No. 53 and FRR No. 28 all illustrate increased public attention to bank fraud. Moreover, SAS No. 99, effective in 2003, builds upon SAS No. 82 to expand auditor guidance for detecting material fraud in financial statements. While not technically changing auditors' responsibilities, SAS No. 99 encourages increased *professional* skepticism (an objective, questioning mindset) in all audits and requires "brain-storming" among engagement team members to identify potential fraud risk areas before and during the audit.

The Committee of Sponsoring Organizations of the Treadway Commission (1999) noted that between 1987 and 1997, about half of the firms that committed financial statement fraud recorded revenues prematurely or created fictitious revenue transactions. One-half that recorded fictitious assets should have expensed. Auditors should understand that audit procedures designed to address an increased risk in errors could respond ineffectively to increased risks of fraud (Bloomfield, 1995). Management can alter existing information, withhold data or use other methods to avoid detection from auditors who use common error detection methods in performing their duties. For example, Erickson et al. (2000) reviewed the CPAs' working papers in the Lincoln S&L fraud found that: (1) while following the dictates of SAS No. 82 would have detected some fraud issues, still more guidance is needed; and (2) increasing traditional audit procedures would not have cast doubt or suspicion on Lincoln S&L's questionable revenue recognition procedures. Adapting audit plans to accommodate changing levels of fraud risk allows auditors to improve their ability to detect financial statement fraud.

#### XI. METHODS OF PREVENTION FRAUD

Both fraudulent financial reporting and asset misappropriation have become major costs for many organizations. Numerous fraud prevention and detection techniques are now utilized to reduce the direct and indirect costs associated with all forms of fraud. These various techniques include but are not limited to: fraud policies, telephone hot lines, employee reference checks, fraud vulnerability reviews, vendor contract reviews and sanctions, analytical reviews (financial ratio analysis), password protection, firewalls, digital analysis and other forms of software technology, and discovery sampling (Carpenter and Mahoney, 2001; Thomas and Gibson, 2003). Organizations that have not been fraud victims tend to rely more on intangible prevention tools such as codes of conduct or fraud reporting policies while those that have suffered fraud have implemented more tangible measures such as whistle-blowing policies and fraud prevention and detection training (PriceWaterhouseCoopers (PWC), 2003).



#### A. *Maintain a fraud policy*

Every organization should create and maintain a fraud policy for guiding employees. A corporate fraud policy should be separate and distinct from a corporate code of conduct or ethics policy. A model or sample fraud policy is available from the ACFE. Such a fraud policy should be clearly communicated to employees. Various avenues of communication include use in orientation of new hires, employee training seminars, and annual performance evaluations. Written acknowledgment by each employee that the policy has been read and understood should be required. (James L. Bierstaker, Richard G. Brody, Carl Pacini, 2006)

#### B. *Establish a telephone hotline*

A rather novel fraud approach that is becoming more common is the use of anonymous telephone hotlines (Holtfreter, 2004). It is a very cost effective means for detecting occupational fraud and abuse. A hotline allows employees to provide confidential, inside information without the fear of reprisal that accompanies being a whistleblower (Pergola and Sprung, 2005).

Hotlines may be supported in-house or provided by a third party. An example of a third-party hotline is a subscription service offered by the ACFE. The annual subscription rate may be quite modest. The results of all calls are provided to the client within two or three days. A hotline is not only an effective detection tool but it also enhances deterrence. Potential perpetrators will likely have second thoughts when considering the risks of being caught.

#### C. *Employee reference checks*

Organizations should conduct employee reference checks prior to employment. An employee with a history of perpetration of fraud schemes may move from one organization to another. When employee references are not checked, a dishonest person may be hired. A dishonest employee can defraud an unsuspecting organization of thousands of dollars and move on to a new job before the fraud is discovered. Resumes should be scrutinized and information verified to determine that the information provided is legitimate. An organization should not rely on the telephone numbers listed on the resume for prior employers, as they may be false. Employer phone numbers should be obtained by the organization independently.

Organizations should conduct a second reference check six months after an employee starts work. The reason for a dishonest employee's recent dismissal from a previous job may not have had time to become part of the employee's record during the initial search. This may be discovered by a second check. (James L. Bierstaker, Richard G. Brody, Carl Pacini, 2006)

#### D. *Fraud vulnerability reviews*

A fraud vulnerability review that investigates the organization's exposure to fraud should be performed. This includes an assessment of what assets are held and how they could be misappropriated. For those organizations involved

in electronic commerce, a vulnerability review should also include an assessment of exposure to employee misappropriation or destruction of such "non-balance" sheet items as confidential customer data and financial information. The purpose of such a review is to "outsmart the crooks." A vulnerability review can help to direct an internal audit plan and, in particular, to highlight the most vulnerable assets. The review is considered a proactive step in fraud prevention and detection. Consideration of each class of asset and the evaluation of the exposure to loss helps the auditor or accountant to see what the thief sees. Steps then should be taken to eliminate, minimize, or at least control the exposures. (James L. Bierstaker, Richard G. Brody, Carl Pacini, 2006)

#### E. *Perform vendor contract reviews*

Review of company contracts and agreements can provide an indication of possible contract fraud, including kickbacks, bribery, or conflicts of interest by an organization's employees. Contract fraud can occur when a trade supplier fraudulently takes advantage of a contract to make illegal profits. Contract fraud may involve a conspiracy between entity personnel and a trade supplier or conspiracy among two or more vendors.

Analyzing contract files for the same contractor routinely bidding last, bidding lowest, or obtaining the contract may detect this type of contract fraud. Awarded contracts may also be scrutinized for evidence of a supplier regularly being awarded contracts without indication of a legitimate reason for the constant receipt of contract awards. Such a review may reveal that bribes or kickbacks are the reason for the awards. A review of various public records may reveal whether an employee has a covert ownership interest in the contractor. (James L. Bierstaker, Richard G. Brody, Carl Pacini, 2006)

#### F. *Use analytical review*

Fraud can affect financial statement trends and ratios. Accounts that are manipulated to conceal a fraud may manifest unusual relationships with other accounts that are not manipulated. Also, erratic patterns in periodic account balances may occur because the fraudster may engage only sporadically in fraudulent activity. Financial analysis conducted by an accountant or investigator may reveal existing relationships that are not expected or the absence of relationships that are expected to be present.

It may behoove the accountant or investigator to analyze several years of financial statement data using different techniques to obtain a clear picture of the financial impact of any fraud scheme. Various analytical review techniques which the accountant or investigator may employ include: trend (horizontal) analysis, ratio analysis (vertical analysis or common size statements), budgetary comparisons, comparisons with industry averages, and review of general ledger and journal entries. Unusual items should be pursued to determine if fraud could be the cause of an aberration. (James L. Bierstaker, et al, 2006)

### G. Password protection

The growth of the internet and e-commerce has led to a rise in the number of dial-in ports to computer networks thus increasing the exposure to fraud. Accountants and investigators should assure that only legitimate users have access to the computer network and associated data. Although passwords are the oldest line of computer defense, they still constitute the most effective and efficient method of controlling access.

The difficulty with passwords is that there is an inverse relationship between making the password effective and usable. If password requirements are too complex, users will write the password down, placing it at risk (Gerard et al., 2004). Therefore, every organization needs to evaluate the tradeoffs. Passwords should be six to eight characters long with a mix of letters, numbers and special symbols. Users should be required to change their password often, for example, every 30-60 days. Additionally, users should have to cycle through 6-12 different passwords before being allowed to reuse a password (Gerard et al., 2004). Also, employees should not be allowed to display their passwords in any location where unauthorized individuals may see them. Lockout procedures should be implemented if a user fails to input a correct password after three attempts.

Technology has advanced to create new forms of password protection using biological features of the user (i.e. biometrics) such as voiceprints, fingerprints, retina patterns, and digital signatures. New forms of password protection are likely to become cost effective in the near future.

### H. Firewall protection

One necessary technique for controlling unauthorized access is the use of firewalls. Firewalls can be used at the software or hardware level. At the software level, there are specific programs (e.g. ZoneAlarm from zonelabs.com) that can be coordinated with internet-related software programs (browsers, e-mail, etc.) to protect the data being passed through them. Hardware firewalls/routers basically prevent people from finding an organization's connection to the internet. The internet connection is known as an IP address. The hardware firewall/router basically hides the IP address so that hackers cannot find and access it (Gerard et al., 2004).

### I. Digital analysis

Digital analysis, which is based on Benford's Law, tests for fraudulent transactions based on whether digits appear in certain places in numbers in the expected proportion. A significant deviation from expectations occurs usually under two conditions. The first condition is that a person has added observations on a basis that does not conform to a benford distribution. The second condition is that someone has deleted observations from a data set that does not adhere to a benford distribution (Durtschi et al., 2004).

Tax cheats, check forgers, and embezzlers simply cannot consciously generate random numbers. Forensic accountants and auditors have depended on this human quirk for years and various types of digital analysis software, including

DATAS, have proven themselves capable of pinpointing this habit (Lanza, 2000). A list of examples of data sets where digital analysis software may be used includes investment sales/purchases, check registers, sales and price histories, 401 (k) contributions, inventory unit costs, expense accounts, wire transfer information, life insurance policy values, bad debt expenses, and asset/liability accounts.

Other types of fraud exist that cannot be detected by digital analysis because the data sets under examination are not appropriate for such analysis. For example, duplicate addresses or bank accounts cannot be uncovered, yet two employees with similar addresses might signal a shell company. Digital analysis will not detect such frauds as contract rigging, defective deliveries, or defective shipments.

### J. Discovery sampling

Discovery sampling is a form of attribute sampling. The latter is a statistical means of estimating the percentage of a population that possesses a particular characteristic or attribute. Discovery sampling is based on an expected error rate of zero. It is employed when the accountant needs to know whether a population contains any error indicative of fraud. If a single case of significant error or fraud is found in a sample, the sampling process is stopped and the error or fraud is investigated.

Let us consider an example. An account should not include any payments made out to a vendor name that is known to be fictitious unless there is that type of fraud in the account. If there is no such fraud in the account, there should be no payments to fictitious vendors. If an auditor were to test some of the payments in an account and were to find a payment made out to a fictitious vendor, the auditors would know that fraud existed but would not know the extent of the fraud. Conversely, if an accountant examined some account payments and did not find any illegitimate payments, he or she would not conclude that no fictitious payments existed in the account. (James L. Bierstaker, et al, 2006)

## XII. DETECT MANAGEMENT FRAUD

The responsibility of the independent auditor to detect management fraud remains a controversial issue. American Institute of Certified Public Accountants recently issued a new Statement on Auditing Standards entitled Consideration of Fraud in a Financial Statement (AICPA, 1997) which supercedes SAS No. 53 (AICPA, 1988).

The new standard continues to require the auditor to plan and perform the audit to provide a reasonable assurance that the financial statements are free of management fraud.

Management fraud is also associated with explosion of litigation against the auditor (Palmrose, 1991).

Auditing can detect management fraud, but audit procedures are not designed to guarantee that the financial statements are free from management fraud. Arens and Loebbecke (1997) contend that management fraud is inherently difficult to uncover because management is in position to override internal controls and can actively conceal the misstatements

### XIII. A THEORY OF SUCCESSFUL FRAUD DETECTION

To explain successful fraud detection we propose that auditors apply the same intentional stance strategy that deceivers use, as we described above. Just as the deceiver solves the problem of creating a deception by using knowledge of how the victim thinks and acts, the detector needs to solve the inverse problem of detecting the deception that has been created by using knowledge of how the deceiver thinks and acts (Wilks and Zimbelman 2004). We assume that both deceiving and detecting deception are accomplished by thinking about the other agent goals, knowledge, and possible actions, i.e. by adopting the intentional stance. The deceiver uses the intentional stance to manipulate information cues and mislead its intended victim. The detector use the intentional stance to “reverse engineer” the cues left behind by the deceiver and identify them as symptoms of attempts to mislead. Just as the six *deception* tactics described above express the deceiver’s knowledge, we conjecture that detectors learn corresponding *detection* tactics to counter what the deceiver has attempted to do. For example, the masking tactic is countered by a corresponding anti-masking tactic, which consists of realizing that something (e.g., an expense or a liability) appears to be missing because it has been intentionally concealed by the deceiver. Knowledge of the detection tactics comes from experience. Not necessarily from specific experience with fraud per se, which is scant, but from experience with deception in general, which is more abundant. Auditors, as any other social agent, have frequent and varied exposure to instances of deception, both as a deceiver and/or victim or intended victim of deception (e.g., Ekman 1992; Ceci , Leichtman, and Putnick 1992). As a way to cope with potentially deceiving adversaries, social agents develop knowledge for detecting the deceptions created by others (Vasek 1986). This general detection knowledge is specific to the task of detecting deceptions, but is not expressed in terms of domain content (Cosmides 1989; Cosmides and Tooby 1992). In the specific case of fraud detection, auditors interpret cues found in financial statements in the light of goals ascribed to management, as well as tactics they believe management may potentially have used to manipulate the information are attempting to evaluate. The detection tactics are heuristics that are activated in the presence of three conditions: 1) the discovery of an anomaly, 2) the belief that the anomaly is functional to the goal ascribed to the potential deceiver (e.g., management) and 3) the belief that the anomaly could be the result of the deceiver’s intentional manipulation. For example, the conditions for applying an anti-masking tactic are that the auditor 1) notices that something (e.g., an expense or a liability) is unexpectedly missing, 2) concludes that this absence contributes to the goals that have been ascribed to management, and 3) believes that management has the capability of manipulating the reporting process so that the expense (liability) does not get recorded. When these conditions are met, the auditor hypothesizes that the deceiver has masked the unexpectedly missing item and

takes corrective action (e.g., searches for evidence, or assumes that the item was maliciously removed).

To be useful, the detection tactics must be applied to specific situations. To continue the above example, in an auditing context a detector must develop expectations about the value of expenditures, she must be able to ascribe goals to management, and whether management could manipulate the accounting process so as to fail to record the expense or liability in the financial statements (e.g., Albrecht, Leichtman, and Putnick 1995). These abilities are enabled by a type of knowledge that we have called mediating knowledge of auditing. Mediating knowledge maps the general conditions of the tactics into entities and relationships in a particular situation. We claim (below) that this mediating knowledge is also the source of errors and thus ultimately the failure to detect deception. The rationale for this claim is that the detection tactics are likely to be quite refined, because of the repeated exposure that individuals have with deception in the world, both as a deceiver and as a target. By contrast, the knowledge necessary to connect a specific situation to a tactic is more likely to be lacking, because in most specific domains the experience of a deception is relatively rare. To summarize, the theory we have proposed describes a solution to the problem of detecting fraud as faced by auditors. It is viable because it satisfies the three general characteristics of the fraud detection problem that were identified at the beginning of this paper. First, it addresses low base-rate, because it argues that this knowledge develops by abstraction from numerous instances of deception to which the auditor has been exposed in everyday life. Second and third, it not only appreciates but also exploits the adversarial and intentional nature of the deceptions created by management as it uses the goals and actions ascribed to management as a basis for detecting the deception they have created. To demonstrate that the theory works we next analyze in detail a computer model that applies the detection tactics to a set of real financial statements, and we run the model on the cases listed in Table 2. The model is described next.

### XIV. THE DEVELOPMENT OF ACCOUNTING FRAUD RECOGNITION TECHNOLOGY

#### a. *The Quantitative Technologies of Discerning Accounting Fraud*

We can set up linear and non-linear models by studying different data reports, and then make some combinations of these discerning models, which will offer us a better way to solve this problem for most of cases. This is because it is infeasible to discern complicated accounting fraud by only using one single model if we count reliability and risk in. What’s more, every kind of model will include some useful independent information; hence we can’t fully tap out all the valuable economic information if we only use one single model. The composite discerning model is designed to solve these limits. This model will combine all the other discerning results, thus establish itself as the best discerning method. Research indicates that the connection between financial index and the existence of fraud is universal, thus the exceptional change of financial numerical index can



often expose its tactics. As a result, if we pay more attention to financial index, which reflects the profits, we can discern the means of making frauds to a great extent. Therefore, it is our duty to structure a strong index system where we can detect the frauds by normative research, demonstrations, nerve network and fuzzy methods

#### *b. Characteristic Signals of Accounting Fraud*

Regulations, we will face numerous uncertain factors. While auditing the accounting files, we need to adopt diversified testing methods in order to test the existence of accounting fraud from different aspects. Nowadays, the research on discerning accounting fraud in China still remains its elementary level with theoretical analysis and preparation in its early period. Although theoretical circle and economic experts are working hard on it, they haven't established a complete theory and an applied system. Discerning accounting fraud is a kind of complicated and comprehensive management activity where the theory and applications will involve many kinds of disciplines, such as natural science, social science, engineering, systematic science, management science and so on. This paper argues that we can combine different kinds of technologies, such as finance, information technology, controlling and simulation technology into one new applied technology. Upon many case-studies and comparisons, mathematic statistics and model proof, we are determined to design a fraud-recognition system, through which we can calculate and evaluate the data, set up standards for controlling and making decisions. The process of the accounting fraud recognition system. In order to meet the functional demands, we will divide this recognition system into five parts: objective, evaluation and analysis, detective signal and discerning, mid-process control and regulative conduct. Monitoring and predicting the accounting information is developed on the basis of middle control objective. Particularly, we first choose some variables related with accounting fraud, change these variables into mid-objectives after numerical processing; then according to the safe value, we will set up the default value for our case, hence getting the critical values at different significant levels. After setting up the regeneration index system, the corresponding dynamic monitoring system will start to work. This dynamic monitoring system will trace those variables, and make predictions according to the critical values at different significant levels. Also this system will make adjustments upon the feedback information to correct the unreasonable critical values. In this way, the system of monitoring and discerning accounting fraud is a both stationary and dynamic effective system and the discerning function realizes through above-mentioned risk monitoring, adjusting to the feedback and getting the best results.

#### XV. LITERATURE REVIEW

Much prior research addressing fraud prevention and detection methods has addressed "red flags." For example, Albrecht and Romney (1986) found in a survey of practicing auditors that 31 flags related to internal control were

considered better predictors of fraud. The survey contained a list of 87 red flags. Loebbecke and Willingham (1988) offered a model that considers the probability of material financial statement misstatement due to fraud as a function of three factors:

- (1) the degree to which those in authority in an entity have reason to commit management fraud;
- (2) the degree to which conditions allow management fraud to be committed; and
- (3) the extent to which those in authority have an attitude or set of ethical values that would facilitate their commission of fraud.

Apostolou et al. (2001) surveyed 140 internal and external auditors on the fraud risk factors contained in SAS 82. They document management characteristics as the most significant predictor of fraud followed by client operating/financial stability features, and industry conditions. Chen and Sennetti (2005) apply a limited, industry-specific strategic systems auditing lens and a logistic regression model to a matched sample of 52 computer firms accused of fraudulent financial reporting by the SEC. The model achieved an overall prediction rate of 91 percent for fraud and non-fraud firms. Moyes and Baker (2003) conducted a survey of practicing auditors concerning the fraud detection effectiveness of 218 standard audit procedures. Results indicate that 56 out of 218 procedures were considered more effective in detecting fraud. In general, the most effective procedures were those yielding evidence about the existence and/or the strength of internal controls.

#### XVI. RESEARCH OBJECTIVES

This study investigates to measure Iranian accountant conception of fraud and provide policies to prevent it searches for a relationship between the conception of fraud and its reduction.

To measure the level of Iranian accountants awareness of fraud and its prevention methods.

To measure the level of Iranian accountant awareness of Iranian accountants awareness of computer fraud and its prevention methods.

To present suggestions on order to increase awareness of fraud prevention methods.

To provide some plans in order to decrease fraud in Iran.

