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INDIRA

Indira Management Review

Bi -annual Research and Academic Journal

Research and Academic Papers

- Understanding the effect of Dutch Disease
- Growth Analysis And Performance Ranking Of Select Indian Fertiliser Companies

Poser

- A study of Human Resource Management practices in Information Technology and ITES units in Mumbai
- Determinants Of Profitability Of Public Sector Banks

Case study

- Companies Performance And Cost Of Capital:
- Consumer Perception And Brand Loyalty: An Empirical Study Of Smart phones In India

Book Review

- Global Business Leadership

Indira Group of Institutes

Indira School of Business Studies

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Indira Management Review

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INDIRA GROUP OF INSTITUTES, PUNE

Shree Chanakya Education Society (SCES), Pune, was established in 1994, with the explicit vision to provide sustainable impetus to the corporate and entrepreneurial abilities in the youth.

The realization that a robust framework of education is indispensable for the growth of global leaders, the visionary, Ms. Tarita Wakalkar Mehendale, Chairperson, Indira Group, integrated her pursuit of excellence and articulated educational institutions, known as Indira Group of Institutes (IGI), which imbibe human excellence and demonstrate strong social values, with a single minded pursuit of developing the youth to become business leaders.

Unrelenting initiatives by the management team at Indira led to adding of multi-disciplines such as Management, Information Technology, Pharmacy, Commerce, Science, Engineering and Mass Communication to the group. And growth has been as deep as it has been wide. With 12 institutions, IGI now offers education right from Kindergarten to Doctorate level studies .

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Having traversed the journey of thirteen years we have ourselves made certain significant achievements which we are aware, are but the building blocks for achieving further heights.

- Indira is ranked amongst the top 2 B-schools in Pune, by the prestigious AIMA - IMJ.\
- The same journal gave us a top 30, all India ranking on the parameters of Industry interface.
- Our students have shown good academic results at the level of university ranking.
- The achievements of our students have enabled them to attract some of the best corporate recruiters.
- Indira Group of Institutes and our goodwill has enabled us to establish campus agreement with Microsoft for using different software.
- Our goodwill with Microsoft was further accentuated with Microsoft conducting workshops at Indira, for train the trainer modules.
- Business India has also ranked us amongst the top 3 in Pune for last 2 yrs.
- Our Institutes have received accreditation from various certifying bodies.
- Indira Institute of Management was the first management institute in Maharashtra to receive the accreditation from the NBA, New Delhi.
- We also have our audiovisual centers supported by Harvard Business School, Stanford, Pyramid Media and Tom Peters Company and we have a vast collection of titles.

Editorial **P. G. Vijairaghavan**

One of the key articles of this issue is on the factors that might affect the growth of companies, particularly in the manufacturing sector – a typical one, being the fertilizer industry. Is growth decided by factors unique to a company – such as the size of the company, or is it also influenced by other factors that might be common to peer units? This is the subject of the effort by R Parvatham and Anuradha Rajendran to discern the truth behind growth, especially in the fertilizer industry.

How does one explain the strange fact of some of the most resource-rich countries of the world languishing among the developing or underdeveloped country tag? What could be the factors that these countries lack to be able to exploit the immensely rich sources of natural wealth with which they are endowed?. Kishore Kulkarni and Ajibola Adeoye-Adeyemi, take a look at the Nigerian example which typically exemplifies the need for not just natural wealth but much more; in fact, they examine the hypothesis whether absence of natural wealth need not be a constraint but skilled planning, management of resources etc could be a bigger restrictive bottleneck.

Also, in this issue is an interesting study of the consumer's loyalty to brands – especially in the area of smart phones. What contributes towards brand loyalty and how does consumer perception of a brand decide the fate of the brand in the market? This is examined by Amanpreet Kang, while Bidyut Bhattacharjee examines the cost of capital as a factor affecting its profitability, and staying with profitability Vijayakumar looks at the profitability of India's public sector Banks – where a number of wholly different factors affect profitability.

The Knowledge industry has come to occupy an important place in the growth of our economy in the past two decades. The increasing role of this sector in forging our growth means employment of more skilled personnel; requiring practices in HR which cater to this section specifically is looked into by Chandrakant Ghabak.

The book review section features a review of Sarah Macarthur and E. S. Webbek's much appreciated work on Global Business Leadership, by M . S. Rao.

Understanding The Effect Of Dutch Disease On The Economy Of A Developing Country: The Nigerian Case

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ABSTRACT

Nigeria is one of many developing economies affected by the "Dutch Disease"- a concept that diagnoses the case of a country so poor yet so rich even with abundant resources. Is it possible to have resource endowment and have a slow growing economy with little or no infrastructural development? In 2009, studies showed that there has been a steady decline in life expectancy and standard of living since the discovery of crude oil in Nigeria in 1956. This is a misnomer as the country has "earned more than US$300 billion from crude oil" (Okonjo-Iweala, 2012, p.4) but corruption, infant mortality, and poor infrastructure has become the bane of the economy impeding any of form of development. In this paper, the concept of Dutch disease as it affects Nigeria is considered with a view to understanding the major culprits in the country's case. It is also surmised that the chief culprit for a nation's poverty is not always the lack of abundant natural resources but lack of planning, preparedness, transparency, mismanagement of these resources and a high level of corruption. It has been concluded that Nigeria as a nation of talented and industrious people would have fared better economically and as a consequence politically, if crude oil had not been discovered and exploited. Some evidence is the gradual decline of GDP, the increase in unemployment rate and the continued increase in the country's poverty level. These should not be the indices of a resource-rich country.

UNDERSTANDING THE EFFECT OF DUTCH DISEASE ON THE ECONOMY OF A DEVELOPING COUNTRY: THE NIGERIAN CASE

1.0 INTRODUCTION

Nigeria, a developing country is well known for her crude oil exports. A member of the Organization of the Petroleum Exporting Countries (OPEC), Nigeria first discovered oil in Oloibiri, in the now Bayelsa State in 1956. Prior to the discovery, her economy was dominated by agriculture with major crops being cocoa, groundnuts, rubber, hides and skin etc. Oil production started in 1958 and the economy started a gradual but seemingly permanent shift towards total dependence on oil as its main source of revenue. This is a peculiar problem to many developing countries some of which include Mexico, Venezuela and Algeria.

Does the immiserizing growth hypothesis affect the economic development of developing countries? Is it possible to have resource endowment and have a slow growing economy with little or no infrastructural development?

The trade of these resources generates foreign exchange earnings for these countries and has a direct effect on the country's economy. This increase in earnings should in turn cause economic growth as the government is now able to afford the provision of basic amenities, essential infrastructure and social stability but this is hardly the norm in most developing countries with a lot of natural endowment. This phenomenon is often referred to as "Dutch Disease" or "Resource Curse". It also applies to the situation where after discovery of this resource, all other sectors of the country's economy begin to suffer and eventually economic development declines.

Dutch disease was first mentioned in the1970s in Netherlands after the discovery of natural gas, hence the name, "Dutch". This discovery was associated with an increase in foreign exchange earnings and thus an economic boom. The boom did not however last an eventually gave way to economic retardation evidenced by unemployment, high rate of inflation etc.

For countries like Nigeria, it is expected that this increased revenue will translate into economic development but the real life scenario differs completely. Instead oil has choked up other resources and source of foreign exchange earnings – agriculture, manufacturing – and became the major dependence of the country resulting in a complete neglect in the other sectors.

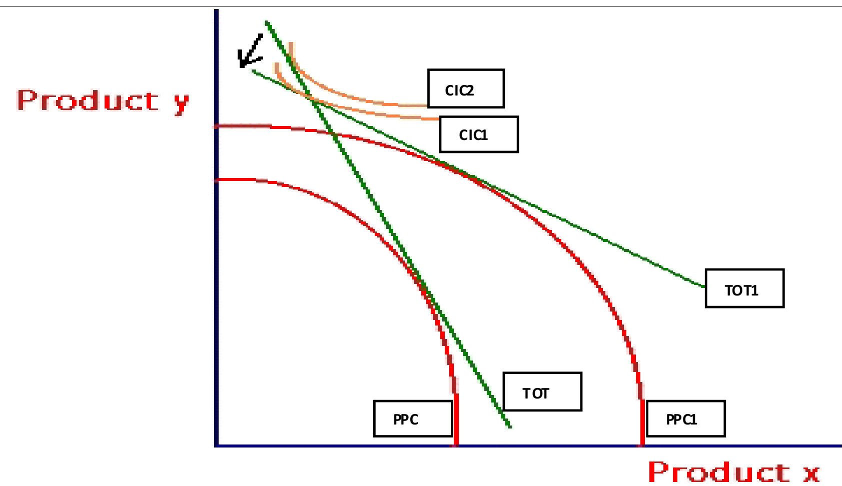
A good way to understand this phenomenon is to examine this situation through the lens of the immiserizing growth hypothesis. Attributed to the Colombian University economist, Jagdish Bhagwati, this theory explains the effects of a country's abnormal growth due to the sudden economic boom as "[e]conomic expansion increases output which, however, might lead to a sufficient deterioration in the terms of trade to offset the beneficial effect of expansion and reduce the real income of the growing country" (Bhagwati, 1958, p.201).

The first section of this paper will examine the different literature on this hypothesis and its application to developing countries. The benefits of the increase foreign exchange earnings to an economy will be examined as well as the impact of poor management of these resources on the economy and the populace. The next section will focus on Nigeria beginning from the discovery of oil and the major landmarks after this discovery. Nigeria's history, leadership, economic policies and how all these have helped shaped the nation's economy will be looked at. The management of the oil sector, the challenges the sector currently faces and the effect this has had on the economy will also be examined. With the aid of tables, data and charts, a comparison between the country's welfare and growth retardation will be made. In conclusion, a brief assessment of what has been done by other developing countries to prevent or cure this disease will be made; with special emphasis on what has worked so far and how this can by Nigeria.