#### XVII. RESEARCH METHODOLOGY

The research methodology used in this study is based on both survey and description methods. So far accurate answer to the research questions, the authors design and developed a questionnaire which it is the most suitable for this study. A survey questionnaire was completed by the accountants of Iranian Company at the end of 2010. The questionnaire contains four parts namely (A) General information and (B). Including elements in fraud prevention methods, (C). elements in computer fraud prevention, (D). questions in reviewing plans to decrease fraud in Iran.

## XVIII. THE RESEARCH HYPOTHESES

According to the research problems and objective as well, the following hypotheses were postulated in the study Iranian accountants are aware of fraud and its prevention methods.

Iranian accountants have enough knowledge about computer fraud and its prevention method.

Some plans have been provided to decrease fraud in iran.

23 independent elements of fraud prevention methods, have same important from the view point of their effectiveness .

7 independent elements of the computer fraud prevention methods have same importance from the view point of their effectiveness.

A survey questionnaire has been provided in these five hypotheses to achieve the aims of this study.

## XIX. TESTING OF THE HYPOTHESES

## a) First hypotheses test

H0: Iranian accountants have no awareness of fraud and its prevention methods.

H1: Iranian accountants have enough awareness of fraud and its prevention methods.

As shown in table (1), t – test value, is 1.521, df is 177, p-value is 0.130, since p-value > 5%, then H0 is accept in. assurance distance of 95%.

## b) Second hypotheses test

H0: Iranian accountants have no awareness of computer fraud and fraud prevention.

H1: Iranian accountants have enough awareness of computer fraud and fraud prevention.

As shown in table (1), t – test value, is 1.211, df is 177, p-value is 0.228, since p-value > 5%, then H0 is reject in. assurance distance of 95%.

## c) third hypotheses test

H0: There is some policies to reduce fraud in iran.

H1: There is no policies to reduce fraud in iran.

As shown in table (1), t – test value, is -0.298, df is 177, p-value is 0.766 since p-value > 5%, then H0 is reject in. assurance distance of 95%.

Table (1)

Description Hypotheses	t	df	P-value	Result
First hypotheses	1.152	177	0.130	Accept
Second hypotheses	1.211	177	0.228	Reject
Third hypotheses	-0.298	177	0.766	Reject

## d) Forth hypotheses test:

We have use Friedman's test to prioritize and define the importance of each element to prevent fraud. This test is used when we have statistical data in ordinal type or when we classify them based on ordinal conception. This test shows that if there is most same importance.H0: 23

independent elements to prevent fraud have the same importance from the view points of their effectiveness.H1: 23 independent elements to prevent fraud have not the same importance from the view points of their effectiveness

Table (2-1)

N	178
Chi-Square	453.408
d.f	22
P-value	0.000

As shown in table 2-1, p-value = 0 , then H0 is reject in the level of 5% but H1 is accept. In table 2-2, the arrangement order moves from more important to less one.



**Table (2-2) independent variables prioritization from the view point of their importance base on Friedman's test**

Rank	Independent Variables	Mean Rank
1	Bank reconciliations	16.08
2	Ethics training	15.2
3	Employee counseling programs	14.02
4	Security department	13.44
5	Increased attention of senior management	13.25
6	Operational audits	13.18
7	Inventory observation	13.12
8	Fraud prevention and detection training	13.04
9	Organizational use of forensic accountants	12.99
10	Employment control	12.56
11	Corporate code of conduct/ethics policy	12.52
12	Internal control review	12.35
13	Increased role of audit committee	12.33
14	Make Detection fraud policy	12.32
15	Cash reviews	12.13
16	Fraud auditing	11.93
17	Fraud reporting policy	11.69
18	Make recycle employment policy	10.09
19	Make fraud	9.54
20	Employment contracts	9.09
21	Fraud vulnerability reviews	9.08
22	Surveillance of electronic correspondence	8.27
23	Code of sanctions against suppliers/contractors	7.8

e) *Fifth Hypotheses Test*

We have use Friedman's test to prioritize and define the importance of each element to prevent computer fraud. This

test is used when we have statistical data in ordinal type or when we classify them based on ordinal conception. This test shows that if there is most importance one among elements or not and if they have same importance in the process.

H0: 7 independent elements to prevent computer fraud have the same importance from the view points of their effectiveness.

H1: 7 independent elements to prevent computer fraud have not the same importance from the view points of their effectiveness

**Table (3-1)**

178	N
338.600	Chi-Square
6	d.f
0.000	P-value

As shown in table 3-1, p-value = 0 , then H0 is reject in the level of 5% but H1 is accept. In table 3-2, the arrangement order moves from more important to less one.

**Table (3-2) independent variables prioritization from the view point of their importance base on Friedman's test**

Rank	Independent Variables	Mean Rank
1	Virus protection	5.86
2	Firewalls	4.59
3	Filtering software	4.46
4	Digital analysis	4.15
5	Discovery sampling	3.13
6	Virus protection	3.01
7	Data mining	2.79

## XX. CONCLUSION

To introduce improvements in financial and accountancy methods by processing the procedure of performance stages. Informing process of employees' duties and services to achieve common goals. The reinforcement and organizing authority limitations of audit committee and try to increase them. The reinforcement of relation between members of audit committee and making surveillance between them. Do produce necessary education in order to prevent fraud and describe the duties of official members against fraud. Public awareness of prospective, individual and social rights, processes, standards, ethics frame work of organizations and professional behavior regulation. To support fraud informants and witnesses of company and try to praise. To

introduce more efforts in improving official, management, social and cultural elements in order to prevent main causes

of fraud. In the case of official and management elements some recommendations are suggested as follow: Reviewing and improvement of vales and regulation and so renewal of organization constructions and designs. To compile the regulation of management promotion and appointment based on their efficiency. Employees performance measurement regulation. The reinforcement of internal control and maximization of control in several organizational units or sections. Employees education in order to maintain data and electronic information by mentioned items in table (2-2).

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# Importance Of Leadership In Private Sector Within Indian Economy

Dr. Sangeeta Saxena

**Abstract-**This paper examines the importance of leadership in private sector within Indian economy which helps in the development of the economy. "For a company to achieve the desired result, its culture – what people think and do – must be aligned with the result."

**-Roger Connors, Author of the Oz Principle: Getting Results through Individual and Organizational Accountability.**

Leaders and managers are different. By definition, a manager works within a system to maintain existing goals and direction. They use people and equipment to meet a goal or they use a process to produce results. A leader by contrast, sets the direction for projects. They bring vision to reality by gaining commitment from the people in the organization. Successful organizations need both managers and leaders. Management activities are critical to any business. Most often, management is providing the "what" that needs to be done in the daily operation. Leadership provides the "how" those management activities get accomplished. Companies should have the "what" and "how" aligned for optimum results. Inspire. Leaders create the energy for There are 3 common traits that leaders possess: employees to do their best.

**Inspire.**

Leaders create the energy for employees to do their best. They clear roadblocks and encourage creativity.

**Communicate.**

Leaders keep employees informed about the organization. They build relationships at all levels in the organization.

**Support.**

Great leaders create environments where employees feel safe to speak up.

The business environment is constantly changing, but the leadership component remains steadfast. It's important for managers to work collectively to identify and develop leaders in the organization. The success of this collaboration has a direct impact on a company's future. So for the proper and smooth running of the private sector which tends to be fruitful for the growth of the Indian Economy leadership plays an eminent role.

## I INTRODUCTION

The private sector plays a key and pivot role in the development of the Indian economy. This sector in the past few years had given a significant development in terms of investment and its share in Gross Domestic Product. The central government has decided to abolish MRTP Act and incorporate a Competition Commission of India to bring the public sector and the private sector on the same platform.

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Previously the Indian market was ruled by the govt enterprises but the scene in the Indian market had completely changed as soon as the role of private sector had increased in terms of investments. This gave rise to the Indian private sector companies which prioritized customer's need and satisfaction. This all is possible only with the effective and key role of the leadership which helps the private sector to manage the things and achieved the desired objective. It can be clearer by the following quote given by

**Peter. F. Drucker: "Leadership is the lifting of a man's visions to higher sights, the raising of man's performance to a high standard, the building of a man's personality beyond its normal limitations"**

## II NATURE OF LEADERSHIP

The spirit behind management in action is leadership. All the management activities such as planning, organizing, staffing, decision making are lifeless or inactive shell covers without the effective leadership. The life in the whole management process is poured by the essence of leadership. Leadership has taken on a greater role in the development process with the existence of private sector in an Indian economy. The behavior of the leader directly affects the motivation of workers, because leadership is all about is all about getting results for your followers if the results are positive in nature the people will support you. The leader is a vital medium of communication to people.

As in words of **K. Davis:**

**"Leadership transforms the potential (of machines and people) into reality (of organization)"**

Leadership is the activity of influencing people to strive willingly for mutual objectives. This helps a lot to private sector which recently showing its inclination to serve the society through the activities of serving peoples like giving aid to the peoples suffering from natural calamities, launching women empowerment programme, providing help to street children and so on. The Govt of India is looking after the number of agencies in order to identify the areas that had blocked the entry of the private sectors; these areas are like infrastructural development like legal procedures, regulating policies etc. The overall participation of the private sector is comparatively less than that of the public sector. The investment by the private sector in the recent past years i.e. in the first quarter of 1990 registered approximately 56% which arose to nearly 71% in the next quarter accounting for an increase of 15%, certain steps have been taken by the govt which proves to be an stepping stone for the private sector which helps a lot in the journey to success, which includes industrial dilicensing,

devaluation that was previously implemented. The participation of the private sector in Indian economy is desired by the govt of India for infrastructural development including specific sectors like power, development of highways and so on.

The main reason for slow contribution of the private sector in infrastructural development activities are:

The small and medium scale companies in the private sector of Indian economy mainly suffers from shortage of finance which affects their business to other states or diversify their product range.

The private sector of Indian economy also suffers from the absence of appropriate regulatory structure.

The above mentioned shortcomings had been solved and sorted out up to a great extent by the role of leadership. This quality alone can convert cherished dreams into realities. Managers by carrying their managerial functions such as planning, organizing, staffing and controlling may get some results but the contribution induced by leadership ability of the managers can be increased by the proper utilization of all the available employee resources.

### III NEED AND IMPORTANCE OF LEADERSHIP

It is an important element of management process that impels others to action. Leadership alone can guide feeling, thinking and action of other people towards a set of objective, because good leadership is essential for effective management. The wheels of an organization must be propelled by leadership. Leader is the fulcrum on which needs of the organization are properly balanced, it is the quality of leadership that usually determines the fame of an organization. The significance of leadership can be understood as follows:

#### a) *Morale Building*

Good leadership helps in raising morale of the employee in the private sector. The leader lifts a man's vision to higher sights, raises his performance and builds up his personality. He shapes the thinking and the attitude of the person according to the situation and maintains a coordination and cooperation among his followers which helps to be fruitful in the working of the private sector for the development of the Indian economy.

#### b) *Creating Confidence*

A true leader sustains confidence among his followers. It serves as an aid to formal authority through which desired results can be achieved easily which helps a lot in the smooth functioning of the private sectors with in Indian economy.

#### c) *Motivation*

Leadership works as a motivating force for the individuals to achieve the desired results. He gives character to the groups and set the tone of the organization which helps in increasing the working efficiency of the working factors for the achievement of the predetermined objectives.

#### d) *Coordination*

A good leader creates a community of individuals by their way of interest and also by harmonizing organizational goals. He resolves internal conflicts and let the employees to work in the given situation in order to prove his skills. In the words of **Mr. Narayana Murthy: "Leadership is all about courage to dream big"** It means the quality of leadership helps in making a person courageous so that he is able to work and face any situation easily. It also helps in increasing the working efficiency and also to welcome the ideas of others.

### IV ACHIEVEMENTS THROUGH LEADERSHIP IN PRIVATE SECTORS

1. Through leadership free market and private enterprise must be given wide scope.
2. The state has encourages and facilitate private sectors in terms of exporting goods and services.
3. It helps to promote efficient production.
4. It helps in extreme and rapid liberalization of imports of locally and regionally produces products.
5. It helps in promoting informatics and telecommunications.
6. Private sector is drawing well targeted programme to reduce unemployment and poverty.
7. As public utilizes are being privatized the state should establish regulatory commissions like a Fair Trading Commission to keep price movements of basic commodities.

### V CONCLUSION

Leadership has a pivot importance in smooth running and functioning of the private sector during the present scenario because with the quality of leadership private sectors can help upto a great extent in the economic growth as well as economic development of the country. The importance of private sector in Indian economy over the last 15 years has been tremendous. The opening up of Indian economy has led to free inflow of foreign direct investment (FDI) along with modern cutting edge technology, which increased the importance of private sector in Indian economy considerably. Previously, the Indian market was ruled by the government enterprises but the scene in Indian market changed as soon as the markets were opened for investments. This saw the rise of the Indian private sector companies, which prioritized customer's need and speedy service. This further fueled competition amongst same industry players and even in government organizations. The importance of private sector in Indian economy has been very commendable in generating employment and thus eliminating poverty. Further, it also affected the following -

- Increased quality of life
- Increased access to essential items
- Increased production opportunities
- Lowered prices of essential items
- Increased value of human capital
- Improved social life of the middle class Indian

- Decreased the percentage of people living below the poverty line in India
- Changed the age old perception of poor agriculture based country to a rising manufacturing based country
- Effected increased research and development activity and spending
- Effected better higher education facilities especially in technical fields Ensured fair competition amongst market players
- Dissolved the concept of monopoly and thus neutralized market manipulation practices

The importance of private sector in Indian economy can be witnessed from the tremendous growth of Indian BPOs, Indian software companies, Indian private banks and financial service companies. The manufacturing industry of India is flooded with private Indian companies and in fact they dominate the said industry. Manufacturing companies covering sectors like automobile, chemicals, textiles, agri-foods, computer hardware, telecommunication equipment, and petrochemical products were the main driver of growth. The Indian BPO sector is more concentrated with rendering services to overseas clients. The KPO sector is engaged in delivering knowledge based high-end services to clients. It is estimated, that out of the total US \$ 15 billion KPO service business around US \$ 12 billion of business would be outsourced to India by the end of 2010. However, private enterprises of all sizes must be encouraged by the state to become more efficient and internationally competitive. At the same time, the economy and the wider society cannot be left to be completely run by private enterprise. Some balance, good judgment and common sense must be exercised by the social partners. The state may have to be involved in joint ventures with local, regional and foreign private firms for minerals extraction, telecommunications and public utilities. In cases of divestment the employees must be offered shares in the enterprise. Some may view a "management contract" with an extra-regional firm as an alternative to divestment. The danger here is that the firm undertaking the management will not be facing any risk, so Management contracts should always be combined with some ownership of shares by the management firm.

- 1) Economic growth and development must protect, and restore the environment.
- 2) Economic development in the context of greater self-reliance must come internally from both above and below and externally from diversified patterns of extra-regional exports of goods and services.
- 3) The social partners should vigorously seek to increase domestic savings by the public sector, the private sector and the household (or personal) sector.
- 4) There must be widespread participation in economic activities and in national decision-making based on the principle of social partnership.
- 5) Trade unions should pay more attention to: the stabilization of employment levels within the enterprises of their membership; employment

generation in other enterprises and sectors; and concentration on securing higher wages and other benefits from the enterprises in which their members are employed.

- 6) A rounded view of social justice calls not only for the satisfaction of economic and social rights of individuals and groups within the country, but also for the proper discharge of obligation to society and to the state. This must be explicitly spelt out in any national or regional charters of social rights, which should be termed charters of social right and obligations.

# The Effect Of Entrepreneurship Education On Students' Entrepreneurial Intentions

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*GJMBR Classification*  
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**Purpose-**The main aim of this paper is to examine the effect of entrepreneurial education on students' entrepreneurial intentions. Also the study sought to determine whether such intention usually give rise to entrepreneurial start-up among students. **Design/methodology/approach-**Primary data comes from 250 students who currently have entrepreneurship as one of their courses in their institution of higher learning within the south west of the country. Respondents filled in a detailed questionnaire on their background and other related items as regards to their entrepreneurship education. A model of regression analysis was considered most appropriate for the data analysis of the study used. The use of regression analysis results from the fact that it will enable the study to test the influence of independent variables on the dependent variable and also to ascertain the rate of change in the dependent variable as determined by increase or decrease in the independent variables. **Findings-**The results of the regression analysis revealed that student's exposure to entrepreneurship education has a positive influence on the students' entrepreneurial intentions. **Research Limitations/implications-**Examining the impact of entrepreneurial education on students' entrepreneurial activities tends to raise or provide some useful insights into some theoretical issues on one hand. And on the other hand, it raises some practical implications for policy makers both in the government and universities. However, this study is limited based on the information available when the research is carried out. Further research could look at the effect of the entrepreneurship education on entrepreneurial activities after graduation. This study hence recommends that the Nigerian government should make entrepreneurship education a compulsory course in Nigerian schools (primary, secondary and tertiary institutions). This will help to influence youth's attitude towards entrepreneurship. **Originality /value-**The study makes empirical and theoretical contribution by focussing on the research area that has received less attention especially in the context of study environment.

**Keywords -** Entrepreneurship Education, Entrepreneurial Intentions and Entrepreneurial Actualization.

## I INTRODUCTION

The aim of this study is to examine the effect of entrepreneurial education on students' entrepreneurial intentions and dreams. This is to confirm or disaffirm the assertion that entrepreneurial education increases the intention to start business among University undergraduates (Maki 1999; Douglas and Dean 2002; Shane, 2004; Dean, 2004; Villanueva et al, 2005). The effects of entrepreneurial education has made entrepreneurship to gain worldwide recognition in countries such as USA, France, Germany, Britain to mention a few. As Gartner and Vesper, (1974); Fayolle (2004) and Bhandari (2006) rightly observed, more educational institutions now offer a wide range of entrepreneurship programmes and training activities. The programme appears to be influencing students in terms of generating entrepreneurial interest and going into the business of their choice. Souitaris, Zerbiniati and Al-lahan (2006) revealed that entrepreneurial programmes raise attitudes and behaviour capable of provoking entrepreneurial intentions among youth who have interest in the economic development of their nation. Similarly, the result of the study conducted by Karl Eller Centre-Berger Entrepreneurship Program, University of Arizona (2000) indicated that (i) entrepreneurship education increased the probability of being instrumental in a new business venture by 25 percent (ii) graduates are three times more likely to be self-employed; (iii) graduates receive annual incomes that are 27 percent higher and own 62 percent more assets and (iv) are more satisfied with their jobs (self-employment). Entrepreneurial start up among students does not only enhance their economic life style but help to stimulate economic development. This makes universities socially impactful and popular in the industry. It leads to a strong emergence and diffusion of the entrepreneurial spirit within the university campuses (Fayolle, 2004). Despite the importance of entrepreneurship to economic development, the role of students in promoting entrepreneurship remains largely unstudied. Thus a better understanding of the factors that affect students' and their entrepreneurial intentions could have theoretical and practical implications to policy makers (both the government and university).

This present study focuses on the students' entrepreneurial intentions to undertake entrepreneurship activities on graduation rather than focusing on students' entrepreneurial

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various entrepreneurial activities within the school appears to be the first indication that students believe in the entrepreneurial development programme that is being run by their university. Lack of empirical evidence on entrepreneurial tendencies and intentions in Nigeria largely informed us in undertaking this unique study. Some of the specific questions in our minds during the research include; does entrepreneurial education really influence the students' intentions to start a firm? do students' motivation for entrepreneurship relate to their entrepreneurial education? This paper is structured in such away that section two presents the literature on the factors that could provoke entrepreneurial intentions among university graduates and undergraduates and the theoretical framework. Methodology and data analysis are presented in Section three. Section four presents the survey results of the paper, while section five discusses the results. It is also the concluding section.

## II LITERATURE REVIEW

### 1) *Entrepreneurship*

Entrepreneurship refers to the intentional creation or transformation of an organisation for the purpose of creating or adding value through organization of resources (Bird and Jelinek, 1988). As a dynamics process of vision, change and creation (Kuratko, 2005), it requires to be taught for the transfer of its skills and knowledge from an expert to someone else. It involves an application of energy and passion towards the creation of an enterprise and this includes the; willingness to take calculative risks; team work; the creative skill to marshal needed resources; fundamental skill of building solid business plan; and finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion ((Walstad, and Kourilski, 1999; Arenius and Minniti, 2004; Kuratko and Hodgetts, 2004).

### 2) *Entrepreneurial Characteristics*

Entrepreneurs whether students, non students, graduates, young or old possess peculiar characteristics required for carrying out successful entrepreneurial ventures. These characteristics may differ depending on the researchers' interest. They include; desire for achievement (McClelland, 1961); Locus of control (Rotter, 1966); risk taking propensity (Brockhaus, 1980); proactiveness (Miller, 1983), tolerance for ambiguity (Schere, 1982; Betaman and Grant, 1993) and creativity (Drucker, 1985). Other characteristics as were identified by researchers such as Borland (1974); Timmons, (1978); Low and Macmillan (1988); Bartol and Martin (1998); Envic and Langford (2000) include; competitiveness, drive, and organization, flexibility, impulsiveness, self-interestedness, Leadership, scepticism and endurance (Buttner and Rosen 1992; Luthje Franke, 2003); high tolerance for ambiguity (Bartol and Martin, 1998). These characteristics have become the focus of many researchers in the recent time. Youth often have a special personality. They value the issues of strength, autonomy and independence as important in their desire to

become entrepreneurial (Bhandari, 2006). They perceive change as an opportunity to unleash their potential and are willing to take moderate risks (Brockhaus, 1980). They have social skills and possess a balance between intuition and thinking (Reimer-Hild et al, 2005).

On the other hand, entrepreneurial motivational factors that act as part of youth characteristics include; the need for achievement (McClelland, 1961; Glennon, 1966; Hornaday and Aboud, 1971; Robinson, Stimpson, Huefner & Hunt, 1991 cited in Envic and Langford 2000), desire for independence, ability to control resources (Timmons, 1978; Hisrich, 1990), exposure to entrepreneurial role models, dissatisfaction with limits on their resources and advancement, flexibility; insatiability of wants and an expert mind-set (Walstad, and Kourilski, 1999; Krueger, 2007). Birdthistle (2007) in his study also identified extroversion; compatibility; conscientiousness; emotional stability and the respondents' culture as characteristics that can be associated with entrepreneurial students.

### 3) *Entrepreneurship Education*

Entrepreneurial education is focused on developing youth with the passion and multiple skills. It aims to reduce the risk associated with entrepreneurship thought and guide the enterprise successfully through its initial stage to the maturity stage. According to Brown (2000) entrepreneurial education is designed to communicate and inculcate competencies, skills and values needed to recognize business opportunity, organize and start new business venture. Gorman, Hanlon, and King, (1997) point out that entrepreneurship education is an educational programs that is focused on impacting students with issues on entrepreneurship. Entrepreneurship education has passed through several developmental stages. Postigo and Tamborini (2007) in their study reviewed and analyzed four lines of research that described in details this phenomenon in different countries. These include;(i) the study of the impact that entrepreneurship education at the university level by Price and Monroe, (1993); Charney and Libecap, (2000); (ii) the analysis over the pedagogic instruments and methodologies used to teach entrepreneurship (Plaschka and Welsch, 1990; Laukannen, 2000); (iii) the research related to the state-of-the-art entrepreneurship education (Vesper and Gartner, 1997) and (iv) report on practical experiences at different educational level (Mason, 2000; Solomon, Duffy, and Tarabishy, 2002). Other studies have also listed out what the contents of a good entrepreneurship education programme that are skill-built oriented. These include; leadership, negotiation, creative thinking, exposure to technology, invention and innovation (McMullan and Long, 1987; Vesper and McMullen, 1998); opportunity identification, venture capital, idea generation and protection, tolerance for ability, ability to tackle challenges at different entrepreneurial stages, personality traits, ability to write and communicate business plan, new venture development, ability to diagnosis business performance, networking and mentorship, environmental analysis, computer and simulation skills, case studies, films and videoing, field and company analysis (Zeithamal and Rice



1987; Hills 1988; Hood and Young 1993; Donckels, 1991; Plaschka and Welsch, 1990; Preshing, 1991; Brawer 1997; Truell, Webster and Davidson 1998 cited in Kuratko, 2005).

#### 4) *Entrepreneurship and Enterprise Education*

While entrepreneurship is a concept that involves mental activities such as creativity, innovativeness and proactiveness, enterprise education is designed to prepare students for engaging in a self directed economic future such as seeking opportunities, taking risks and having the tenacity to push an idea through to reality combined into a special perspective that permeates entrepreneurs (Adenipekun, 2004). According to Garavan, Costine, and Hegarty (1995) enterprise education is the process of or series of activities which aims to enable an individual to assimilate and develop knowledge, skills, values and understanding that are not simply related to a narrow field of activity, but which allow a broad range of problems to be defined, analysed and solved. It focuses on developing students with the passion and skills needed to create an inherently risky entrepreneurial enterprise and guide the enterprise successfully through its initial stage to the maturity stage. It communicates and inculcates the skills needed to recognize business opportunity, organizing and process starting new business venture (Brown, 2000). Its aim is to help young people develop skills and attributes that allow them to be innovative and to identify, initiate and successfully manage personal and work opportunities, including working for themselves (Walstad, and Kourilski, 1999; Bhandari, 2006; Adenipekun, 2004; Uwameiye and Uwameiye, 2006).

Relating education to entrepreneurship, studies by different scholars revealed that there are different perspectives and approaches that can be adopted (Clark et al., 1984; Lafuente and Salas, 1989; Robinson and Sexton, 1994; Upton et al., 1995; Kolvereid and Moen, 1997; Delmar and Davidsson, 2000; Charney and Libecap, 2000; Cowling and Taylor, 2001; Levie et al., 2001; Lüthje and Franke, 2002 cited in Thandi and Sharma 2003). The adoption these approaches depends on the institutional decision and programme design. Aside formal class room setting, researchers are of the view that entrepreneurship can also be communicated through conferences, seminars, journal publications, workshop programmes and using the platform of research centers (Adenipekun, 2004; Uwameiye and Uwameiye, 2006; Miettinen, 2006). Enhancement in the quality of entrepreneurial education in our institutions increases the level of youth's attitude towards entrepreneurship development. As was predicted by Vesper (1974) entrepreneurship education is one of the areas that have developed relevant knowledge in our time. Evaluating the effect of education on entrepreneurship, Miettinen (2006) opined that a great deal of emphasis is placed on interaction between education and industry, expert exchanges and the transfer of knowledge from educational establishment to business. Education either about or for entrepreneurship (Laukannen, 2000; Luthje and Franke (2003) helps in new business creation, development of entrepreneurial process and issues that have to do with theories and management of entrepreneurial ventures.

#### 5) *Entrepreneurial Intentions*

Generally, intention is the cognitive state immediately prior to executing a behaviour (Krueger, 2005). Thus, an entrepreneurial intention is concerned with the inclination of a person to start an entrepreneurial activity in the future (Davidson, 1995). It is a key determinant of the action of new venture creation moderated by exogenous variables such as family background, position in one's family, parent(s) occupation, education and training (Bird and Jelinek, 1988). Krueger (2005) identified perceived desirability and feasibility as two other critical antecedents of entrepreneurial intentions. Bird (1988) observes that intentionality is a state of mind that directs a person's attention (experience and action) towards a specific object (goal) or a path in order to achieve something (means). It emphasizes the reasons or motivational factors identified by founders which underline their action in starting up a firm. Examining the relationship between entrepreneurial intentions on entrepreneurial action, researchers such as Shapero and Sokol (1982); Carsrud and Johnson (1988) looked at two broad categories of factors; individuals and environment. An individual with entrepreneurial characteristics, abilities, and perception must find himself or herself in an environment conducive for entrepreneurial venturing. Researchers have identified education and training as one of these factors (Adenipekun, 2004; Uwameiye and Uwameiye, 2006; Miettinen, 2006). And this has become more prominent among young people and graduating students. It constitutes a key source of nascent entrepreneurs who would end up as either intrapreneurs or as owners of their own business or their family businesses (Thandi and Sharma, 2003; Kruegar, Reilly and Carsrud, 2000). The studies of the Global Entrepreneurship Monitor (GEM) UK Report (2005) and Wilkinson (2005), confirmed that youth between the ages of 18-25 have the tendency of starting up their own businesses immediately after graduation or within 5 years after graduation. Apart from education, individuals who want to be entrepreneurs can also distinguish themselves from others by intentionally sourcing their own resources required for the success of the enterprise (Bird and Jelinek, 1988). Intentionality therefore acts as a force that propels entrepreneurial actions and behaviour. It gives direction to someone attention and determines experience one gets in life (Krueger, 2005). Determining how intentions forms someone behaviour, Assagioli, (1973); Miller, Galnter and Pribram, (1960) studies on behavioural intentions threw more light on this.

#### 6) *Influence of Entrepreneurial Education on Intentions*

This study also tried to look at the relationship between entrepreneurial education and intentions. Does entrepreneurial education influence the students' intentions to start a firm? Intention according to Ajzen (1991) is generally recognized as the single predictor for an individual to engage in a specific behaviour. Kruegar, Reilly and Carsrud (2000) in their study showed how intention can be a single predictor for entrepreneurial behaviour. Several other researchers such as Krueger (1993); Reynold (1995);

Thomas 1999; Simon et al (1999); Drnovsek and Glas (2001) cited in Thandi and Sharma (2003) also have explored the relationship between entrepreneurial education and students' entrepreneurial intentions. Their studies revealed that most of the entrepreneurial activities start from attitudinal behaviour exhibited by the entrepreneurs which is a factor for the predictions of entrepreneurial intentions (Autio et al; 1997; Kruegar, 2005). Understanding the relationship between entrepreneurial education and intentions is very significant so as to justify the introduction of entrepreneurial education in our universities. Certain factors according to existing literature may be related to intentions and behaviour. On this note Bird and Jelinek (1988) are of the view that an entrepreneur's attitude and behaviour have a way of influencing the realization of his intentions. To expatiate this further, behaviour theorists are of the opinion that past behaviour and experience have a positive relationship with someone's future intents (Kuratko, 2005; Birdthistle 2007; Levenburg and Schwarz, 2008). The study of Miettinen, (2006) on ISCE threw more light on how students' entrepreneurial intentions can easily be identified. Using the 2006 ISCE he compared the entrepreneurial activities and intentions of students in an international context. A standardized questionnaire that consists of several parts was developed on the basis of already existing studies to explore students' professional orientation, expectations or 'determinants of creation' and their personality traits. The study revealed that a vast majority of the students responded that they have the intention of starting up a business after graduation. To ascertain empirically, the relationship between entrepreneurship intention and entrepreneurial activity led us to the issue of entrepreneurship and motivation.

#### 7) *The Place of Motivation*

Do students' motivations for entrepreneurship relate to their entrepreneurial education? Several motivational factors exist among graduating students that could differently influence their intentions to start up a firm. University emphasis on academic knowledge and performance that is entrepreneurial based as one of the university requirements for students' graduation can encourage and provoke entrepreneurial action among students. Villanueva, et al (2005) presented detailed evidence on arguable factors relating to the likelihood of each outcome and their implication to university entrepreneurial activities. However, entrepreneurial ventures might emerge from a particular entrepreneurial education class even where many students never had any intentions to start up business. The reason behind this is because in most cases, students are pressurized by their university instructors or programme policy or grant availability (which emphasizes on students' registration of their own business) to start up a business while still in school as an indication of their entrepreneurial intentions. This has created a challenge of not having a clear cut distinction between entrepreneurial education and students actual intentions to start up business. Thandi and Sharma (2003) developed a conceptual framework to demonstrate the relationship between antecedent factors

(entrepreneurial drivers), intervening variables or entrepreneurial education (entrepreneurial facilitators) and entrepreneurial intentions (entrepreneurial actions or outcomes) among students. According to them, entrepreneurship education acts as intervening variable to someone's intention to start up entrepreneurial venture.

### III THEORETICAL BACKGROUND

#### 1) *Planned Behaviour Theory*

This study draws heavily on the theory of planned behaviour. The theory of planned behaviour was postulated by Azjen (1991) and adopted by Krueger and Carsrud (1993). According to planned behaviour theory, entrepreneurial behaviour (EB) is a function of entrepreneurial intentions (EI). Krueger and Carsrud (1993) illustrated this relationship as follow: Attitudes = Motivation (Behavioural control) = Intentions = Behaviour. Entrepreneurial intentions are aimed at either creating a new venture or creating new values in existing ventures (Vesalainen and Pihkala, 1999). This theory according to Thandi and Sharma (2003) suggests that a person's attitude towards becoming an entrepreneur, subjective norms (perception of others), and behavioural control are antecedents of intention. Meaning that attitude, subjective norms and perceived behaviour control act (motivation). Thus, the more favourable the attitudes and subjective norms is and the greater the perceived behavioural control is, the stronger the intention to perform the behaviour. The theory of planned behaviour has been used successfully to predict intentions in various applications (Kruegar and Carsrud, 1993).

#### 2) *Methodology and Data Analysis*

The graduating students from the three colleges of the selected University were surveyed using a questionnaire that was developed for this study. The main objective of this research is to find out the effect of entrepreneurship education on the graduating students' entrepreneurial intentions. In applying the general framework of the theory of planned behaviour, this paper focused on providing answers to the following research questions: what are the entrepreneurial characteristics of the students? does entrepreneurship education influence the students' intentions to start a firm? do students' motivations for entrepreneurship relate to their entrepreneurial education?

#### 3) *Measurement of Variables*

The students used as the respondents of this study were asked to provide their demographic and other data which include; their age, gender, position in their family, the occupation of their parents, their faculty and programme. Our curiosity to measure the respondents' entrepreneurial intentions led us to delve into literature such as Rotter, (1966); (Brockhaus, 1980); Miller, (1983), Schere (1982); Betaman and Grant (1993); Drucker, (1985); Borland (1974); Timmons (1978); Bartol and Martin (1998) to find out the basic personal characteristics that relate to entrepreneurship. A three sectional questionnaire with

twenty eight items was used. Section A requested for the respondents' evaluation of demographic data, section B and C required the respondents' to give evaluation of their entrepreneurial characteristics, exposure to entrepreneurial education and entrepreneurial intentions. The respondents were made to indicate the degree of their agreement with the statements on the questionnaire about themselves. They were required to select from a five-point scale which include a category of strongly agree, agree, undecided, disagree and strongly disagree. A likert scale was chosen because of its widely usage in social and behavioural science. Apart from likert scale, structured questions, which enabled the students to select either yes or no options on their prior attempt to run an entrepreneurial venture before their exposure to entrepreneurial education were also used. The students were also asked questions to find out their opinion on their readiness to start up entrepreneurial activities in five years time. Thirteen items relating to aspects which include exposure seminar/training, skill for running business, ability to identify business opportunity, ability to work with less supervision, desire to own a business and prior business experience were seen as important indicators for entrepreneurial intentions. These were derived from the works of Nelson (1977); Buttner and Rosen (1992); Boyd and Vozikis (1994); Fayolle (2004); Bhandari (2006); Vesper and McMullen, (1998); Thandi and Sharma 2003; Birdthistle (2007); Levenburg and Schwarz (2008). Check for the validity and reliability measures was carried out using the works of Levine (1981); Kerlinger (1983); Kotz, Johnson and Read (1983) and Zikmund (1994).

To be able to test our null hypothesis, which states a negative relationship exists between the dependent and independent variables, we employed regression analysis model. The response for this survey item was also in five point Likert scale ranging from strongly agree = 5 to strongly disagree = 1. The dependent variable for the regression model was on the students' intentions to venture into business in the next five years while our independent variable was on the student's possession of the required knowledge and skills for running a business. The respondents were allowed to tick the options in line with their choice of answer.

#### 4) *The Sample*

The sample for this research majored mainly on the entrepreneurial students of a particular University in the South-West Nigeria, where entrepreneurial programmes were designed to be taught to students for a minimum of eight (8) semesters. The name of the institution is withheld for security reasons. The data was obtained from the questionnaire distributed to the students of the same University. The students' class representatives were used in administering the questionnaire. The questionnaires were randomly distributed at the end of a general class. A total number of 250 questionnaires were distributed and 237 or 94.8% was retrieved back.

#### 5) *Data Collection and Variables*

The questionnaires for the study were distributed to the students at their point of graduation. The variables used for this study are (i) variables relating to entrepreneurial characteristics. (ii) some motivational variables were identified that could influence students' intention for entrepreneurship. These variables though not totally exhausted have been identified to include risk taking, desire for independence, creativity, parental occupation, passion for business and others.

#### 6) *Survey Results*

The analysis of the sample includes the demographic characteristics of the students and other aspects related to the research questions. All these were explored and showed below.

#### 7) *Demographic Characteristics of the Respondents*

Table 1 (see appendix) shows that out of the 237 of sample size of the respondents, 88 or 37% are male while 150 or 63% of the respondents are female. In terms of their family position, 87 of them belong to the first position, 52 of them belong to the 2<sup>nd</sup> position in their family, 36 of them belong to the third position, 30 of them belong to the fourth position while 28 of them are in the 5<sup>th</sup> position and above. Looking at the age of the respondents, 36 of them belong to the age range of 16 – 19 years, 172 of them are in the age range of 20 -23 years, 27 of them are in the age range of 24 – 27 years, while only 2 of them belong to the age range of 28 years and above. In terms of the respondents' enrolment status, Table 1 also revealed that they were drawn from the three colleges of the University (College of Business and Social Sciences, Human Development and Science and Technology). 172 or 72.3% of them are from the College of Business and Social Sciences, 28 or 12% of them were from the College of Human Development while of 37 or 16 of them were from College of Science and Technology.

Also looking at the occupation of the parents of the respondents, Table 1 revealed that 130 or 55% of the respondents had parents who either owned their business or were self employed, 85 or 36% of the respondents had parents who were not self employed, while 17 or 7% of the respondents refused to disclose if their parents are self-employed or not.

#### 8) *Entrepreneurial Characteristics of the Respondents*

To identify the entrepreneurial characteristics possessed by the respondents, ten variables which are considered by the researchers as important characteristics of entrepreneurs were used for the selection. The respondents were asked to indicate from the questionnaire those antecedents' variables that they are most likely to be identified with and these are shown in Table 2 (see appendix) in their descending order of their strength. Their response was done at more than one selection. Table 2 revealed that 92.9% of the respondents considered creativity and innovation as the most important characteristics of an entrepreneur possess by them, 91.6% of them saw emotional stability and confidence as the next

characteristics of an entrepreneur possess by them, 91.6% of them saw emotional stability and confidence as the next important antecedent variables for an entrepreneur, 89.9% of them also agreed that they have the ability to seize opportunity in their immediate environment, 85.7% and 84.4% felt that their desire for independence and achievement respectively is high and important attributes for an entrepreneurial actions, 77.3% of them possess the attributes of risk taking and competitiveness, 70.8% and 63.9% of them have the ability for the pursuit of moderate difficult goal and tolerance for ambiguity respectively.