2.0 THE IMMISERIZING GROWTH HYPOTHESIS

The immiserizing growth hypothesis was invented by Jagdish Bhagwati, an economist at Columbia University, in 1958. He sought to explain the impact of terms of trade on the economic growth of a country, especially in the area of economic welfare. Terms of trade is "the price of a country's exports divided by the price of its imports" (Krugman, Obstfeld, and Melitz, 2012 p.112). As a result, when the price of a country's exports exceed the price of imports, there is an increase in the terms of trade and this signals an improvement and vice versa.

In his explanation, he "assume[d] the traditional two-country, two commodity "real" model" ... where growth ... leads to a sufficiently acute deterioration in the terms of trade which imposes a loss of real income outweighing the primary gain in real income due to the growth itself" (Bhagwati, 1958, p. 202). This will affect the country's overall welfare negatively, in spite of the fact that, an increase in exports should bring about an increase in the country's welfare. This is depicted by the graph below:



Where:

TOT is the Terms of Trade

CIC is the Community Indifference Curve

PPC is the Production Possibility Curve

Figure 1.1 Immiserizing Growth Hypothesis (*Source: http://business.baylor.edu/Joe_McKinney/Graphs.html*)

2.1 THE "DUTCH DISEASE" EXPLAINED

The above theory is proven by what is known as "Dutch disease" which explains why resource rich countries end up being poor because of their inability to manage their resources effectively. In spite of the increase in revenue owing to the exports, the country remains impoverished. The first example, as explained earlier, was seen in the Netherlands after the discovery of natural gas in the 1960s. It was used to explain the situation where though revenue from trade of the natural resource was high, "the Dutch economy suffered from rising inflation and unemployment, declining export of manufactures and lower rates of income growth" (Kulkarni, Erickson, 1999, p.298).

In theory, the Dutch disease does not happen suddenly, it takes a gradual process. According to Kulkarni and Erickson (1999), "[a]s its [the country] main national export enjoys increased demand from the rest of the world, a nation's foreign reserves increase, its currency appreciates and its other exportable commodities see much decline in their demand" (p.298). It starts with the discovery of the natural resource. Kulkarni (2011) also explained that "it tends to affect countries upon the discovery, extraction, and exploitation of large amounts of natural resources – most notably oil or natural gas – it can occur once international demand for a country's export item spikes or the world price of the resource rises" (p. 420).

Why is this situation peculiar to developing countries? Developing countries are usually characterized by the abundance of labour and the production of labour intensive goods. They are usually disposed to a lot of problems mainly because they have a fundamental problem of good and effective leadership. They are blessed with a lot of resources but mismanagement of the revenues generated from these resources, leaves many of these country in dire poverty. Oplatka, 2004 opined that some of the characteristics of developing countries include the fact that, "[t]hese countries were ruled by Europeans for a long time, their economy is more agricultural-based, and they are usually characterized by high mortality rates, high birth rates, high levels of poverty and large gaps between rich and poor" (p.428).

2.2 SYMPTOMS AND IMPACT OF THE "DUTCH DISEASE"

The first and most profound is the increase in foreign reserves which is most likely dependent on external factors. In the case of the Netherlands, the oil shocks of the 1970s were responsible for this. With the increase in natural gas price came increased revenues for the government and invariably an increase in the government's spending power. However, that a country earns more revenue from its export does not mean the country has been infected by the disease. This increase, particularly from a resource, renders the other tradable sectors of the economy unimportant. The country's focus shifts completely to that resource causing a neglect of other sectors of the economy.

This invariably affects imports, making imports expensive. In the case of the Netherlands, the country depended on raw materials for its local production and these raw materials became expensive because of the same reason – the instability caused by the oil shocks. Import prices increased and the cost of production, increased. With an increase in exports, came a drop in the country's aggregate supply (Kulkarni, 2011).

The drop in aggregate supply resulted in an increase in unemployment and inflation referred to as stagflation. In stagflation, the domestic money supply increases and the supply of good decreases owing to the increase in cost of production. This is closely linked with the appreciation of the country's exchange rate which is also a symptom of the disease. This increase in the availability of foreign exchange caused by the increase in revenue from the trade of the resource is often responsible for this. Kulkarni and Erickson (1999) concurred in their research stating that "the surplus of foreign currency caused by domestic economy's increased export earnings can reduce the domestic real exchange rate leading to appreciation of the domestic currency" (p.370).

All these symptoms culminate in a loss in the country's Gross Domestic Product (GDP). The higher the GDP, the higher the economic welfare of a country; this is however not so in the case of countries suffering from the Dutch disease. Instead, there is a decline in the country's GDP. Kulkarni (2011) maintained that "countries with resource-based exports with respect to their GDP have … a tendency for low growth" and that "a negative effect of the stock of foreign reserves on the level of GDP is a sign of the presence of Dutch disease" (p.379,425).

Finally, other sectors of the economy bear the brunt of the appreciation of that one sector and this is exhibited in the neglect experienced in these sectors, especially the agricultural and manufacturing sectors. This phenomenon, according to Kejeh (1986), is called "resource movement effect" (p.61). This is peculiar to those situations where the vibrant sector of the economy – the sector experiencing the boom, causes a deficiency in the other sectors of the economy by taking up most of the available resources and causing a lack in these sectors. For instance, the situation where the oil or natural minerals sector, takes up most of the labour available, causing a noticeable deficiency in the agricultural industry. In Kularni (2011)'s view, "the rural agriculture sector, that was the major source of domestic food supply and industrial raw materials, suffered severe manpower loss" (p.394) as a result of this resource movement.