#### 9) Entrepreneurial Education

To test the intervening variables of entrepreneurship among the

run their businesses, nearly all the respondents agreed that they have undergone one training programme or the other on how to start respondents, the mean agreement was measured using a five point Likert scale which ranges from 5= strongly agree to 1 = strongly disagree. The result in Table 3 (see appendix) shows that the students' exposure to entrepreneurial education acted as a motivating factor on their decision to choose entrepreneurship as a career alternative. Majority of the respondents agreed that entrepreneurship should be taught to all students both in secondary and an institution of higher learning for at least a period of one academic year.

An analysis was also taken of the mean agreement of number of students that have undergone training and seminars on how to and run business. The results in Table 4 (see appendix) also revealed that the respondents were in

agreement that teachers are to be exposed to entrepreneurial education.

#### 10) Entrepreneurial Intention

To ascertain the students' response towards entrepreneurial intentions in the near future, they were asked to indicate their intentions to venture into business in the next five years. Table 5 (see appendix) revealed that 182 or 87.8% of the respondents agreed that they see themselves venturing into business in the next 5 years. This appears to suggest that the students seemed to be prepared for new business initiatives. The following constructs were used to measure the students who are ready to venture into business after their graduation.

### IV DATA ANALYSIS

#### A. Regression Analysis

H0 1 : A negative relationship exists between students' entrepreneurship education and their entrepreneurial intentions.

The result of the regression analysis model in Table 6 shows that the independent variable (acquisition of knowledge and skills required for running a business) is significantly correlated towards the dependent variable (entrepreneurial intentions). The analysis result shows that knowledge and skill acquisition indicated the existence of significant influence towards entrepreneurial intentions at  $p < .05$ . The analysis result also shows that knowledge and skills is/are major influencing factor(s) in the students' entrepreneurial intentions as proved by t and beta score ( $t = 16.435$ ,  $\beta = .222$ ).

Table 6. Regression Results on the Relationship between Students' Entrepreneurship Education and Entrepreneurial Intentions

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.	95% Confidence Interval for B	
Model		B	Std. Error	Beta			Lower Bound	Upper Bound
	(Constant)	3.741	.228		16.435	.000	3.292	4.189
	have the skill required for running business	.148	.055	.173	2.669	.008	.039	.257

a Dependent Variable: can see myself venturing into business in the next 5 year



H0 2: A negative relationship exists between student's reception to changes in their environment and their entrepreneurial intentions.

The result analysis in Table 7 also shows that student's reactions to change in their students' environment are significantly correlated based on .01 and .05 significant levels. It is interestingly to note that the students' reception to the changes in their environment has the t and beta score of .238 and 12.986, indicating the existence of a strong positive relationship with the dependent variable

(entrepreneurial intentions) at .000. This is less than our level of significant set at confidence interval of 95%. Since the results from our analysis in testing the two hypothesis proved to be significantly influence towards entrepreneurial intentions, we therefore accept our alternate hypothesis and reject our null hypothesis which state that students' entrepreneurial education and reception to changes in their environment have negative relationship with their entrepreneurial intentions.

Table 7. Regression Results on the Relationship between Student' Reception to Changes in their Environment and Entrepreneurial Intentions

.Coefficients

Mode		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
<b>1</b>	(Constant)	3.387	.261		12.965	.000	3.292	<b>4.189</b>
	<b>highly receptive to change from my immediate environment</b>	<b>.225</b>	<b>.061</b>	<b>.238</b>	<b>3.718</b>	<b>.000</b>	<b>.039</b>	<b>.257</b>

a Dependent Variable: can see myself venturing into business in the next 5 year.

#### B. Discussion of Regression Results

Evaluating closely the results of the study especially the student's entrepreneurial intentions in To provide answers to our research questions, different literature provided us with the opportunity to draw up a list of entrepreneurial characteristics. The works of McClelland (1961); Rotter (1966); Brockhaus, (1980); Betaman and Grant (1993) and others were very helpful on this regard. Their frequent appearances on this paper are an indication of their usefulness for this study. Among all the entrepreneurial characteristics, desire for achievement, Locus of control, risk taking propensity, proactiveness, and tolerance for ambiguity, innovation and creativity are believed to be more peculiar to entrepreneurs. Students' intentions to start up entrepreneurial actions were conceived to have qualified them as entrepreneurs. Table 7, the findings indicate the potential of respondents to establish a business in the next five years. This can easily be understood from the entrepreneurial antecedents and intervening variables

(personality traits and education) identified with the respondents. However, drawing the conclusion that all the students that agreed that they will venture into business in the next five years, will start their own businesses might lead to misconception. The study needs further research to find out the authenticity of the claims in this paper. Our results showed strong support for variables such as desire for achievement, risk taking, internal locus of control, desire independence, creativity and innovation, as determinants of entrepreneurial intentions as well as some demographic variables such as age, gender, position in the family and parents occupation. Also it was the researchers' assumption that knowledge and orientation can influence attitude, which in turn affects intention and behaviour. As a result, we postulated that the respondents' exposure to entrepreneurial education and their reception to the changes in their environment have negative relationship with their entrepreneurial intentions. To test these hypotheses, our dependent variable (entrepreneurial intentions) was regressed against independent variables (knowledge and



skills for running business and reception to changes in the environment). The result of the regression analysis showed strong significant values of .008 and .000 for hypotheses one and two respectively.

### C. Conclusion and Policy Implications

This study set out to examine the effect of entrepreneurship education on the students' entrepreneurial intentions. The study makes it clear that entrepreneurial characteristics of youth are diverse and their exposure to entrepreneurship education for a period of four years is capable of provoking the intention of becoming entrepreneurs. This is also an indication that they have been equipped with the necessary knowledge and skills required for a new venture start up. It is also deductive that entrepreneurship education is a useful programme that will enable the respondents either to help their future employers or manage their own business successfully. The essence of introducing entrepreneurial educational programs to schools is to equip students with the necessary skills and mindsets required for successful entrepreneurship from their early years and also to instil in students across all levels of education, the self confidence and assurance required for launching business. Clearly, institution and social contexts play important roles in determining the entrepreneurial inclination and action among students. Education conveys the required knowledge and skills which is capable of turning students' entrepreneurial intentions to entrepreneurial activities. In implementing intention, students' attitude towards other people's resources and talents is important. Although participating in entrepreneurial education may not necessarily lead to entrepreneurial intentions, it has a way of motivating students in initiating entrepreneurial venture. Also, there is tendency that not all the students who had the intention to start entrepreneurial venture will end up as entrepreneurs. While these is beyond the scope of this research, understanding of the factors out side the institution that can enhance students' entrepreneurial action is important for formulation of sound strategies and initiatives in the study environment. The study therefore recommends that for entrepreneurship education to be actualized it is important that institutions should device a strategy to assist the students that indicated their intention to start enterprise while in school and after graduation through incubator programme. This will help to encourage more students to be serious with their intention to be entrepreneurs. Government should make entrepreneurship education a compulsory course in Nigerian schools (primary, secondary and tertiary institutions). This will help to influence youth's attitude towards entrepreneurship. Since fund is an important factor in implementing one's intention, students should learn to cultivate saving culture while they are still in school. This is necessary so as to be involved in raising the required capital for starting their business.

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- I

Table 1 Respondents' Demographic Characteristics.

<u>Variable</u>	<u>Items</u>	<u>Frequency</u>	<u>Percentage</u>
<b>Gender</b>	Male	88	<b>37.0</b>
	Female	150	<b>63.0</b>
<b>Age of the Respondents</b>	16-19	36	<b>15.0</b>
	20-23	172	<b>73.0</b>
	24-27	27	<b>11.0</b>
	28-above	2	<b>1.0</b>
<b>Faculty of the Students</b>	CBS	172	<b>72.0</b>
	CHD	28	<b>12.0</b>
	CST	37	<b>16.0</b>
<b>Position in the family</b>	1 <sup>st</sup>	87	<b>37.0</b>
	2 <sup>nd</sup>	52	<b>22.0</b>
	3 <sup>rd</sup>	36	<b>16.0</b>
	4 <sup>th</sup>	30	<b>13.0</b>
	5 <sup>th</sup> and Above	28	<b>12.0</b>
<b>Parents employment Status</b>	<b>Self employed</b>	<b>130</b>	<b>56.0</b>
	<b>Employed</b>	<b>85</b>	<b>36.0</b>
	<b>Undecided</b>	<b>17</b>	<b>7.0</b>
	<b>Mission</b>	<b>1</b>	<b>1.0</b>

*Table 2 Respondents' Entrepreneurial Characteristics*

Characteristics	Freq. Dist in. (%)	Mean	Stand. Dev.
<b>Creativity and innovation</b>	92.9	4.579	<b>3.350</b>
<b>Emotional stability and confidence</b>	91.6	4.313	<b>.728</b>
<b>Ability to seize quality opportunity</b>	89.9	4.296	<b>.656</b>
<b>Desire for independence and freedom</b>	85.7	4.339	<b>2.156</b>
<b>Desire for achievement</b>	84.4	4.281	<b>1.018</b>
<b>Risk taking</b>	77.3	3.915	<b>.935</b>
<b>Competitiveness</b>	77.3	4.004	<b>.956</b>
<b>Pursuit of moderate difficult goals</b>	70.8	4.025	<b>1.027</b>
<b>Tolerance for ambiguity</b>	<b>63.9</b>	<b>3.761</b>	<b>.945</b>

*Table 3 Students' Entrepreneurial Intervening Variables*

Years for teaching entrepreneurial education	Percentage %
<b>Minimum of one</b>	<b>29.8</b>
<b>Minimum of two years</b>	<b>20.6</b>
<b>Minimum of three year</b>	<b>15.1</b>
<b>Four years and above</b>	<b>32.4</b>
<b>Total</b>	<b>97.9</b>

*Table 4 Respondents' Exposure to Entrepreneurial Education*

Exposure to Entrepreneurial Education	Mean	Percentage %
<b>I have undergone training/ Seminar on business</b>	2.974	<b>48.3</b>
<b>Highly receptive to change in educational environment</b>	<b>4.231</b>	<b>83.6</b>

*Table 5 Students' Entrepreneurial Intention*

Intention	Mean	Percentage %
<b>I see myself venturing into business in the next 5 years</b>	4.337	<b>87.8</b>
<b>I have the knowledge and skills required to start a new business initiative</b>	3.995	<b>78.4</b>
<b>I would like to have a business enterprise after my name</b>	<b>4.375</b>	<b>87.0</b>



# Significance Of Strategic Marketing To Enterprise Performance: An Empirical Analysis Of Nigerian Oil And Gas Industry

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## I. INTRODUCTION

**Abstract-**The purpose of this thesis is to investigate the significance of strategic marketing to Enterprise performance of the Nigerian oil and gas industry. The specific objective of the study include showing how the strategy of marketing mix (product, price, place and promotion) influence or affect the diversification and concentration of Nigerian oil and gas marketing companies' performance. This study adopted a survey research methodology to examine the significance of strategic marketing to Enterprise performance of Nigerian oil and gas marketing companies in an attempt to attain their desired level of performance. Three hundred and forty one (341) respondents were chosen from the target population of two thousand three hundred (2300) through stratified random sampling. Out of the 341 copies of the questionnaire given out, two hundred and eighty six (286) copies representing 83.87% responses were received for analysis. one hypothesis was formulated from the statement research problem. Analysis of Variance, Pearson Moment Correlation Analysis, Factor Analysis among other statistical tools were used in testing the hypotheses. The overall results suggest that strategic marketing is a driver of organizational positioning in a dynamic environment, and that it helps to enhance the development of new product/service for existing markets. These findings, along with other interesting findings of the study, are discussed. From the empirical and anecdotal managerial evidence as well as from the literature implications are drawn for the efficient and effective strategic marketing practices in the Nigerian oil and gas industry. Based on the findings of the study, the concepts and principles of total quality management within a holistic framework it is recommended that (i) efforts should be made by organizational marketers towards understanding the relevant economic factors that affect both clients' behaviour and the strategic options that may be adopted to cope with such behaviours; oil and gas marketing academics should endeavour to study holistically the relevant business functions and activities which may enhance or hinder the understanding and application of relevant modern management concepts and principles to oil service marketing; in a constantly changing business environment, firms can adopt different strategic marketing practices since the yardstick is the enhancement of business performance.

**Keywords-**Strategic Marketing, Strategies, Dynamic environment, Deployment, Resources, Performance

The sensitivity of petroleum resource is clearly reflected in the fact that it has remained or continued to be the goose that lay a golden eggs for the Nigerian economy as well as the supreme foreign exchange earner contributing over 80% of government revenues and helps the development of Nigeria's infrastructures and other industries (Anyia 2002; Chukwu 2002; Gary and Karl 2003). However, due largely to the highly technical nature of exploration and production, the sector depends substantially on imported technologies and facilities for most of its operations. In view of the critical importance of the sector to the nation's economy and its capacity to generate far-reaching multiplier effect, the grooming of highly skilled indigenous manpower to participate keenly in the activities of the sector to redress the foreign dominance becomes imperative (Baker 2006). The rapid development of an indigenous technical workforce has become more compelling than ever before against the background of the expected imminent injection of massive investment in the sector. With a current production capacity of about 30 million barrels per day (bpd), Nigeria plans to increase her production capacity to about 40 million bpd by 2010 (Utomi 2001; Obi 2003; Mathiason 2006). Already, Nigeria is the leading oil and gas producer in Africa, currently ranked the seventh highest in the world (NNPC 2004; The Guardian 2006). In addition to the above, Nigeria which is widely referred to as a gas province, has natural gas reserves that triple crude oil reserves, being estimated in excess of 187.5 trillion standard cubic feet (scf) (Africa Oil and Gas 2004). The foregoing underscores the vast investments and potentials of the Nigerian petroleum sector, and therefore calls for commensurate investments in the development of the Nigerian human capital base. The Federal Government has stated that one of its objectives is to achieve 50 per cent local content in the oil and gas sector by 2010. Adegbulugbe (2002) observes that Nigeria began exporting oil in 1958 with crude oil production of 5000 barrels per day (bpd) rising by 1979 to a peak of 2.3 million bpd. Currently, Nigeria's crude oil production is about 1.5 million barrels per day (bpd) and is expected to rise to 2.5 million bpd. Nigeria is the 13<sup>th</sup> largest oil producer in the world and 6<sup>th</sup> largest oil producer among the Organisation of Petroleum Exporting Countries (OPEC). Determined by crude oil reserves and output, gas reserves and output, refinery capacity and product sales volume, Nigeria ranks first in Africa in oil production. It ranks 5<sup>th</sup> in gas reserves which

makes the country more of a gas rather than an oil country (CBN 2002). Indeed, Nigeria is often described as a gas zone with some oil in it. However, gas resources are largely untapped and Nigeria's gas reserves place it among the top ten countries in the world in that category (Assael 2000 ; Ekpu 2004). Assael (2000) and Ekpu (2004) also observe that other energy resources such as hydro power, wind energy, and coal, which is produced in Enugu and Benue States abound in the country. Nigeria is in fact the only coal-producing West African nation. About 43% of Nigeria's natural gas is associated with oil which according to (Ekpu 2004) is unfortunately largely flared to the detriment of the economy. Consequently, the energy resources base of the country can be classified into two, namely: Fossil fuels, which are all non-renewable or finite in supply and renewable resources, which in principle are infinite. Fossil fuels comprise crude oil, natural gas, coal, bitumen and tar sand, while renewable resources consist of hydropower and solar energy. For the latter group, the rate of exploration is less than the natural rate of replenishment. Energy consumption is in the area of petroleum products, which according to (Dixon et al 2005), accounted for between 70% and 80% of total energy consumed in Nigeria between 1970 and 1980, the major consumers being the transportation, household and industrial sectors.

Like in the marketing of any product, there are players and products in the petroleum marketing industry variously described as Oil Marketing, Petroleum Product Marketing, and Downstream Oil and Gas Marketing. The main products such as Liquefied Petroleum Gas (LPG) commonly called cooking gas, petrol, base oil, kerosene, diesel oil, petrochemicals and fuel oil are partly imported from Europe and America while the bulk is manufactured by the Nigerian National Petroleum Company (NNPC) in its four refineries at Port Harcourt (1 & 2), Warri and Kaduna. Petrol, diesel oil and kerosene are strictly regulated, while base oils, LPG and petrochemicals have guided de-regulation. The main uses of petroleum products are for transportation, lubrication, electricity and manufacturing. Apart from the NNPC, players in the petroleum industry include marketers who are classified as major and independent; transporters and regulators; Environmental Protection Agency, EPA; and Directorate of Petroleum Resources (DPR). Petroleum product substitutes range from natural gas, which is generally clean, abundant and cheap, to solar energy which is however not a viable substitute yet because of its high technology and capital cost. The economic importance of the oil sector stems from its significant contribution to the Nation's foreign exchange earnings. According to the Central Bank of Nigeria (CBN) Annual Report and Statement of Account for the period 1990- 2000, oil export earnings amounted to over US\$13 billion, representing about 95% of total National Income in 2000 (Assael 2000 ). To achieve a set of organizational goals and objectives, companies conceptualize, design, and implement various strategies. These strategies can be corporate, business, or functional. Marketing strategies constitute one of the functional strategies amenable to application by contemporary companies in order to enhance performance.

Marketing has been defined and conceptualized in various ways, depending on the author's background, interest, and education (Osuagwu 1999). For example, marketing can be seen as a matrix of business activities organized to plan, produce, price, promote, distribute, and megamarket goods, service, and ideas for the satisfaction of relevant customers and clients. Achumba and Osuagwu (1994) also posit that marketing is important for the success of any organization, whether service- or product-oriented. Bolaji (2003) argues that the oil and gas service sector constitutes a service industry that has currently been changed by aggressive strategic marketing behaviour. According to (Okoroafo 1993), indigenous Nigerian oil and gas marketing companies were not profoundly entrepreneurial at the beginning for the following reasons: lack of trained manpower, poor infrastructural development, lack of adequate or sufficient capital base on the part of the indigenous oil and gas marketing companies and intense competition from superior foreign companies. Therefore, early indigenous Nigerian oil and gas marketing companies were operated by regional governments entrusted with ownership responsibilities. The relatively good performance of these regional oil and gas marketing companies, in addition to the liberalized regime of governments of the day pertaining to regulations in the oil and gas industry, resulted in the proliferation of oil and gas marketing companies. This proliferation forced the oil and gas marketing companies to design and implement efficient and effective marketing strategies, in addition to other strategies that could rescue the Nigerian economy out of the woods. However, with the few functional and reasonably competitive oil and gas marketing companies in Nigeria, low indigenous/local investment, and little foreign investment in the Nigerian economy, existing oil and gas marketing companies in Nigeria compete fiercely for available businesses. This has, consequently, led to the design of all forms of marketing strategies by Nigerian oil and gas marketing companies in order to survive, grow, and achieve their set goals and objectives. The petroleum industry is considered to be one of the largest and most powerful industries in the global market with its operations covering every corner of the globe and with the world's energy heavily dependent on oil and gas products (Amnesty International 2004). Today, activities in the petroleum industry are composed of various procedures including exploring, extracting, refining, transportation and marketing of the petroleum product. This study is intended to expand the body of knowledge in respect of the application of strategic marketing practices to the oil and gas sector especially in a developing economy like Nigeria that earns over 80% of her foreign exchange from oil and particularly, as the Federal Government is putting in place policies and strategies to improve the oil sector's contributions to the Nigeria economy (Garuba 2006).

#### I. STATEMENT OF RESEARCH PROBLEM

The problem statement, according to (Wiersma 1995), describes the content for the study and it also identifies the general analysis of issues in the research necessitating the

need for the study (Creswell 1994). The research is expected to answer questions and provide reasons responsible for undertaking the particular research (Pajares 2007). The problem of this study is to measure, analyse and establish the impact of organization expenditure on oil and gas industry performance variables which include effect of structure/strategies, the diversification and concentration, environmental performance indices and goal actualization of the organization objectives. Many research efforts in the area of marketing practices in developing economies have dealt with macro issues and emphasized the management of company's structure and strategies, conduct and performance of marketing activities as they relate to performance indices such as market share, growth, efficiency and well being of consumers and clients (Boyd et al 1994; Baker 1995; Bauer 1998; Samli and Kaynak 1994) lament that the key defect with this static and macroanalysis of marketing practices in developing economies is that it minimizes the impact of marketing environment on the achievement of performance measures. Also, although some research efforts have been undertaken to explain marketing practices in developing economies at the organizational level (Westfall and Boyd 1990; Samli 1994; Wadimambiaratchi 1995 ; Cravens et al 1990), many of these research efforts do not provide answers to issues pertaining to the impact of company's structure and strategies on the performance of mineral prospecting industries particularly the oil and gas marketing companies. The deregulation of the Nigerian economy through the Structural Adjustment Programme (SAP) affected the oil and gas sector in Nigeria in many ways (Miles and Snow 1978 ;Umunnaehila 1996). These include the diversification and concentration of marketing activities and the need to apply the marketing mix elements such as price, place, product, and promotion to meet the needs and wants of customers and also survive in intense competition within and outside the Nigerian oil and gas industry. The restructuring policy of SAP, brought deregulations in the sector and encouraged many new oil and gas marketing companies to enter into the oil and gas industry. This resulted in oil and gas companies seeking for clients and designing services that would meet clients' needs and wants. Consequently, the Nigerian oil and gas companies incorporated the usage of various market mix elements to improve their market outreach/ coverage, new product ratio, price positioning, competitive orientation, etc to survive and grow (Umoh 1992; Udell 1998; Osoka 1996 ; Adler 1997 ; Johnne and Davies 2002). The poor condition of some oil and gas marketing companies in Nigeria is a function of some interrelated problems. According to (Sheng 1999 ; Day and Reibstein 1997 ; Kim and Mauborgne 1998 ; Johnne 1999 ; Kandampully and Duddy 1999), the causes of the oil and gas marketing companies failure or poor performance, are due to microeconomic or macroeconomic factors (performance industry environmental factors indice coupled with the management of marketing content and product marketing). Mamman and Oluyemi (1995) ;McDonald (1996) and Creveling (1994) have, however, posited that oil and gas companies poor performance in

Nigeria is a function of industry environmental factor indices and marketing of oil and gas services. Faced with the compelling need to achieve their organizational goal, oil and gas companies in Nigeria must explore new avenues, approaches, strategies or practices to achieve their set goals and objectives. Generally, marketing strategy deals with adapting the marketing mix elements to environmental factors. It evolves as a result of the interplay of the marketing mix elements and the environmental factors, which impact on these elements (Scnars 1991; Li et al 2000 ; Aristobulo 1997; Jain 1993 ; Mavondo 2000). Therefore, the function of marketing strategy deals with determining the nature, strength, direction, and interaction between marketing mix elements and the environmental factors in a particular situation (Jain and Punj 1987; Osuagwu 2001; 2001; 2004). However, achieving efficient and effective product marketing strategy by an organization is difficult, as a result of the ambiguity and instability of environmental factors (Brownie and Spender 1995). The peculiarities of oil and gas marketing services may create or set modalities for goal actualization parameters that are different from those found in the marketing of tangible products. The peculiarities may, also, require unique inter-industry/marketing commitment and approaches. However, marketing concepts, principles and goals are of relevance in the marketing of oil and gas service. Sound and robust marketing commitment on the part of organization and sales-people are important to the survival and growth of the oil and gas industry, considering the subtle, unstable and seemingly hostile business environments in which contemporary business organizations operate (McDonald 1996; Creveling 1994). In order to formulate and implement effective and efficient goal actualization and inter-industry marketing commitment in product distribution, oil and gas companies should have a thorough and continuous understanding of the relevant environment that impacts on their marketing strategies (McDonald 1989; 1992 ; 1996). Today, obtaining and retaining a dominant position in the market has become very difficult due to the vast spread of products and services and the aggressive competition on one side and increasing customers demand on the other side. Also rapid transitions of information age and appearance of new economies set forth customer as a valuable asset and communicating successfully with (internal and external) customers is an essential part of doing business which create competitive advantage in the external environment and enhance interindustry marketing commitment in internal environment, in a manner that all of the resources and technologies of an organization should combine with internal and external customers in order to have a sustainable competitive advantage and organizational commitment. Successful organizations are those that intergrate efficient and effective management in internal and external dimensions through external relationship management and enhancement of interindustry marketing commitment and goal actualization among internal and external customers. Internal marketing paradigm is a mechanism for the managers to analyze the organizational issues which need to be addressed in implementing



marketing strategies. It is therefore, imperative for organizations to establish an important framework of legitimacy for new directions and transformations and accommodate the constant process of change management and knowledge management.

## II. OBJECTIVES OF THE STUDY

The main focus of marketing activities of oil and gas marketing companies is the identification and satisfaction of clients' needs and wants. These objectives can be attained by identifying the likely marketing mix variables and strategies, including relevant environmental impacts on them. There is, therefore, the need to carry out this research given the enormity of the problem facing the oil and gas industry. Specifically the study sought to investigate the following:

1) To show how the marketing mix strategy(product, price, place and promotion) influence and affect the diversification and concentration of Nigerian oil and gas marketing companies performance.

### 1. Research Hypotheses

The following null hypotheses are considered in this study: There is no significant relationship between marketing mix strategy and diversification and concentration of Nigerian oil and gas marketing companies performance.

### 2. Literature Review

A service may therefore be seen as an activity or benefit which can be offered to an organization or individual by another organization or individual and which is essentially intangible. It is a separately identifiable but intangible offer which produces want-satisfaction to the client, and which may or may not be necessarily tied to the sale of a physical product or another service (Osuagwu 1999). Services include a wide range of activities and form some of the growing sectors of the economies of developed and developing countries. Services include professional services (legal, accounting, medical, management consulting, etc), general services (insurance, postal, telephone, transportation, internet ,tourism, etc), maintenance and repair services, and services from marketing researchers and product manufacturers, among others. Oil and gas service is not a tangible thing like food, clothing and car. The main factor that affects a person's demand for oil and gas service is that person's attitude towards risks. The peculiarities of oil and gas services may create marketing programmes that are different from those found in the marketing of tangible products. The peculiarities may, also, require unique marketing approaches and strategies. However, marketing concepts , principles and strategies are of relevance in the marketing of oil and gas services. Sound and robust marketing strategies are important to the survival and growth of any business, including oil and gas business, considering the increasingly subtle, unstable and seemingly hostile business environments in which contemporary business organizations operate (McDonald 2004 and Creveling 2005). Therefore, in order to formulate and

implement efficient and effective marketing strategies, business organizations should have a thorough and continuous understanding of the relevant environment that impacts on their marketing strategies.

According to (Schnars 1991), marketing strategy has been a salient focus of academic inquiry since the 1980s. There are numerous definitions of marketing strategy in the literature and such definitions reflect different perspectives ( Li et al 2000). However, the consensus is that marketing strategy provides the avenue for utilizing the resources of an organization in order to achieve its set goals and objectives. Generally, marketing strategy deals with the adapting of marketing mix-elements to environmental forces. It evolves from the interplay of the marketing mix elements and the environmental factors (Li et al 2000). Therefore, the function of marketing strategy is to determine the nature, strength, direction, and interaction between the marketing mix- elements and the environmental factors in a particular situation (Jain and Punj 1997). According to (McDonald 1992), the aim of the development of an organization's marketing strategy development is to establish, build, defend and maintain its competitive advantage. Managerial judgment is important in coping with environmental ambiguity and uncertainty in strategic marketing (Brownlie and Spender 1995). Marketing strategy development has the following peculiarities:

- 1) It requires managerial experience, intuition and judgment (Little 1990; Mintzberg 1994a; 1994b; 1996; Brownlie and Spender 1995; McIntyre 1992; Alpar 1991).
- 2) It carries a high level of uncertainty and ambiguity (Brownlie and Spender 1995).
- 3) It is business sphere knowledge- intensive (McDonald and Wilson 1990; Duberlaar et al 1991).
- 4) It entails a broad spectrum of strategic information (Mintzberg 1994b ; Berry 1997).
- 5) It is a process which usually involves subtle decision making by organizational managers based on exhaustive examination of relevant environments and a synthesis of essential and useful pieces of information (Mintzberg, 1994a and 1994b);
- 6) It is specifically concerned with devising an approach by which an organization can effectively differentiate itself from other competitors by emphasizing and capitalizing on its unique strengths in order to offer better customer/client value over a long period of time (Jain and Punj 1997). However, it is difficult for an organization to achieve an efficient and effective marketing strategy (Li et al 2000). As a result of the ambiguity and instability of environmental factors, strategic marketing may be a difficult task for organizational strategists. Many factors prevent organizational managers from designing and implementing efficient and effective marketing strategies (McDonald 1992). The fact is that environmental factors generally interact in an astonishing manner and affect the efficiency and effectiveness of managers in strategic marketing issues (McDonald 1989; 1996). Against this background, the present research attempts to assess the marketing strategies of Nigerian oil and gas marketing companies, the impacts of environmental factors on such strategies and the

effectiveness of the marketing strategies. The growth of oil and gas marketing companies and business in Nigeria has been phenomenal, with the attendant competition and other factors. It seems that this growth in the number of product marketing companies in Nigeria has not been matched with an equal growth in the awareness of oil and gas services to clients and other interested publics. In order to be efficient and effective, Nigerian oil and gas marketing companies have to devise good marketing strategies that will enable them to reach out to a wider spectrum of the society for patronage. The interaction of these marketing strategies and the relevant environmental factors determines the performance of product marketing companies in Nigeria. On the other hand, oil products in the Nigerian business environment include PMS, gasoline, kerosene, diesel, lubricant, among others. On the other hand the environmental factors include men, money, materials, management, machines, facilities location, market, technology, legal provisions, economic factors, organizational culture, political factors, structure of the oil and gas industry, oil and gas clients' behaviour, among others. These factors are internal and external.

The marketing strategies of Nigerian oil and gas marketing companies are expected to be adaptable to these environmental factors in order to achieve set performance goals. The oil and gas industry seems to have witnessed some form of corporate performance over the years which can be attributed to their distinct level of market share (Okwor 1992; Falegan 1991 ; Daniel 1998 ; Olawoyin, 1995 ; Ogunrinde 1990).

Marketing strategies and tactics are concerned with taking decisions on a number of variables to influence mutually-satisfying exchange transactions and relationships. Typically, marketers have a number of tools they can use, these include megamarketing (Kotler 1996) and the so-called 4Ps of marketing (McCarthy 1995), among others. Marketing seems easy to describe, but extremely difficult to practice (Kotler and Connor 1997). Organizational managers in many firms have applied the so-called marketing concept, which may be simple or complex. The marketing concept and variants like the total quality management concept for example, are essentially concerned with satisfying clients' needs and wants beneficially. Developing and implementing efficient and effective marketing strategies which incorporate relevant dimensions of the marketing concept involve the organic tasks of selecting a target market(customers/clients) in which to operate and developing an efficient and effective marketing ingredient combination. Marketing thought, with its practice, has been moving speedily into the service industry (Kotler and Connor 1997). Literature, partly, centres on the discussion of whether physical product marketing is similar to, or different from, the marketing of service and concludes that the differences between physical product and service might be a matter of emphasis rather than of nature or kind (Creveling 1995). Marketing is one of the salient and important organic functions which help to service organizations to meet their business challenges and achieve set goals and objectives (Kotler and Connor 1997). The

word "service" is used to describe an organization or industry that "does something" for someone, and does not "make something" for someone (Silvestro & Johnston 1990). "Service" is used of companies or firms that meet the needs and wants of society such organizations are essentially bureaucratic (Johns 1990). "Service" may also be described as intangible its outcome being perceived as an activity rather than as a tangible offering. The question of the distinction between services and tangible products is based on the proportion of service components that a particular offering contains (Johns 1990).

### 3. Definition of Strategic Marketing

The early strategic marketing - performance studies date from the time of rapid expansion of formal strategic marketing in the 1960s (Henry 1999). Although some studies employed diverse methodologies and measures, they shared a common interest in exploring the financial performance consequences of the basic tools, techniques, and activities of formal strategic marketing i.e. systematic intelligence- gathering, market research, SWOT analysis, portfolio analysis, mathematical and computer model of formal planning meetings and written long- range plans. The studies did not generally examine the relationship between performance and the extent of formal planning; variously referred to as "comprehensiveness, rationality, formality, or simply, strategic marketing". However, strategic marketing is a continuous and systematic process where people make decisions about intended future outcomes, how these outcomes are to be achieved and how success is to be measured and evaluated. Strategic marketing will help organizations capitalize on their strengths, overcome their weaknesses, take advantage of opportunities and defend themselves against threats. According to Allison and Kaye (2005), strategic marketing is making choices. It is a process designed to support leaders in being intentional about their goals and methods. Differently expressed, strategic marketing is a marketing management tool and like any tool, it is used for one purpose only namely to help an organization to do its job better. Hence, strategic marketing is a systematic process by which an organization agrees on and builds commitment among key stakeholders to priorities that are essential to it and are responsive to the environment. Bryson (2004) observes that strategic marketing is a disciplined effort to produce fundamental decisions and actions that shape and guide what an organization is, what it does, and why it does it, with a focus on the future. Woodward (2004), argues that strategic marketing is a process by which one can envision the future and develop the necessary procedures and operations to influence and achieve the future. Organizations can develop a planning process based on six simple questions. Realistic answers to these can help to guide the owners and managers of any business or organization toward a successful future.

Why are we in business?

How do we do business?

Where are we now?

Where do we want to be?

How can we get there?



How will we know that we have arrived there

Strategic marketing, according to (Berry 1997), is the process of determining (i) what your organization intends to accomplish and (ii) how you will direct the organization and its resources towards attaining the goals set over the coming months and years. In other words, strategic marketing is a tool for finding the best future for your organization and the best path to reach the desired destination. Higgins and Vincze (1993); Mintzberg (1994); Pearce and Robinson (1994) are of the opinion that strategic marketing can be defined as the process of using systematic criteria and rigorous investigation to formulate, implement, and control strategy, and formally document organizational expectations. Kudler (1996), views strategic marketing as the systematic process of determining the firm's goals and objectives for at least three years into the future and developing the strategies that will guide the acquisition and use of resources to achieve the set objectives. Steiner (1997), sees strategic marketing as the process of determining the mission, major objectives, strategies and policies that govern the acquisition and allocation of resources to achieve organizational aims. Strategic marketing has come to be "inextricably interwoven into the entire fabric of management", it is not seen as separate and distinct from the process of management. Bradford and Duncan (2000), argue that strategic marketing is an organization's process of defining its strategy and making decisions on allocating its resources to pursue this strategy, including its capital and people. The outcome is normally a strategic plan which is used as a guide to define functional and divisional plans, technology, marketing among others. Hunsaker (2001) observes that strategic plans apply to the entire organization. They establish the organization's overall objectives and seek to position the organization in terms of its environment. Strategic marketing is done by top level managers to determine the long- term focus and directions of the entire organization. All short- term and specific plans for lower- level managers are linked and coordinated so that they may contribute to the organization's strategic plan. Paley (2004), sees strategic marketing as representing the managerial process for developing and maintaining a strategic fit between the organization and changing market opportunities. It relies on the development of the following sections:

A strategic direction or mission statement

Objectives and goals

Growth strategies

A business portfolio

Gup and Whitehead (2000), on other part, see strategic marketing as the formulation of a unified, comprehensive and integrated plan aimed at relating the strategic advantages of the firm to the challenges of the environment. It is concerned with appraising the environment in relation to the company, identifying the strategies to obtain sanction for one of the alternatives to be interpreted and communicated in an operationally useful manner. Anderson (2004), states that strategic marketing is the logical and systematic process by which top management reaches a consensus on the major strategic direction of the company.

He enumerate major characteristics of strategic marketing as: a process of deciding in advance what will be done, when and by who, and how it will be done:

the future impact of current decisions,

an integral part of the management process, and

a structure of plans integrating major objectives, strategies, policies and functions of the organization.

He argues further that strategic marketing management horizons vary from two to fifteen years depending on the nature of the industry and individual business characteristics. He then presents eight major steps that are commonly recognized in the strategic marketing process as:

i. Determination of the long-range direction of the business

ii. Defining the company's major areas of business, key market segments and key resources

iii. Evaluation of the company's position relative to that of its competitors in the industry

iv. Assessment of the company's capabilities, strengths and weaknesses.

v. Identification of objectives and goals having regard to available opportunities and existing threats. Determination of the long-range direction of the business Defining the company's major areas of business, key market segments and key resources Evaluation of the company's position relative to that of its competitors in the industry Assessment of the company's capabilities, strengths and weaknesses. Identification of objectives and goals having regard to available opportunities and existing threats.

vi. Formulation of strategies to achieve the desired objectives and goals

vii.

viii. Development of a monitoring system to ensure the implementation of the plan.

Finally, he states that for strategic marketing to succeed, an appropriate climate must exist, top management must be committed and involved, and there must be a disciplined but flexible planning approach. He further observes that line personnel must participate, performance standards for monitoring and evaluation must be established and planning must be integrated with decision making. Paley (2004), advocating the adoption of strategic marketing in solving organization's problems, remarks that the organization which does not plan for its future does not deserve any future. Citing the work of (Ansoff 1988), he contrasts strategic marketing with long- range planning and concludes that both concepts are not synonymous. He argues that long- range planning is based upon the extrapolation of past situations, a questionable premise on the ground that present conditions are not the same as those of the past. Ulrich & Barney (1984), further criticize the traditional extrapolation techniques of long range planning and suggest the use of scenario analysis which encourages broad and creative thinking about the future. The authors cite the work of (Wing 1997), which contest that traditional forecasting techniques are based on the assumption that tomorrow's world will be much like today's. Commenting on „New Age' Strategic marketing Ginsberg (1997) explains that the present complex environment is characterized by side effects, time delays, non-linearity and

multiple feedback processes. He then concludes that traditional strategy tools are no longer adequate in designing superior strategies. He consequently advocates the use of the holistic systems approach as opposed to the esoteric ways of the „old’. Ansoff (1988), reports that newly invented strategic marketing displaced long range planning because of the growing discontinuity of the environment.

He gives the following reasons for this replacement: that the firm’s environment has its own turbulence level and that there are specific systems appropriate for given turbulence levels. He states further that each firm therefore needs to diagnose its own future turbulence level and the appropriate systems chosen to explain that under an environment of slow change, without urgent needs to anticipate, familiar pattern can be extrapolated. That type of environment was reported to have characterized the pre-1950 year of long range or corporate planning after which the 1980s changes became progressively discontinuous from the past and less predictable. The author explains the difference between long range planning and strategic marketing as essentially one of more of perception of the future. With long range planning, the future is expected to be predictable through extrapolation of historical events which also assumes that the future would be better than the past. Strategic marketing on the other hand does not necessarily expect an improved future or extrapolatable past. Hinterhuber (1992), argued that a manager is not necessarily a strategist and that a manager’s vision is also not an entrepreneurial vision. He explains that while the manager would rather have an orientation point of guiding a company in a specific direction, an entrepreneur having strategic competence should state his vision clearly, aggressively and in an optimistic manner. A strategist and not just a manager therefore, should have an entrepreneurial vision, corporate

philosophy, competitive advantages, and should involve line managers in strategic marketing. Line managers are the ones to implement strategies who should therefore be involved early in the strategic marketing process. Realizing however that strategic marketing process does not specify how plans should be translated into action, the issue of strategic marketing implementation led to the evolution of strategic marketing management.