3.0 NIGERIA AND THE DUTCH DISEASE

3.1 ECONOMIC BACKGROUND

Nigeria is a very diverse country. She boasts of a population of over 160 million people, over 250 languages and is referred to as the most populous country in Africa. The country was created in 1914 and gained independence in 1960; has had both civilian and military administrations and each has helped shaped the country into what it is today.

Until recently, the Nigerian economy was predominantly agrarian with cocoa, rubber, yams, cassava, palm produce, hides and skin being the major crops. In addition, "[her] wealth includes large deposits of coal, iron, tin and columbite, as well as lead, copper, and zinc" (Falola, Heaton, 2008, p.4). Eventually the discovery and exploration of oil in 1956 skewed the dependency on this sector towards the petroleum sector. As opined by Kulkarni (2011), increase in oil revenue further resulted in the decline of the agricultural sector as "[c]ontinued neglect of the agriculture sector, while oil exploration was prioritized, amounted to misplacement of emphasis in the country's economic development effort" (p.394). In the chart below, the authors demonstrated the importance of the oil sector above the agricultural sector. Thus, a marginal growth in the agricultural production is noticed compared to the massive activity in oil production.

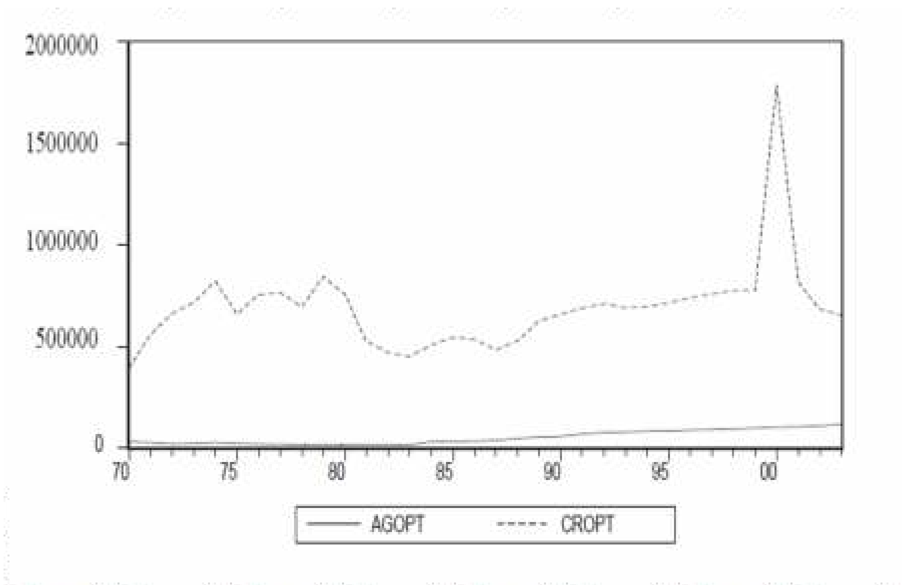


Figure 1.2 Agric and Crude Oil Production (1970-2003) (*Source: Olusi, J.O. and Olagunju, M.A. (2005)*

3.2 THE NIGERIAN CRUDE: A BRIEF HISTORY

The discovery of oil dates back to 1956 and "this discovery opened up the oil industry to investment from multinational oil companies" (Okonjo-Iweala, 2012, p.2). Consequently, oil became the main stay of the Nigerian economy after the Nigerian civil war known as the Biafran war as signaled by the country joining the Organization of Petroleum Exporting in 1971. Similarly, the increase in crude oil production to over 2.3 million barrels per day, currently, and "... reserves of oil amount[ing] to 37.2 million barrels – the tenth-largest reserves in the world (Okonjo-Iweala, 2012, p.2 quoting OPEC, 2011). Refineries were built in Port Harcourt, Warri and Kaduna but due to poor maintenance, they are still producing below capacity and as such cannot meet the daily requirement of a big country like Nigeria. This therefore explains why Nigeria imports most of the refined petroleum products consumed locally, as seen in the graph below which shows crude oil exports viz-a-viz refined petroleum products imports.