#### 4. Methodology

A cross- sectional survey was selected for this study because it was easy to undertake compared to longitudinal survey and the result from the sample can be inferred to the larger population. In addition, some extraneous factors could have manifested in the observed change other than the independent variable concerned.

The target population in the study was the employees of product pipeline marketing companies in Lagos, Nigeria. A structural questionnaire was used to collect data from the respondents. The questionnaire was developed to capture the information on the level of respondents, knowledge on the main purpose of performance of appraisal system and a assessment of the awareness of performance appraisal by the university. The questionnaire was pre-tested with respondents in other product marketing company, to authenticate reliability. The pre-testing was done to avoid any possible influence on trial respondents before the actual survey.

The analyzed data was presented using descriptive statistics, frequency tables, Analysis of Variance, and Correlation coefficients. Descriptive statistics allow the generalization of the data to give an account of the structure or the characteristics of the population as represented by the sample.

### Data Analysis, Finding and Discussion

Table 1: Descriptive Statistics of Perception placed on Oil and Gas Marketing Strategy Variables(n=286).

Variables	Mean	Standard Error	Standard Deviation	R <sub>2</sub>	Cum. High(%)	Cum.Low(%)
Unstable, rapidly changing environments provide more opportunity	5.50	.22	.71	.50	40.0	<b>60.0</b>
Lowest cost relative to competitors	4.30	.37	1.16	1.34	80.0	<b>20.0</b>
Company reactive than proactive	2.70	.47	1.49	2.23	30.0	<b>70.0</b>
Identifies causes of problems before making strategic decisions	4.0	.39	1.25	1.56	70.0	<b>30.0</b>
Speed of product/service	5.10	.23	.74	.55	70.0	<b>30.0</b>

development is an important priority						
Work hard in maintaining lowest cost possible	5.10	.23	.74	.55	70.0	30.0
Faster in responding to competitors action	5.00	.30	.94	.89	90.0	10.0
Make profit by delivering above average quality product/services	4.50	.50	1.58	2.50	80.0	20.0
Access longterm implications of change in technology	3.50	.60	1.90	3.61	50.0	50.0
Places strong emphasis on research and development	3.60	.50	1.58	2.49	70.0	30.0
Frontload production by building capacity ahead of sales	4.20	.36	1.14	1.29	60.0	40.0
Develop product/services faster than competitors	4.40	.60	1.89	3.60	70.0	30.0
Taking advantage of economies of scale is an important goal	3.60	.40	1.27	1.60	50.0	50.0
Product/services far exceeds competitors	4.10	.41	1.29	1.66	70.0	30.0
Structure makes it difficult for competitors to come easily	3.30	.58	1.83	3.34	60.0	40.0
Structure lets someone else break new new grounds	3.30	.56	1.77	3.12	50.0	50.0
Enforce legal provision in order not to be in conflict with environment	3.90	.59	1.85	3.43	60.0	40.0
Anticipates how competitors might respond to strategic actions	3.70	.37	1.16	1.34	60.0	40.0
Assess longterm forecast of sales	3.50	.62	1.96	3.83	90.0	10.0

<b>Places emphasis on legal or regulatory matters</b>	3.20	.61	1.93	3.73	50.0	<b>50.0</b>
<b>Set guidelines on how key operations are to be carried out</b>	3.60	.63	2.00	4.00	50.0	<b>40.0</b>
<b>Places emphasis on meeting clients satisfaction</b>	2.70	.58	1.84	3.35	50.0	<b>40.0</b>
<b>Government policy has encouraged the industry to make profit</b>	3.30	.65	2.05	4.22	50.0	<b>50.0</b>
<b>Structure enable to build a strong product/brand image</b>	3.40	.60	1.89	3.60	60.0	<b>30.0</b>
<b>Invest in high visible projects with chances of high returns</b>	<b>2.80</b>	<b>.68</b>	<b>2.14</b>	<b>4.61</b>	<b>40.0</b>	<b>60.0</b>

Table 1 shows the descriptive statistics of perception placed on dimensions of oil and gas marketing strategies. Many of the marketing strategy variables showed above average perceptions. However, some of the variables received slow average perception. This means that relatively low perception were placed on dimensions of organisation structure and investment in high visible projects, in addition to low perception placed on meeting clients satisfaction (mega marketing). In contemporary terms, it may be said that the concepts and principles of total quality management (TQM) and megamarketing have not been adequately emphasized in Nigeria's oil and gas industry. Often, Nigerian oil and gas clients complain about the poor quality of services rendered by oil and gas marketing companies, particularly with respect to follow-up and comprehension of

oil and gas policy terms and conditions. According to (Median 1999; McColl-Kennedy and Fetter 1999), identification and satisfaction of oil and gas clients' needs and wants should be the emphasis of oil and gas marketing companies. These objectives are partly achievable through reasonable emphasis on the marketing-mix combinations of products, pricing, promotions, distribution, and megamarketing strategies, among others. The highest marketing strategy emphases were placed on "rapidly changing environment provide more opportunity, and speed in product/service development. In the Nigerian oil and gas industry, aggressive salesmanship activities are undertaken by oil and gas sales agents/representatives in order to win new clients/market. Also, price negotiations may be tailored towards what the prospective client can afford to pay.

Table 2: Reliability Coefficients of Research Measures (Cronbach's Alpha)

S/N	Variable Measure	Cronbach's Alpha Coefficients
1	Management of Marketing strategy	0.76
2	Oil and Gas Performance Measurement	0.73
3	Effect of Environmental factors on marketing strategies	0.65
4	<b>Organizational structure and strategies</b>	<b>0.84</b>

Table 2 above shows Cronbach's alpha coefficients of the major research measures. "Management of marketing strategy contracts" and "Oil and gas performance measurements" met Nunnally's (1978) internal consistency (reliability) standard for newly-developed research measures, while "Effect of environmental factors on marketing strategies" failed to meet Nunnally's (1978) standard for reliability. Specifically, Nunnally (1978) recommended 0.70 Cronbach alpha value (internal consistency) for newly developed research instruments.

Therefore, subject to the specific and usual limitations associated with this type of research, the research instrument appears reliable and valid.

This study has provided empirical evidence pertaining to the perception placed on oil and gas marketing strategies, and oil and gas performance measures and impact of environmental factors on such strategies. The research findings show that product and mega marketing strategies received relatively low perception. These findings have managerial and research implications.

Table 3: Descriptive Statistics of Effectiveness of Strategic Marketing Using Qualitative Measures of Performance (n= 286).

Variables	Mean	Std. Dev.	Variance	Skewness
<b>Company makes profit by selling large quantities of goods/services</b>	5.17	.96	.89	<b>-.127</b>
<b>Experience to cut costs is an important goal</b>	4.67	.99	.99	<b>-.79</b>
<b>Sales executive move faster than competitors in responding to customers needs</b>	4.93	.98	.87	<b>-.99</b>
<b>Develops an exhaustive set of alternatives before making improvement management decision</b>	4.79	.89	.79	<b>-.69</b>
<b>Demands better services provided by customers</b>	4.17	1.23	1.29	<b>-.39</b>
<b>Emphasize opening up new branches</b>	4.69	1.23	1.27	<b>-.32</b>
<b>Ability to gain market share is high</b>	<b>3.57</b>	<b>1.39</b>	<b>1.79</b>	<b>-.34</b>

Table 3 presents the descriptive statistics of the effectiveness of strategic marketing practices of the studied oil and gas industry. The finding shows that strategic marketing practices have been reasonably effective in oil and gas industry, with strategic marketing effectiveness

being very high from the analysis above. The essence of strategic marketing is to achieve set objectives, and these objectives can be measured in terms of profit, market share, marketing cost, gross earnings, capital employed, asset



quality, quality of marketing management, liquidity, turnover of marketing staff, and management of departmental crisis. The effectiveness of strategic marketing practices in the studied oil and gas industry is encouraging. These are the CAMEL measures of performance. According to (Umoh 1992; McDonald 1996), the effectiveness of oil and gas strategies determines the survival and growth of downstream sector in Nigeria, especially in an ever-changing environment. Effective oil and gas management through strategic marketing assists in the employment of capital raised, and manages the oil and gas asset portfolio in viable business options so that the assets are seen to be performing and yielding returns. The marketing strategies of oil and gas, in order to show reasonable levels of

effectiveness along the CAMEL measures, have to emphasize a marketing management team with foresight, experience, and commitment towards the survival and growth of the oil industry, among others. Oluyemi (1996), posit that the most widely accepted measure of performance of oil and gas industry is current profitability, which is measured in terms of return on assets and return on equity. Nigerian oil and gas industry that creates comparatively large amounts of value (in relation to its equity) through its strategic marketing practices can be said to show high level of effectiveness. And as Table 3 shows, the studied oil and gas industry's have shown appreciable levels of effectiveness using the identified measures of performance.

Table 4: Comparison of Environmental Characteristic <sup>a</sup>

Dimension of the Environment	Company A Total Mean	Company Oando Mean	B Company Texaco Mean	C Company Agip Mean	D
<b>Markets</b>					
<b>Product diversity</b>	4.64	4.29***	3.22	3.12	
<b>Geographical diversity</b>	5.40	4.22***	2.34	3.21	
<b>Level of product information</b>	4.89	4.80	4.33	4.02	
<b>Diversity of promotional media</b>	4.92	4.46*	4.06	3.42	
<b>Competition</b>					
<b>Intensity of rivalry</b>	5.69	5.36**	4.34	4.54	
<b>Inability to influence market conditions</b>	4.21	3.60***	3.34	3.18	
<b>Average profitability of the principal market</b>	4.32	4.26	4.21	4.65	
<b>Entry barriers to the principal market</b>	4.69	5.42***	4.32	4.24	
<b>Constraints imposed by inter-industry relationships with major stockholders</b>	2.84	3.09	3.33	3.24	
<b>With major distributors and customers</b>	2.76	3.78***	3.43	3.11	
<b>With major suppliers-subcontractors</b>	2.49	3.71***	3.34	3.54	
<b>With government</b>	4.38	3.27***	3.12	3.43	
<b>With competitors</b>	2.14	2.64***	2.42	2.56	
<b>Ability of labour market</b>					
<b>For managers</b>	3.64	1.79***	3.11	3.23	
<b>For technological experts</b>	3.47	1.99***	2.23	2.65	

Notes: <sup>a</sup>. The higher the mean score, the more typical is the characteristics

\* Significant at 0.5 level by t-test of means

\*\* Significant at 0.1 level by t-test of means

\*\*\* Significant at 0.001 level by t-test of means

From the above table, there is also a significant difference in labour market-ability between the four companies. Total firms face a less mobile labour market than oando, Texaco and Agip firms. Not new, the findings is consistent with the prevalent view that the Total labour market is less mobile because of its many tangible

incentives incorporated into their employment system. The strengths and range of constraints imposed by interrelationships with other organizations are also different in Total and other oil and gas companies under study. Oando and other oil and gas firms face stronger constraints imposed by government and regulatory bodies, while Total firms feel the constraints imposed by their relationships with distributors, customers, suppliers and competitors to a greater degree than Oando, Texaco and Agip firms. This

result suggests that Total companies create closer interorganizational networks with various kinds of organizations. The networks, although constraining decisions within organizations, may have a number of benefits including risk-sharing and long term stabilization of business. The strong constraints imposed by the government upon oil and gas companies probably stem from the relatively adverse historical relationship between business and government in Nigeria as well as from motives to protect the public and promote competition.

To sum up, Total firms face a less diverse, less competitive, more volatile and high opportunity environment, and less mobility of market. They are, moreover, constrained by

interrelationships with other organizations to a greater extent than the other oil and gas marketing firms under study. A firm must set operational objectives, the priorities of which are contingent upon the opportunities provided and constraints imposed by its environment matched against the internal capabilities of the organization

### III. HYPOTHESES TESTING

#### A. Hypothesis 1

Marketing mix strategy, diversification and concentration adopted do not yield better performance of Nigerian oil and gas marketing companies.

*Table 5: Mean and Standard Deviation on the Use of Marketing Mix Strategy , Diversification and Concentration of Nigerian Oil and Gas Marketing Companies Respectively*

Questions	Freq.	Mean	Standard Deviation
Marketing mix elements adopted by Total firm	286	52.64	1.74
Marketing mix elements adopted by Oando firms	286	30.49	1.24
Marketing mix elements adopted by Texaco firm	286	23.34	1.20
Marketing mix elements adopted by Agip firm	286	20.28	1.13
Rate of diversification and concentration of marketing activities	286	45.30	1.52

*Source: Field Survey, 2007.*

Table 5 above shows the difference between means of diversification and concentration of marketing activities and the resultant performance of Nigerian oil and gas marketing companies in terms of the marketing mix elements employed. Total with a mean of 45.30 and standard d

eviation of 1.52 earned higher diversification on marketing activities with respect to the four elements of marketing mix than its counterparts when divided. Total's performance with the mean of 52.64 and standard deviation of 1.74 was also better. The question then is, was the difference significant enough or was it the result of a sampling error? The answer is presented in Table 6

*Table 6: Summary of Analysis of Variance on the Adoption of Marketing Mix Strategy, Diversification and Concentration of Marketing Activities on Oil and Gas Companies Respectively*

Source	Type III Sum of squares	Df	Mean square	F	Sig.
Corrected Model	231.872	9	25.765	25.764	.000
Intercept	2469.746	1	2469.746	2469.626	.000
Company Types	3.724	1	3.724	3.742	.087
4Ps of marketing mix	26.264	4	5.110	5.142	.000
Company Types* 4Ps of marketing mix	9.101	4	1.666	1.676	.026
Error	423.207	283	.884		
Total	6347.000	285			
Corrected Total	588.002	286			

*Source: Field survey, 2007.*

Table 6 above shows that the competitive use of marketing mix elements by oil and gas marketing companies culminated in significant difference in diversification and concentration of marketing activities at  $f(4,285) = 5.142$ , at 0.05 significant level. The fact that these companies are significantly different in operation equally contributed to a significant difference in their diversification and concentration of marketing activities at  $f(1,285) = 3.742$ , at 0.05 significant level. The testing of the second hypothesis which combined the two variables together that the oil and gas marketing companies' use of the elements of marketing mix relative to their diversification and concentration of marketing activities yielded higher returns. The findings indicated that the second hypothesis was rejected and the alternative hypothesis retained, which meant that the use of marketing mix elements yielded higher returns for the oil and gas marketing companies respectively.

#### B. Summary of Empirical Findings

(a) ) The result from the testing of Hypothesis 1 revealed that there is a significant difference in performance at  $f(4,285) = 5.142$ , at 0.05 significant level. Thus, the null hypothesis two was rejected

#### C. Discussion of the Findings

As stated earlier, the discussion of this study followed the hypotheses raised and tested and they are presented below:

#### D. Hypothesis 1

The null hypothesis two which stated that "the marketing mix strategy, diversification and concentration of marketing activities does not yield higher rate of performance" was rejected. This implies that the oil and gas marketing companies use of the elements of the marketing mix and diversification of marketing activities yield higher rate of performance. The earlier studies reported reasons to support this finding; the asymmetries in resource endowments across national boundaries were some of the reasons why oil and gas marketing companies use elements of marketing mix and diversification of marketing activities would yield more returns (McDonald 1992; Zeithmal 2000; Rindfleisch and Moorman 2003; Roehrich 2004 and Best 2005). Firms operating in foreign markets face disadvantages viz- a viz other competitors, such as the latter's greater familiarity with local conditions, political and exchange risks and the travel and communication costs incurred in conducting international business (Day 1994; Johnson et al 2003; Knorr and Mahoney 2005; Lazonick and Prencipe 2005; Cert et al 2006).

### IV. CONCLUSIONS

This section elaborates on the conclusion of the research. Based on the findings of this research, the following conclusions are warranted: The evidence from findings suggested that oil and gas marketing companies have comparative advantages in adopting various marketing strategies using different technologies. Oil and gas marketing companies appeared to specialize in the use of traditional methods of marketing, which is based on "soft"

information culled from close contacts by marketing and sales department rather than the use of the specialized strategic marketing methods that are based on "hard" quantitative information. Most of the findings of the research are consistent with previous normative and empirical works. For instance, the companies face a less diverse, less competitive, more volatile and high opportunity environment, and a less mobility of market. They are however, constrained by interrelationships with other organizations to a greater extent. The research instrument shows high validity and reliability. This study has provided empirical evidence pertaining to the perception of oil and gas marketing strategies, and the industry environmental factors on such strategies..

### V. MANAGERIAL AND RESEARCH IMPLICATIONS

The findings of this study have several managerial implications for Nigerian downstream oil and gas. First, Nigerian oil and gas managers are advised to place more emphasis on the adoption of various marketing strategies using different technologies. Second, all organizations face an external business environment that constantly changes. Changes in the business environment create both opportunities and threats to an organization's strategic development, and the organization cannot risk remaining static. It must monitor its environment continually in order to: build the business, develop strategic capabilities that move the organization forward, improve the ways in which it creates products/services and develops new and existing markets with a view to offering its customers better services. Third, anticipating competitors' actions and reactions to the organizational moves may be the key determinant of success for any marketing strategy. Fourth, with the competitive downstream oil and gas industry of today, participants can put more emphasis on relationship marketing to ensure effectiveness. This essentially entails personalizing the oil and gas services offered to clients, attending to clients' cultural and social activities, in relation to other non-business activities, which are of interest to clients. Fifth, Nigerian oil and gas marketers should be sensitized to the importance of their offerings to their clients, including the impressions their clients have of those offerings. As oil and gas clients are demanding more quality from their petroleum product marketing companies (PPMC), it may be strategic to inject the idea of total quality management (TQM) and its variants among product marketers. Sixth, Nigerian oil and gas industry are well advised to consider the principles and concepts of synergy in their product service marketing. This may entail considering the implications of any marketing strategy decisions on the other organic business functions. Nigerian corporate marketing executives should make their marketing companies learning organizations. In such learning organizations, oil and gas marketing companies staff would always be inquiring into the total or systemic impacts of their business behaviours, instead of just concentrating on the local effects of their business behaviours (Chen 2004). Seventh, efforts should be geared towards having an improved total oil and gas package having core, peripheral,

and augmented product components. It is hoped that this improved oil and gas package will create positive attitudes in oil and gas buyers' behaviour, which will subsequently lead to achievement of set of marketing objectives.

Eighth, Nigerian oil and gas marketers should bear in mind that economic consideration is a salient determination of strategic marketing performance. Therefore, efforts should be made by organizational marketers towards understanding the relevant economic factors that affect both oil and gas clients' behaviour, and the strategic options to be adopted to cope with such behaviours. Finally, oil and gas marketing academics should endeavour to study holistically the relevant business functions and activities which may enhance or hinder the understanding and applicability of relevant modern management concepts and principles to product services marketing. Although this study has provided some knowledge for the understanding of strategic marketing practices of Nigerian oil and gas marketing companies, it has some limitations. Effective downstream oil and gas marketing strategies in Nigeria may hinge on an intelligent understanding of beneficial marketing strategies, the relevant environmental factors that assist or hinder the efficacy of marketing strategies, and how marketing strategies and environmental factor singly or wholly determine product marketing companies' performance. Despite the satisfactory performance of Nigerian oil and gas marketing companies with their marketing strategies, as reported in this research, Nigerian oil and gas marketing managers are advised to undertake extensive marketing research and SWOT analysis. Instability of regimes and policies, and variations in other environmental factors can still pose challenges to product marketing companies' in Nigeria. It should be noted by Nigerian oil and gas marketing companies' managers that participants' reputation and good image, staff politeness and kindness, in addition to the managerial ability of corporate product marketing managers are the salient factors implicated in oil and gas marketing companies' efficiency and effectiveness (Chen 2004).

#### VI. RECOMMENDATIONS, LIMITATIONS AND SUGGESTIONS FOR FURTHER STUDIES

This study indicates that strategic marketing practices have a significant impact on performance variables and that they interact with the different components to facilitate performance. It also indicates that different performance factors moderate strategic marketing practice. Therefore, organizations hoping to enhance corporate performance in a dynamic business environment should consider the following:

#### VII. RECOMMENDATIONS

The concepts and principles of total quality management (TQM) are recommended for holistic study, in addition to contemporary marketing management issues such as relationship marketing, value analysis, business process re-engineering, megamarketing, re-marketing, co-marketing, bench marketing, and permission marketing, among others. Efforts should be made by organizational

marketers to understand the relevant factors that affect both clients' behaviours, and the strategic options to be adopted to cope with such behaviours. Oil and gas marketing scholars or researchers should endeavour to study holistically the relevant business functions and activities which may enhance or hinder the understanding and subsequently applicability of relevant modern management concepts and principles to oil services marketing. Firms that are not operating in a dynamic business environment need not adopt a strategic marketing practice as this may cause the firm to look inconsistent in the eyes of its customers and eventually reduce effective performance. The need for the identification of options and resources and of capabilities of deployment constitutes an impetus to effective strategic marketing implementation, since the practice derives from capabilities in assembling and maintaining an appropriate resource portfolio and coupling the resource portfolio with the identification and recognition of options. In a constantly changing business environment, firms can adopt a strategic marketing practice because it is able to enhance their business performance.

The need for configuration, reconfiguration and deployment of resources to arrest negative changes in the business environment. The need to generate real options by devising and configuring resource-based capabilities.

#### VIII. SUGGESTIONS FOR FURTHER STUDIES

This research leads to some observations that might be of interest to future researchers, as they represent the seeds from which future research can be developed.

This same research can be carried out in other nations so that a broad comparison of the concepts of strategic marketing as it affects firm performance can be made.

Research into the combined effects of strategic marketing practice and performance factors as mediators of firm performance relationship.

Research into the effects of key characteristics of industries environmental indices and marketing strategy could be carried out to further explain the differences in the firm's adoption of strategic marketing.

Finally, future research works are to be undertaken in order to refine the cobwebs found in the present research, and orient it to more specific contexts (business, time, location, etc) in Nigeria's oil and gas industry.

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# A Note On The Validity PPP Hypothesis: Evidence From Middle East Countries

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JEL: K29, K23, F29, F39, F59 }

**Abstract-**As a result of impediments to trade and controls on capital flows it is possible for the official exchange rate to deviate from the PPP. Therefore in this paper, we examined PPP by taking black market into account for Middle East countries and compared with official rates. We find strong evidence for both official and black market exchange rates by using ADF, PP and IPS, LLC and MW tests.

**Keywords-** PPP, Black Market Exchange Rates.

## I INTRODUCTION

Purchasing Power Parity (PPP) has been one of the most enduring concepts in international economics. The theory, which is a generalization of the law of one price, supposes that all goods are identical and transportation costs and trade barriers are very low in both countries. The absolute version of the theory asserts that under these conditions, the same basket of goods and services should cost the same when expressed in terms of the same currency. On the other hand relative PPP is said to hold when the rate of depreciation of one currency relative to another matches the difference in aggregate price inflation between the two countries concerned. If the nominal exchange rate is defined simply as the price of one currency in terms of another, then the real exchange rate is the nominal exchange rate adjusted for relative national price level differences (Sarno and Taylor, 2002). PPP was formalized and developed by Cassel (1918), and has attracted numerous studies attempting to search for evidence of PPP. Despite a vast empirical literature, many questions remain regarding the validity of PPP. The validity of the PPP has been extensively tested, especially for developed countries and focused on official exchange rates. In general, PPP is a valid long-run equilibrium condition at least in industrialized economies (see the survey of Froot and Rogoff, 1995; Sarno and Taylor, 2002; Sarno 2003). On the other hand, empirical evidence on the validity of long-run PPP for developing countries is rather mixed (see, for example, Telatar and Kazdagli, 1998); Bahmani-Oskooee and Mirzai, 2000; Luintel, 2000; Basher and Mohsin, 2004; Kalyoncu, 2009). There are few studies on the exchange rates of Middle East countries. One of them is Narayan and Prasad (2005) who considered PPP for 11 Middle Eastern countries using a number of tests: the one-break test unit root, the two-break unit root test, and the panel Lagrange multiplier (LM) unit

root test with structural breaks. The main finding from univariate tests is that there is evidence for PPP in only seven countries (Lebanon, Saudi Arabia, Egypt, Iran, Syria, Tunisia and Sudan). However, when the panel LM test is applied with two structural breaks, strong evidence is found in favor of PPP for the Middle Eastern countries. Although black market exchange rates (BMREX) play such a major role in emerging market economies, there is very few papers in the PPP literature use this major source of information to investigate the long-run PPP hypothesis. Pioneering study of Age'nor and Taylor (1993), Baghestani (1997) and Phylaktis and Girardin (2001) examined for 19 developing countries, India and China, respectively. Phylaktis and Kassimatis (1994) and Luintel (2000) focused on the experience of seven countries in the Pacific Basin region, while Diamandis (2003) analyzed four Latin-American countries and Cerrato and Sarantis (2007) examined 34 emerging countries. BMREX are unofficial rates that are fully market determined. This contrasts with the official exchange rates (OREX) in Middle East, which is in general controlled by the government. In Middle East Countries covered in the present study, black market exchange rates have a long tradition and in many cases have also been supported by governments. Actually, in many countries the volume of transactions in black markets was also larger than that in the official market (Cerrato and Sarantis 2007). It has been argued that the ability to test for consistency of the PPP hypothesis in emerging economies is prevented by the frequent changes in the exchange rate arrangement, resulting in long periods of fixed exchange rates. Furthermore, the same specification of the PPP hypothesis is not applicable to countries that adopt different exchange rate regimes. To cope with the problem, it has been suggested that the black market exchange rate better represents market forces, compared to the administrated official exchange rate (OREX), when testing for PPP. A black market exchange rate (BMREX) arises when governments try to restrict capital flow by imposing various types of restrictions on the purchase of foreign currencies. These restrictions contain such as licensing, waiting time, and various taxes (Hassanain, 2005). These limitations on the purchase of foreign currencies make excess demand for foreign currencies that cannot be met from the official market and thus creates an unofficial (black) market in emerging markets such as in Middle East Countries covered in the present study. In addition to few studies on the exchange rates of Middle East countries, there are no studies on the validity of the PPP for black market exchange rates. This study is an attempt to fill this gap in the literature. The purpose of the study is to test the validity of the PPP theory

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in seven Middle East countries using both black and official exchange rates by time series and panel data unit root tests. This paper contributes to the literature by examining the PPP hypothesis for seven Middle Eastern countries. The study differs from earlier studies in an important way: it focuses on black market exchange rates.

## II BASIC MODEL AND DATA

$$RER = NER \frac{P^*}{P} \quad (1)$$

where RER is the real exchange rate, NER is the nominal exchange rate and  $P^*$  and  $P$  are the foreign and domestic prices, respectively. In logarithmic form, the real exchange rate can be represented by

$$\log(RER) = \log(NER) + \log(P^*) - \log(P) \quad (2)$$

Following equation shows the model of mean reverting real exchange rate

$$\log(RER)_t = \alpha + \beta \log(RER)_{t-1} + \varepsilon_t \quad (3)$$

where  $\alpha$  and  $\varepsilon$  are constant and error term respectively. PPP suggest that real exchange rate series should be stationary. If real exchange rate is stationary this exhibit that any percentage changes in the price level between two countries would be offset by an equal depreciation/appreciation of the nominal exchange rate. If there is a unit-root in the real exchange rate this implies that shocks to the real exchange rate are permanent and PPP does not exist between two countries.

The black market and official exchange rates data are taken from the study of Reinhart and Rogoff (2004). Price levels are defined as the logarithm of the price ratio generated by the each Middle East countries' consumer price index (CPI) divided by the US CPI (IFS line 64) and taken from the International Monetary Fund's International Financial Statistics (IMF-IFS) database. Due to the lack of consistent

data on the CPI index for Middle East Countries before 1969 and unavailability of data beyond 1998 for black market, the data spans from 1969-1998.

## III EMPIRICAL RESULTS

It is performed Augmented Dickey- Fuller (ADF) unit root tests to provide a benchmark for our result. The ADF test involves regressing the first difference of a variable on a constant, its lagged level, and  $k$  lagged first differences;

$$\Delta r_t = \mu + \rho r_{t-1} + \sum_{j=1}^k \gamma_j \Delta r_{t-j} + \varepsilon_t \quad (4)$$

Where  $r_t$  is the (logarithm of) the real exchange rate. It is tested the null hypothesis that real exchange rate contains a unit root against the alternative that it is level stationary.

The results of the ADF tests for BMREX and OREX are reported in Table 1 and Table 2. The ADF test results provide strong evidence against the unit root null. The Phillips-Perron test (Phillips-Perron, 1988; PP) is also conducted to ensure the stationarity of the BMREX and OREX series. The Phillips-Perron test uses a non-parametric correction to deal with any correlation in error terms. The test results, reported in Table 1 and Table 2, show that all the data series are stationary. These findings also provide strong evidence for the validity of long run PPP.

In addition to time ADF and PP test, we apply the panel data unit root based tests in Maddala and Wu (1999) –hereafter MW–, Levin, Lin and Chu (2002) –LLC– and Im, Pesaran and Shin (2003) –IPS–, provided that they accommodate panel data sets with moderate number of individuals ( $N$ ) and large number of time periods ( $T$ ). All these tests state the null hypothesis of unit root, but LLC restrict the model under the alternative hypothesis to be a stationary autoregressive process with a common autoregressive parameter for all the individuals, whereas MW and IPS allow for heterogeneity in the autoregressive parameters under the alternative hypothesis.

Table 1. Official Real Exchange Rates for Middle East Countries

Country	ADF		PP	
	With trend	Without Trend	With trend	Without Trend
IRAN	-4.887 [0] (0.002)	-4.641 [0] (0.000)	-4.869 [3] (0.000)	-4.641 [0] (0.000)
IRAQ	-5.036 [0] (0.001)	-4.879 [0] (0.000)	-5.206 [6] (0.001)	-4.872 [2] (0.000)
ISRAEL	-5.292 [0] (0.001)	-5.201 [0] (0.000)	-5.424 [5] (0.000)	-5.199 [2] (0.000)
KUWAIT	-5.281 [0] (0.000)	-5.201 [0] (0.000)	-5.407 [5] (0.000)	-5.198 [2] (0.000)
LEBANON	-5.211 [0] (0.001)	-5.108 [0] (0.000)	-5.321 [5] (0.000)	-5.103 [2] (0.000)
SAUDI ARABIA	-5.204 [0] (0.000)	-5.101 [0] (0.000)	-5.311 [5] (0.000)	-5.097 [2] (0.000)
SYRIA	-5.186 [0] (0.001)	-5.092 [0] (0.000)	-5.286 [5] (0.000)	-5.087 [2] (0.000)
Panel Unit Root Tests	MW <sub>ADF</sub>		MW <sub>PP</sub>	
	With trend	Without Trend	With trend	Without Trend
	92.723 (0.000)	112.429 (0.000)	96.272 (0.000)	112.287 (0.000)
	IPS		LLC	
	-9.47971 (0.000)	-10.4219 (0.000)	-12.2667 (0.000)	-13.0792 (0.000)

Note: Numbers in the parentheses and angle bracket are the lags and prob. values, respectively. Optimal lag lengths for ADF, IPS and MW were chosen by Schwarz Information Criterion (BIC) and Newey-West Bandwidth is used for PP.

IPS test is based on the traditional augmented Dickey Fuller specification

$$\Delta y_{it} = \mu_i + \delta_i t + \rho_i y_{it-1} + \sum_{k=1}^{p_i} \gamma_{ik} \Delta y_{it-k} + v_{it} \quad (5)$$

IPS allows for a heterogeneous coefficient of  $y_{it-1}$  and proposes a testing procedure based on averaging individual unit root test statistics and the null hypothesis is given by the existence of a unit root in all the units of the panel against the alternative of at least one stationary cross-section. To test the hypothesis, Im *et al.* (2003) propose a standardized t-bar statistic given by:

$$Z_{ibar} = \frac{\sqrt{N} \left\{ \bar{tbar}_{NT} - \frac{1}{N} \sum_{i=1}^N E \left[ \bar{t}_{it} (p_i, 0) \mid \beta_i = 0 \right] \right\}}{\sqrt{\frac{1}{N} \sum_{i=1}^N Var \left[ \bar{t}_{it} (p_i, 0) \mid \beta_i = 0 \right]}} \Rightarrow N(0,1) \quad (6)$$

The LLC test is carried out by estimating the following equation:

$$\Delta y_{it} = \alpha_{ik} + \beta_i y_{it-1} + \sum_{l=1}^{L_i} \partial_l \Delta y_{it-l} + \varepsilon_{it} \quad (7)$$

The panel OLS of the normalized residuals is run to obtain the  $\beta$  estimates. And LLC demonstrates that under the null hypothesis  $H_0 : \beta = 0$ , the regression t-statistic ( $t_\beta$ ) has a standard normal limiting distribution.



Table 2. Black Market Real Exchange Rates for Middle East Countries

Country	ADF		PP	
	With trend	Without Trend	With trend	Without Trend
IRAN	-4.990 [0] (0.002)	-4.778 [0] (0.000)	-4.977 [5] (0.002)	-4.778 (0) (0.000)
IRAQ	-5.261 [0] (0.001)	-5.154 [0] (0.000)	-5.396 [5] (0.000)	-5.151 [2] (0.000)
ISRAEL	-5.87 [0] (0.001)	-5.2013 [0] (0.000)	-5.418 [5] (0.000)	-5.201[2] (0.000)
KUWAIT	-5.281 [0] (0.000)	-5.203 [0] (0.000)	-5.407 [5] (0.000)	-5.201 [2] (0.000)
LEBANON	-5.204 [0] (0.001)	-5.101 [0] (0.000)	-5.312 [5] (0.000)	-5.096 [2] (0.000)
SAUDI ARABIA	-5.203 [0] (0.000)	-5.100 [0] (0.000)	-5.310 [5] (0.000)	-5.095 [2] (0.000)
SYRIA	-5.196 [0] (0.001)	-5.092 [0] (0.000)	-5.300 [5] (0.000)	-5.087 [2] (0.000)
Panel Unit Root Tests	MW <sub>ADF</sub>		MW <sub>PP</sub>	
	With trend	Without Trend	With trend	Without Trend
	94.300 (0.000)	114.545 (0.000)	97.716 (0.000)	114.422 (0.000)
	IPS		LLC	
	-9.62710 (0.000)	-10.5945 (0.000)	-12.4087 (0.000)	-13.2621 (0.000)

**Note:** Numbers in the parentheses and angle bracket are the lags and prob. values, respectively. Optimal lag lengths for ADF, IPS and MW were chosen by Schwarz Information Criterion (BIC) and Newey-West Bandwidth is used for PP.

MW test is another test that has the advantage of not requiring a balanced panel unlike the IPS. The test follows a Chi-square distribution and it is combined the individual p-values ( $\pi_i$ ) associated to the pseudo t-ratio for testing  $\beta_i = 0$  in (7). The test is given by MW

$$= -2 \sum_{i=1}^N \ln(\pi_i)$$

, which under the null hypothesis is

distributed according to  $MW \sim \chi^2_{2N}$ . Overall panel results for both black and official exchange rates (IPS, LLC and MW) provide strong evidence for the validity of long run PPP.

#### IV CONCLUSION

Although the black market exchange rate better represents market forces, compared to the administrated official exchange rate, when testing for PPP, a few study has focused the validity of PPP hypothesis taking black market into account. In this paper, PPP is tested with using black market exchange rate and compared to the official exchange rate by using ADF, PP and IPS, LLC and MW tests. Over all results imply that all unit root test with time series and panel data support PPP in Middle East countries. This finding is consistent with existing literature.

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# Customer Satisfaction And Service Quality: Customer's Re-Patronage Perspectives

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**Abstract**-The purpose of this paper was to examine the relationship between customer satisfaction, service quality and customer's re-patronage intentions in the context of restaurant industry in Nigeria. The respondents were 377 restaurant customers who completed the self-administered questionnaire. Pearson correlation analysis indicated that service quality and customer satisfaction had a direct positive effect on customer's patronage intentions. Multiple linear regression highlighted customer satisfaction as a stronger predictor of re-patronage intentions compared to service quality. Possible interpretations, limitations, and implications for marketing professionals are discussed.

**Keywords**-customer satisfaction, Service quality, Repatronage, Intentions

## I. INTRODUCTION

In today's fast-paced and increasingly competitive market, the bottom line of a firm's marketing strategies and tactics is to make profits and contribute to the growth of the company. Customer satisfaction, quality and retention are global issues that affect all organizations, be it large or small, profit or non-profit, global or local. Many companies are interested in studying, evaluating and implementing marketing strategies that aim at improving customer retention and maximizing share of customers in view of the beneficial effects on the financial performance for the firm. There has been a strong advocacy for the adoption of customer retention as one of the key performance indicators (Kaplan & Norton, 2001). For instance, a study of Reichheld & Sasser (1990) reported a high correlation between customer retention and profitability in a range of industries. However, the fragmentation of media choices and the dynamic nature of the market, coupled with an increased number of more demanding and affluent consumers, brought greater challenges to marketing practitioners in retaining their customers. Quality and customer satisfaction have long been recognized as playing a crucial role for success and survival in today's competitive market. Not surprisingly, considerable research has been conducted on these two concepts. Notably, the quality and satisfaction concepts have been linked to customer behavioural intentions like purchase and loyalty intention, willingness to spread positive word of mouth, referral, and complaint intention by many researchers (Olsen, 2002; Kang, Nobuyuki & Herbert, 2004; Soderlund & Ohman, 2005). The most commonly found studies were related to the antecedents, moderating, mediating and behavioural consequences relationships among these variables- customer satisfaction, service

quality, perceived value and behavioural intentions. However, there have been mixed results produced. As many industry sectors mature, competitive advantage through high quality service is an increasingly important weapon in business survival. The fast-food industry has certainly not been exempted from increased competition or rising consumer expectations of quality. In Malaysia, the fast-food industry is undergoing a dramatic transformation and experiencing heightened competition. Fast-food is an important but often neglected area of study (Kivela, Inbakaran & Reece, 1999). The fact is that fast-food business is regarded as a low credence service and the quality of the services are difficult to prove until customers patronise the fast-food business. Moreover, the quality of the service that customers encounter may be different each time they re-visit that particular fast food centre, thus influencing the level of satisfaction and eventually affecting their re-patronage intentions. Given these important issues that need to be addressed, the main purpose of this study was to examine the factors that affect customers' repatronage intentions in the fast food context. Specifically, this paper aims to examine the nature and strength of relationships between customer satisfaction, service quality and customer's repatronage intentions. The predictive ability of satisfaction and service quality on patronage intention will also be analyzed.