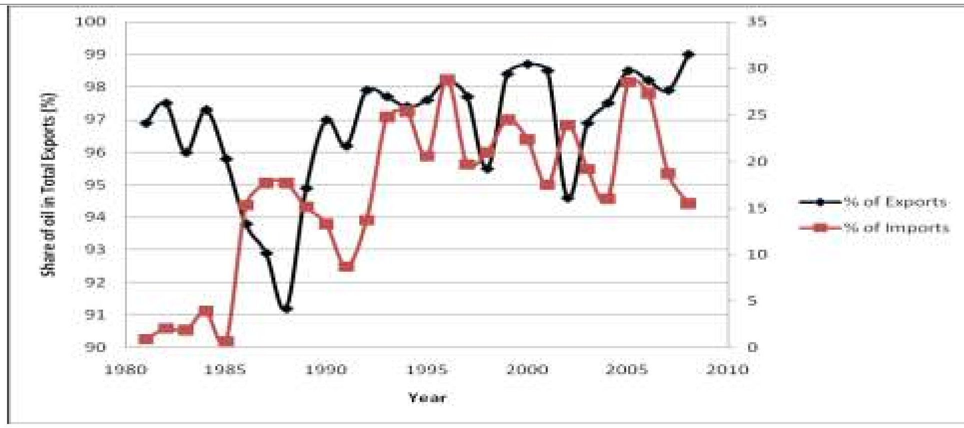


Figure 1.3 Trend of Crude Oil Exports and Imports in Nigeria (1980-2008) *Source: Central Bank of Nigeria, Statistical Bulletin (2009) via Oyejide T. and Adewuyi A. (2011)*

3.3 THE NIGERIAN CRUDE: ECONOMIC IMPACT

The discovery of oil encouraged the influx of foreign owned oil companies. Oil exploration and production is a very expensive venture which requires huge capital investment and technical know-how. Nigeria unable to provide these requirements contracted the services of these multinational companies such as Shell, BP, Mobil etc. These companies in turn paid for been able to operate in Nigeria and these payments are often to as "rents". These companies provided jobs which encouraged the migration of workers from the rural areas depleting the human resource in the agricultural sector of the economy. The adverse effect was the reduction in the agricultural sector's output and the increase in dependence on oil. Falola, Heaton (2008) stated that "[t] he agriculture sector continued its decline during the oil boom years, and Nigeria became more dependent on food imports" (p.183). In Kahn (1994)'s view, the "Dutch disease symptoms had set in during the so-called boom years [and] was made evident by the pattern of government capital expenditure, the growth of the non-tradable sectors, and the decline of the only other main tradable sector besides oil, agriculture" (p.186). Okonjo-Iweala (2012) concurred stating that "[t] he terms of trade turned against agriculture because the high value of the naira, made it easier and cheaper to import agricultural products than to produce them at home. Agriculture as a share of the value of exports declined from 75 percent in 1965 to 3 percent in 2010. Oil increased from 25 percent of exports by value in 1965 to about 96 percent in 2010" (p.3).

In financial terms, Nigeria's foreign reserves showed positive growth since the discovery oil but it has not been a steady climb until recently. Currently it stands at about $46 billion as at January 2013, according to data from the Central Bank of Nigeria. The country's national currency is Naira and the current exchange rate stands at NGN155.75/$1 from the same source. In 2000 however, the macroeconomic indicators according to Okonjo-Iweala (2012) was

characterized by volatile exchange rates, double-digit inflation (23 percent on an annual basis in 2003), a high fiscal deficit (3.5 percent GDP in 2003), low foreign-exchange reserves ($US7.5 billion in 2003), and low GDP growth (2.3 percent on average for the past decade, including negative GDP growth per capita in those years because of the increase in population) (p.19).

3.4 THE NIGERIAN CRUDE: POLITICS OF OIL BOOM AND PROBLEM OF CORRUPTION

Political instability also characterized Nigeria's history and impacted the economy as one would expect. The Nigerian civil war is a good example of the discord an increase in resource based revenue can cause. Odularu (2007) mentioned that “oil revenues fueled already existing ethnic and political tension and actually "burned" the country. This tension reached its peak with the civil war that lasted from 1967 to 1970” (p.7). The war affected crude oil production, causing a drop in government revenue. After the war, the government took over the management of oil with the creation of the Nigerian National Petroleum Corporation (NNPC) in 1971 originally known as Nigerian National Oil Corporation (NNOC).

The two oil booms in the 70s and 80s were very critical to the country's economy. This was evidenced by the sudden increase in oil revenue resulting in a rise in government expenditure, loans and external borrowings. The influx of oil revenue eventually did not help the country as it was squandered and grossly mismanaged as only a few benefitted at the expense of the remainder of the populace. Obioma (2012) in concurrence stated that “[u]nfortunately, these influx of oil revenues have brought in low per capita income for generality of the people and affluence and high living standards for the privileged few citizens of the nations concerned” (p.100).

These booms also made excess funds available to the government and those funds were, for the most part, squandered. Prominent is the regime of General Sani Abacha, the military head of state from 1993 to 1998. After his death, “the Swiss government agreed to repatriate about US$505 million of frozen Abacha funds back to Nigeria in 2005 and 2006” (Okonjo-Iweala, 2012, p.84). This pales in comparison to the over US$5billion alleged to have been looted by the head of state and his family.

3.5 THE NIGERIAN CRUDE: MONETARY AND FISCAL REFORMS AND THE EFFECT ON GROSS DOMESTIC PRODUCT (GDP)

Kulkarni and Erickson (1999) confirmed that “the Nigerian government used this windfall to expand its role in the provision of infrastructural facilities, free social services and capital expenditure for industrial development” (p.300). There is however a school of thought that opined that these were 'elephant projects' which gulped a lot of resources but were never completed. For instance, Udosen, Etok, and George, (2009) mentioned that “the year 2007, Nigeria realized a whooping sum of NGN29.8 trillion naira [app. USD186.2m], much of which was squandered on white elephant projects leading to slow rate of economic growth” (p.42). A very popular instance is the Ajaokuta steel mill which gulped a whopping “US$5billion” and has yielded no dividend to Nigerians (Okonjo-Iweala, 2012).