## II. REVIEW OF LITERATURE CUSTOMER SATISFACTION AND SERVICE QUALITY

The interest in studying satisfaction and service quality as the antecedents of customer behavioural intentions in this paper has been stimulated, firstly, by the recognition that customer satisfaction does not, on its own, produce customer lifetime value (Appiah-Adu, 1999). Secondly, satisfaction and quality are closely linked to market share and customer retention (Fornell, 1992; Rust & Zahorik, 1993; Patterson & Spreng, 1997). There are overwhelming arguments that it is more expensive to win new customers than to keep existing ones (Ennew & Binks, 1996; Hormozi & Giles, 2004). This is in line with Athanassopoulos, Gounaris & Stathakopoulos's (2001) arguments that customer replacement costs, like advertising, promotion and sales expenses, are high and it takes time for new customers to become profitable. And lastly, the increase of retention rate implied greater positive word of mouth (Appiah-Adu, 1999), decrease price sensitivity and future transaction costs (Reichheld & Sasser, 1990) and, finally, leading to better business performance (Fornell, 1992; Ennew & Binks, 1996; Bolton, 1998; Ryals, 2003).

From the literature that has been reviewed so far, customer satisfaction seems to be the subject of considerable interest by both marketing practitioners and academics since 1970s (Churchill & Surprenant, 1982; Jones & Suh, 2000). Companies and researchers first tried to measure customer satisfaction in the early 1970s, on the theory that increasing it would help them prosper (Coyle & Gokey, 2002). Throughout the 1980s, researchers relied on customer satisfaction and quality ratings obtained from surveys for performance monitoring, compensation as well as resource allocation (Bolton, 1998) and began to examine further the determinants of customer satisfaction (Swan & Trawick, 1981; Churchill & Surprenant, 1982; Bearden & Teel, 1983). In the 1990s, however, organizations and researchers have become increasingly concerned about the financial implications of their customer satisfaction (Rust & Zahorik, 1993; Bolton, 1998).

While satisfaction has been examined by many researchers in different industries (Fornell, 1992; Anderson & Sullivan, 1993; Bolton, 1998; Caruana, 2002; Ranaweera & Prabhu, 2003), service quality is also likely to influence consumer behavioural intentions (Bitner, 1990; Cronin & Taylor, 1992, 1994; Choi et al., 2004). Cronin, Brady & Hult (2000) stated that examining only one variable at a time may confound the understanding of consumer decision-making and this may lead to inappropriate marketing strategies. This view is supported by Caruana (2002) and it is crucial to study the effect of other constructs such as quality on behavioural intentions in addition to customer satisfaction. Hence, this study incorporated service quality into the model in examining customer's repatronage intentions in the restaurant context.

### III. DEFINITION OF SERVICE QUALITY, CUSTOMER SATISFACTION AND REPATRONAGE INTENTION

There are many researchers who have defined service quality in different ways. For instance, Bitner, Booms and Mohr (1994) define service quality as the consumer's overall impression of the relative inferiority/superiority of the organization and its services. While other researchers (Cronin & Taylor, 1994) view service quality as a form of attitude representing a long-run overall evaluation, Parasuraman, Zeithaml & Berry (1985) defined service quality as a function of the differences between expectation and performance along the quality dimensions. This has

appeared to be consistent with Roest & Pieters (1997) definition that service quality is a relativistic and cognitive discrepancy between experience-based norms and performances concerning service benefits. Many researchers (Oliver, 1981; Brady & Robertson, 2001; Lovelock, Patterson & Walker, 2001) conceptualize customer satisfaction as an individual's feeling of pleasure or disappointment resulting from comparing a product's perceived performance in relation to his or her expectations. Generally, there are two general conceptualizations of satisfaction, namely, transaction-specific satisfaction and cumulative satisfaction (Boulding et al., 1993; Jones & Suh, 2000; Yi & La, 2004). Transaction-specific satisfaction is a customer's evaluation of his or her experience and reactions to a particular service encounter (Cronin & Taylor, 1992; Boshoff & Gray, 2004), and cumulative satisfaction refers to the customer's overall evaluation of the consumption experience to date (Johnson, Anderson & Fornell, 1995).

Intentions are subjective judgements about how a person will behave in the future and usually serves as dependent variables in many service research and satisfaction models (Boulding et al., 1993; Soderlund & Ohman, 2003). Rust, Zahorik & Keiningham (1995) argues that repurchase intentions and actual repurchase patterns are not necessarily the same. Butcher (2005) agreed that repurchase intention is regarded as a sound service outcome that is measurable. While Soderlund & Ohman (2003) consider repurchase intentions as intentions-as-expectations, Hellier et al. (2003) defined repurchase intention as the individual's judgement about buying again a designed service from the same company, taking into account his or her current situation and likely circumstances.

### IV. DISTINCTION BETWEEN SERVICE QUALITY AND CUSTOMER SATISFACTION

A review of the emerging literature suggests that there appears to be relative consensus among marketing researchers that service quality and customer satisfaction are separate constructs which are unique and share a close relationship (Cronin & Taylor, 1992; Oliver, 1993). Most researchers in the services field have maintained that these constructs are distinct (Bitner, 1990; Carman, 1990; Boulding et al., 1993; Spreng & Mackoy, 1996). Table 1 identifies a number of key elements that distinguish customer satisfaction from service quality.

Table 1. The distinction between customer satisfaction and service quality

Customer satisfaction	Service quality
<b>Customer satisfaction can result from any dimension, whether or not it is quality related</b>	The dimensions underlying quality judgements are rather specific.
<b>Customer satisfaction judgements can be formed by a large number of non-quality issues, such as needs, equity, perceptions of fairness.</b>	Expectations for quality are based on ideals or perceptions of excellence.
<b>Satisfaction judgements do require experience with the service or provider.</b>	Quality perceptions do not require experience with the service or provider.
<b>Customer satisfaction is believed to have more conceptual antecedents.</b>	Service quality has less conceptual antecedents.

Source: Adapted from various sources (Taylor, 1993; Oliver, 1993; Rust & Oliver, 1994; Spreng & Mackoy, 1996; Choi et al., 2004; Grace & Cass, 2005).



## V. CONCEPTUAL FRAMEWORK

The paper developed a conceptual framework (see figure 1), which aims to examine the predictive ability as well as the nature and strength of relationship between service quality, customer satisfaction and re-patronage intentions. All constructs were conceptualized to fit better into the current study setting. Based on the original view of Parasuraman, Zeithaml & Berry(1985), service quality was conceptualized as a function for the differences between expectation and performance along with fast-food attributes such as food quality, service transaction, environment, convenience issues, and its overall images.

### VI. THE DIRECT EFFECT OF SERVICE ON REPATRONAGE INTENTIONS

Substantial empirical and theoretical evidence in the literature suggests that there is a direct link between service quality and behavioural intentions(Bitner,1990; Bolton & Drew, 1991). Among the various behavioural intentions, considerable emphasis has been placed on the impact of service quality in determining repeat purchase and customer loyalty (Jones & Farquhar,2003). As pointed out by Bolton(1998), service quality influences a customer's subsequent behaviour, intentions and preferences. When a customer chooses a provider that provides service quality that meets or exceeds his or her expectations, he or she is more likely to choose the same provider again. Besides, Cronin & Taylor(1994) also found that service quality has a significant effect on repurchase intentions. Other studies which support that repurchase intentions are positively influenced by service quality include Zeithaml, Berry & Parasuraman(1996), Cronin & Taylor(1992,1994), Cronin, Brady & Hult(2000), and Choi et al.,(2004). Hence, it was hypothesized that:

H1: Service quality is positively related to re-patronage intentions.

### VII. THE DIRECT EFFECT OF CUSTOMER SATISFACTION ON REPATRONAGE INTENTIONS

A wide variety of studies has been done to support the link between customer satisfaction and behavioural intentions (Fornell,1992; Rust & Zahorik,1993; Taylor & Baker, 1994; Patterson & Spreng,1997). Bearden & Teel(1983) argue that customer satisfaction is important to marketers because it is generally acceptable assumed to be a significant determinant of repeat sales, positive word of mouth, and customer loyalty. Similarly, Anderson & Sullivan(1993) have also argued that the more satisfied the customers are, the greater is their retention. This view is also supported by Ranaweera & Prabhu(2003) study that the effects of customer satisfaction on customer retention are found to be significant and positive. Specifically, the levels of customer satisfaction will influence the level of repurchase intentions and this is supported by past research in a wide variety of studies(Rust & Zahorik,1993; Taylor & Baker,1994; Patterson & Spreng,1997; Bolton, 1998; Hellier et al., 2003). On the basis of the above, it was then hypothesized that:

H2: Customer satisfaction is positively related to re-patronage intentions.

### VIII. THE RELATIVE IMPORTANCE OF SERVICE QUALITY AND CUSTOMER SATISFACTION FOR THE PREDICTION OF CUSTOMER REPATRONAGE INTENTIONS

Both service quality and customer satisfaction have widely been recognized as antecedents of repurchase intentions. However, it is believed that fast-food centre owners would like to know which of these variables exerts the strongest influence on re-patronage intentions. A recent study reveals that customer satisfaction is a better predictor of intentions to repurchase than service quality (Ravald & Gronroos,1996). Evidence is provided by Cronin & Taylor(1992) who found a much stronger relationship between customer satisfaction and repurchase intentions than the relationship between service quality and repurchase intentions. Academically, from a practitioner's point of view, customer satisfaction is deemed to be more influential on repurchase intentions (Dabholkar,1995). Parasuraman, Zeithaml & Berry(1994) also revealed in their analyses that customer satisfaction is likely to achieve a greater level of statistical significance when both service quality and customer satisfaction have a significant effect on repurchase intentions.

H3: Customer satisfaction will be a stronger predictor of customer's repatronage intention than service quality.

## IX. RESEARCH METHODS

There are two major categories of restaurants in Nigeria(1) fast food centres and (2) family restaurant. Nigeria is Perhaps, not particularly known for the family restaurant scene and research has not been conducted on fast food restaurant. Hence, this paper focused only on the fast-food outlets as there is lack of studies carried out in this context in Nigeria. The sampling unit in this study was all fast food outlets in Lagos and Ogun state-Nigeria, which serves all manner of fast foods. A sample size of 420 was targeted and the subjects are the customers who visited the fast-food outlets at least three times in the past six months and involve an exchange of money for services rendered. A filtering question was used to screen qualified respondents who met the requirement.

## X. DESIGN AND PROCEDURE

This study design is cross-sectional in nature and was conducted using self-administered questionnaires with the consent from the fast food outlets owner/managers. Pilot testing was conducted using a small convenience sample of 35 respondents, including the fast food managers who checked for any ambiguities and confusion in the first draft of the questionnaires. Data was collected from the customers who visited the various fast food outlets from January 2010 to April 2010. The respondents were informed that their participation was on a voluntary basis and all information provided would be kept private and confidential. Questionnaires were distributed only to those who qualified and agreed to participate in the study. The researcher then



briefly explained the nature and requirement of the survey before the respondent filled up the questionnaire.

#### XI. MEASURES

The multiple- items used to measure service quality were taken from Parasuraman, Zeithaml & Berry(1985) and Kivela, Reece & Inbakaran(1999). A total of 14 items was used and includes the additional item(i.e operating hours convenience) based on the suggestions of the fast food outlets managers during the pilot testing. Single- item approach was used for the satisfaction and repatronage intention construct. Typically, assessment of reliability in terms of internal consistency cannot be computed for single-item measurement(Soderlund & Ohman, 2003). Rossiter(2002) has strongly argued that intentions should not be captured with multiple- item scales, as they invite the possibility of a confounded measurement. Though Churchill(1979) argued that single items are unreliable, Rossiter(2002) opposed this by demonstrating that the main issue is the validity problem rather than reliability problem. This is further supported by Westbrook & Oliver(1981) who indicated that single item rating scales were common among researchers in testing customer satisfaction. AA the three main constructs were measured, using a five-point Likert scale. Selected demographic data was also collected at the end of the questionnaire.

#### XII. RESULTS

The statistical package for social sciences, windows version 13.0(SPSS 13.0) was used to analyse the data collected.

#### XIII. DESCRIPTIVE FINDINGS

A total of 420 questionnaires was distributed, of which 377 were returned completed and met the screening requirements, representing a net response rate of 89.8% out of which 25 was excluded from further analysis due to missing data. Among the 377 respondents, 60% were females and 82.7% were aged between 20 to 49. As expected, a majority of them were indigeneous customers and about half of the respondents (56% )were middle-income earners.

##### 1) Customer Expectations.

Based on the mean analysis, it was found that the highest expectations were related to the convenience and service factors. This may be due to the busy lifestyle in urban areas. On the other hand, the fast food's image scored the lowest in terms of customer expectation. However, this does not suggest that restaurateurs can ignore the importance of image but at least fulfil the minimum expectation of customers.

##### 2) Perceived Performance.

The respondents' general perception towards the service quality offered by the fast food outlets was between a mean score of 3.24(atmosphere factors) and 3.90(convenience factors). Further analysis by comparing the perceived performance and expectations level revealed that the perceived performance on all dimensions fell short of their expectations, except for the convenience factor. This indicates that the service quality offered did not meet their customers' expectations on most aspects.

#### THE DIRECT EFFECTS OF SERVICE QUALITY AND SATISFACTION ON REPATRONAGE INTENTIO

**Table 2** provides a matrix of the correlation coefficient for the main measures

*Table 2. Intercorrelations between main measures*

Variables		Repatronage intention	Service quality	Customer satisfaction
<b>Repatronage intention</b>	<b>Pearson Correlation</b>	1	.537**	.822**
	<b>Sig.(2-tailed)</b>	.	.000	.000
	<b>N</b>	377	377	377
<b>Service quality</b>	<b>Pearson Correlation</b>	.537**	1	.486**
	<b>Sig.(2-tailed)</b>	.000	.	.000
	<b>N</b>	377	377	377
<b>Customer satisfaction</b>	<b>Pearson Correlation</b>	.822**	.486**	1
	<b>Sig.(2-tailed)</b>	.000	.000	.
	<b>N</b>	377	377	377

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

The results for direct effect of service quality on repatronage intention revealed an r- value of 0.537 and the correlation is significant at  $p < .01$ . Based on this result, H1 was supported. Therefore, service quality has a positive relationship to repatronage intention. The strength of this relationship is

considered moderate at 0.29 as measured by r-square value. As for the effect of customer satisfaction on repatronage intentions, it was found the satisfaction also has a positive influence on repatronage intention( $r = 0.822$ ,  $P < .01$ ). Therefore, H2 was also supported and the strength of the

relationship between satisfaction and repatronage intention was relatively higher ( $r^2 = .68$ ). It was also found that service quality is positively correlated with satisfaction ( $r = .486$ ,  $P < .01$ ). While the overall findings of the present study were similar to those in the services management literature, the results were somewhat different from Croin & Taylor's (1992) findings that service quality was not able to influence repurchase intention directly. The results of this paper also differs from Hellier et al.'s (2003) study which found that customer satisfaction will not influence repurchase intentions directly. These differences could be due to different context and research methodology applied.

#### XIV. PREDICTING REPATRONAGE INTENTION

A multiple linear regression analysis was conducted to investigate the influence of service quality and satisfaction on repatronage intention. The test of multiple linear regression assumption found expected patterns for non-violation of the assumptions and this result supports the use of multiple linear regression as an appropriate statistical analysis for this study. Table 3 and 4 provide the results of the multiple linear regression analysis. Based on the results in Table 3, it seems that all three models have worked well in explaining the variation in repatronage intention (model 1:  $F = 153.402$ ;  $df = 375$ ;  $P = .0001$ ; model 2:  $F = 509.763$ ;  $df = 374$ ;  $P = .0001$ ; model 3:  $F = 30.831$ ;  $df = 374$ ;  $P = .0001$ ). Overall, model 2 was better

fitted compared to model models 1 and 3 as indicated by F-value. The proportion of explained variance as measured by R-square for model 2 was among the highest ( $R^2 = 0.70$ ) compared to models 1 ( $R^2 = 0.29$ ) and 3 ( $R^2 = 0.675$ ). In other words, 70% of the variation in repatronage intention is explained by service quality and satisfaction in model 2. As indicated by the unstandardized coefficients (Table 4), both service quality ( $t = 5.553$ ,  $P = .0001$ ,  $b = 0.974$ ) were found to exert a significant positive influence on repatronage intention. Lastly, the beta values for model 2 given in Table 4 seems to indicate customer satisfaction ( $\beta = 0.733$ ) as a more important predictor of repatronage intention than service quality ( $\beta = 0.18$ ). This supported H3 that customer satisfaction was a stronger predictor of customer's repatronage intention than service quality. Hence, the result supports Allen, Machleit & Schultz Kleine's (1992) argument that emotions act as a better predictor of behaviour than cognition does. Parasuraman, Zeithaml & Berry (1994) also mentioned that customer satisfaction is frequently more statistically significant, and tends to achieve a greater level of statistical significance compared to service quality. However, the result differs from Choi et al.'s (2004) study in health-care context, in which they found that service quality emerged as a more important determinant of behavioural intentions. However, a review by Dabholkar (1995) suggests that the relationship is situation-specific and therefore depends on the context of the service encountered.

**Table 3 . MODEL SUMMARY OF MULTIPLE REGRESSION**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std Error of the Estimate	Change statistics					Durbin Watson
					R <sup>2</sup> change	F Change	df1	df2	Sig. F Change	
1	.539(a)	.290	.288	.977	.290	153.402	1	375	.000	
2	.836(b)	.700	.698	.636	.409	509.763	1	374	.000	
3		.675	.674	.661	-.025	30.831	1	374	.000	1.725

Notes:

a predictors: (Constant), Service Quality

b predictors: (Constant), Service Quality, Customer Satisfaction

c predictors: (Constant), Customer Satisfaction

d dependent Variable: Re-patronage Intentions

**Table 4. Coefficients Analysis**

Model	Variable	Unstandardized Coefficients		Standardized coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	3.282	.051	.539	64.783	.000
	Service quality	.935	.075		12.386	.000
2	(Constant)	-.071	.152		-.468	.640
	Service quality	.313	.056	.180	5.553	.000
	Customer satisfaction	.974	.043	.733	22.578	.000
3	(Constant)	-4.93	.137		-3.596	.000
	Customer satisfaction	1.091	.039	.822	27.902	.000

## XV. DISCUSSION AND CONCLUSION

In summary, all the hypotheses were strongly supported and the proposed framework of the present study was able to demonstrate strong explanatory power. Notably, this study provides evidence for the direct effect of service quality and satisfaction on repatronage intention as suggested by the literature and satisfaction emerged as a stronger predictor of repatronage intentions in the fast food settings. A number of marketing implications can be drawn from this study. The descriptive result reveals that customers' perception towards service quality level provided was consistently lower than their expectation. This implies that more effort is needed to improve the service quality level of fast food outlets. The frontline staff may well be trained to be more responsive and sensitive to customer needs, thus providing services that are more efficient and effective. In addition, the fast food atmosphere can also be improved by ensuring cleanliness and favourable ambience with appropriate music and lighting. Customer satisfaction is also very crucial for marketing planning since satisfaction does influence customer's intention to repatronage the fast food outlets in future. Hence, marketers should look into the factors that would affect customer satisfaction level. In addition, as customer expectations are changing over time, practitioners are advised to measure their customer expectation and satisfaction regularly and handle complaints timely and effectively. The Present study has a number of limitations. Firstly, the nature of sampling unit under study cannot be generalized to a larger population as only one restaurant was examined and the use of single-item measurement for satisfaction construct has low reliability (Churchill, 1979). Secondly, the causal relationship between service quality and satisfaction was not addressed in the present study. Thirdly, the use of cross-sectional data in a single industry also limits some of the conclusions obtained. In view of the limitations, future study should use different sampling units which are more generalizable and conduct the study nationwide. The proposed model can also be extended to other service industries or other types of restaurants. In terms of measurement issues, future research may use multiple items to strengthen the reliability of satisfaction construct. Also, the structural relationships among the three constructs should be examined. Additional constructs may also be added into this model, based on the literature, and be tested empirically.

## XVI. REFERENCES

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