From the exchange rate argument, Nigeria's real exchange rate appreciated as a result of the oil income. Olusi and Olagunju (2005) showed the appreciation of the REER (real exchange rate) in Nigeria, in the figure below, and suggested that “the appreciation of the REER (downward sloping REER curve) started about the second quarter of 1984” (p.161) and as this occurs, it reduces the strength of the other sectors of the economy, in this case, the agricultural sector.

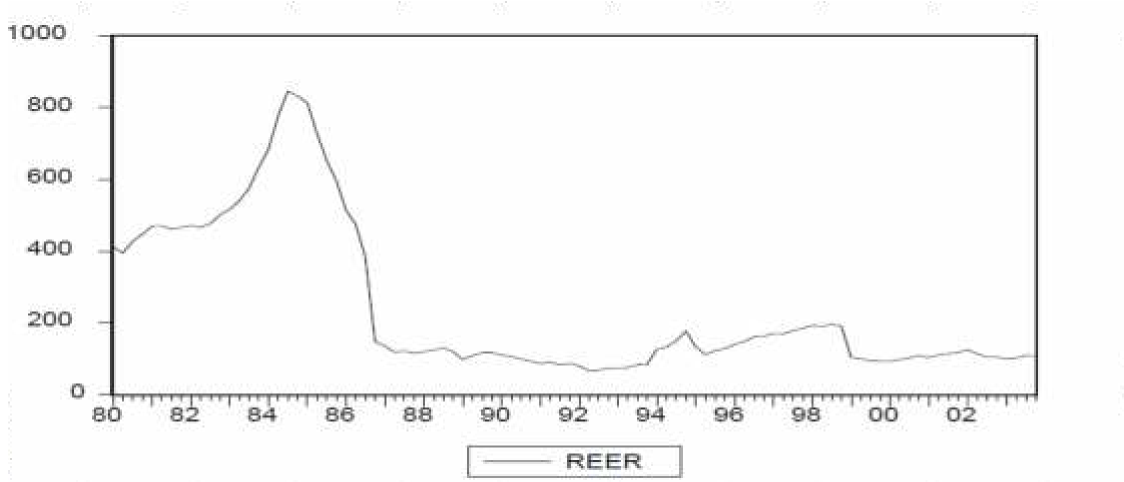


Figure 1.4 Real Effective Exchange Rate (1980-2003) *Source: Olusi, J.O. and Olagunju, M.A. (2005)*

Another result was the reckless habit of external borrowing. According to Okonjo-Iweala (2012), "[f]rom the mid 1970s to 2001, Nigeria earned more than US$300billion from crude oil. Yet over the same period ... borrowed abroad unwisely and unsustainably, accumulating up to US$30 billion in debt ..." (p.4). Crude oil was used as collateral for these loans and this became a norm during this period. Even though the spate of borrowing was unsettling, what was more unsettling was the fact that the funds were not being used for the purpose for which they were borrowed. In the rare instance that they were used for such purpose, the projects were never completed and such projects yielded no dividend.

It is therefore worthy to mention that the rise in oil prices and the increase in government revenues did not actually translate to an improvement in economic indicators in the country, mainly, the Gross Domestic Product (GDP). The country's GDP was on a decline and other sectors of the economy, particularly agriculture and manufacturing, experienced neglect. Kahn (1994) commented on the fact that, "the rising oil revenue and declining GDP of the late 1980s suggest that the impact of the oil boom in the earlier decade was so detrimental to non-oil economic activities, that even increasing oil revenues after the low of 1986 were not sufficient to initiate or sustain GDP recovery" (p.183). The graph shows the steady decline in GDP rate and the resultant inflation. The second indicates the increase in government revenue viz-a-viz the country's GDP rate; which otherwise should have been increasing.

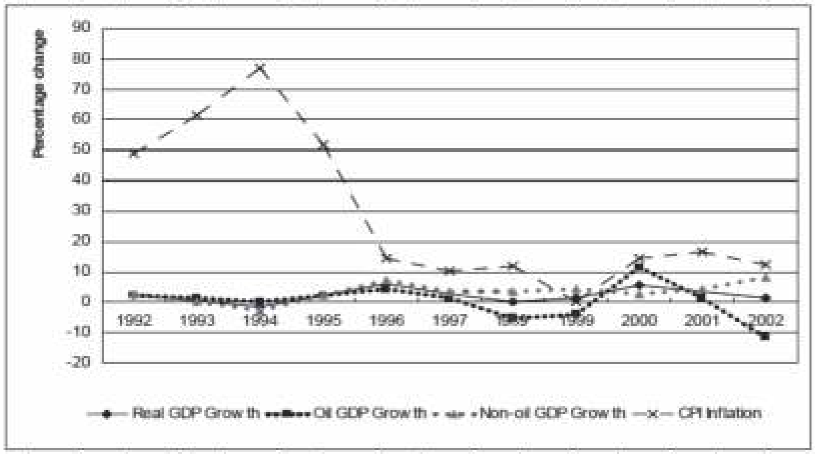


Figure 1.5 Real GDP growth and Inflation (1992-2002) *Source: IMF(2005; 2003; and 2001) via Okonjo-Iweala N. and Osafo-Kwaako, P. (2007)*

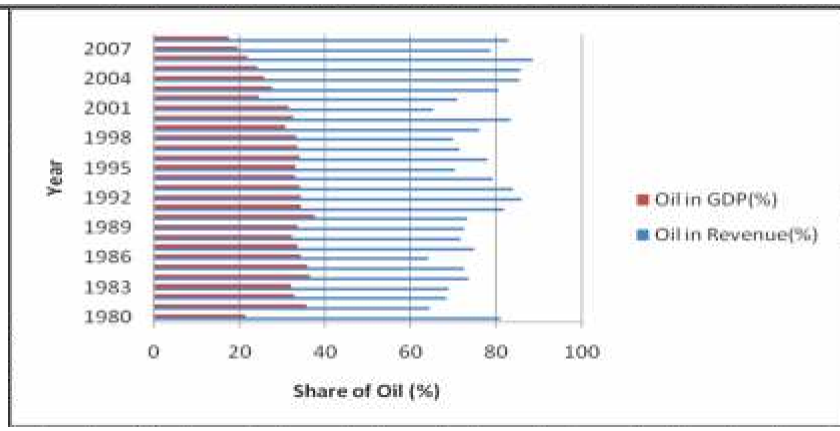


Figure 1.6 Shares of Oil in Total Revenue and GDP of Nigeria (1980-2008) *Source: Central Bank of Nigeria, Statistical Bulletin (2009) via Oyejide T. and Adewuyi A. (2011)*

4.0 THE CASE FOR DUTCH DISEASE IN NIGERIA

Nigeria has had her fair share of corruption, unemployment, poverty, crime etc. arising from a country lacking leadership and accounting and infected by the Dutch disease. Aiken (2011) concurred to this assertion stating that "... many oil-producing African nations face the challenges of corruption, poverty, and the extensive involvement of foreign companies and government" (p. 293). In agreement, Obioma (2009) also mentioned that, "[t]he sizeable oil windfall, of course, presented net wealth and thus additional spending room, but it also has complicated macroeconomic management and led to an extreme dependency on oil- a highly volatile source of income" (p.99). As Nigeria became 'rich', the government became heavily corrupt. This did not come as a surprise as funds available increased and between the military and civilian governments, there was a gradual depletion without any resistance. According to Transparency International, Nigeria is one of the most corrupt countries in the world with a ranking of 139 out of a total of 176 countries and territories. "The oil boom also resulted in widespread corruption on the part of the government officials responsible for collection and allocation of revenues" (Falola, Heaton, 2008, p.183). Corruption thrived because there was "the lack of financial disclosure and transparency of government finances" (Khan, 1994, p.196).

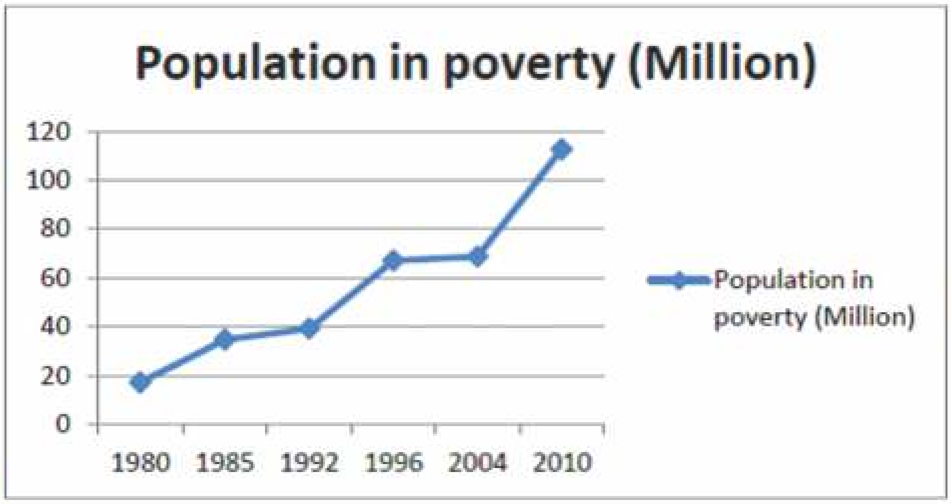


Figure 1.7 Population in Poverty *Source:*
http://www.oxfordresearchgroup.org.uk/publications/middle_east/nigeria_generic_context_boko_haram_violence

Other challenges faced by Nigeria include oil theft otherwise called bunkering. Pipeline vandalization has become a norm in the oil rich region of the country and has caused the country in loss of revenue and loss in production level. Crude oil is usually siphoned from these pipelines in large quantities and sold to a ready market overseas. It has been suggested that this illegal business is control by a cartel and it is estimated that it costs the country roughly N10 billion (about US$62.5 million) daily in lost revenue although this cannot be verified due to the nature of the crime and lack of adequate statistics. A report by the U.S. Energy Information Administration in 2012 states that the [e]stimates from Nigeria's Ministry of Finance show that about 400,000 bbl/d of oil was stolen in April 2012, which led to a fall of about 17 percent in official oil sales. Royal Dutch Shell, Nigeria's largest producer, recently estimated that 150,000-180,000 bbl/d, or 6 percent of the country's total production, on average is lost to oil bunkering and spills.

Another major concern is the issue of security in the country. The growing reliance of the country on oil and gas alone may undermine the democratic structure such as rule of law, political stability (as in the case of militancy in the Niger Delta region), government effectiveness and the fight against corruption (Udosen, Etok, and George, 2009, p.46). The militants in the Niger Delta oil rich region of the country claimed to have taken up the cause of the indigenes of this region who have claimed that they have been continuously marginalized even though they have borne the brunt of oil exploration. They claim they have not received any compensation or fair treatment and decided to make crude oil exploration in the region impossible. This has however been contained to a certain extent by the amnesty given to the militants by the Yar'Adua administration in 2009, "… the resource control conflict also provided opportunistic excuse for militants and criminal gangs to engage in oil theft, the proceeds of which they used to procure arms to perpetuate themselves and resist the security agencies". (Gboyega et al, 2011, p.19).

4.1 LESSONS FROM INDONESIA

Indonesia is one country that is known for its supposed recovery from the Dutch disease and has used her oil revenue for her economic growth. There is however a controversy in this regard as some economists do not concur with this assertion. For the purpose of this study we will only consider what Indonesia did differently to manage the oil boom for the country's advantage as a lesson for Nigeria.

Indonesia is very similar to Nigeria in that the two countries are "agricultural-based, primary commodity-exporting countries which experienced a large transfer of wealth, brought by two major oil booms over 1972-82 (1973-74 and 1979-81)" (Chowdhury, 2004, p.133). Gelb et al. (1988) concluded that "Indonesia's good performance during the oil booms reflected the *institutions* developed earlier to nurse the economy back to health, the *approach to policy* set in the Suharto government's formative years, and *unusual degree of continuity*" (p.223).

5.0 SUMMARY AND CONCLUSION

This paper was geared at understanding the economy of developing countries viz-a-viz the Dutch disease, with special emphasis on the economy of Nigeria. From the aforementioned, we can conclude that Nigeria has shown visible symptoms of the Dutch disease since the discovery and exploration of crude oil. It is also obvious that the country is taking steps to counter the effect of this problem albeit that this is not coming along fast or easy as the disease has eaten into the very fabric of the economy. In sum,

[t]he growth of the oil economy has been both a blessing and a curse for Nigeria. Oil has brought massive revenues, making Nigeria a very wealthy country in terms of increasing overall revenues and giving the country a strong potential for equitable economic growth and sustainable development over the long run. Oil revenues have been horribly mismanaged, with the result that only a very few people have benefitted from Nigeria's oil wealth. The vast majority of the population continues to live in poverty, seeing few tangible results from the country's oil wealth (Falola, Heaton, 2008, p.11).

From previous studies, it is obvious that a lot of the country's wealth has been wasted and since oil is an exhaustive resource, changing previous policies and formulating new policies is inevitable. One of such is the Petroleum Industry Bill (PIB) which is currently with the country's lawmakers waiting to be passed into law. According to the U.S Energy Information Administration website, the key points of the PIB include:

Increase exploration activities and expand reserves; monetize natural gas reserves and reduce flaring; separate regulators for the upstream, midstream, and downstream sectors; deregulate the downstream sector; offer acreage through bid rounds; increase government take; higher royalties; lower production taxes; increase local participation through employment, related industries, and local oil and gas companies; and the Petroleum Host Communities Fund (PHCF).

Another breakthrough is in the positive results of the Federal Ministry of Trade and Investment in attracting foreign investment to the Nigerian economy. According to the ministry's website, one of the most recent achievements is the deal between the Federal Government of Nigeria and General Electric Company of the United States for a sum of US$1billion. The project is supposed to involve the building of a manufacturing assembly facility in Calabar, Cross River state. This will not only provide job opportunities for Nigerians but will also boost the country's export sector. It is situated the Trade Free Zone of the country which also a good indication.

Other reforms have also been carried out in the country in recent times in a bid to improve the economic situation. The price of crude of oil in the budget is usually pegged the current market to allow room for price fluctuations and reduce the effect a sharp decrease will have on the country's economy. This, according to Okonjo-Iweala (2012) is called "The Oil Price-based Fiscal Rule (OPFR)" (p.22). In 2004, oil price was pegged at US$25 per barrel when oil prices were in the region of US$33 per barrel. The excess amount was credited into an account called the Excess Crude Oil account and the funds were to be used for government spending. This entire process was aimed at reducing the government's dependence on oil revenue by "de-link[ing] public expenditures from current oil revenues" (p.21). This policy ultimately increased government revenue.

The banking sector also underwent various reforms under the supervision of the country's apex bank, the Central Bank of Nigerian (CBN). One of these was to ensure the reduction in inflation rate. "End-year inflation declined from 21.8 percent in 2003 to 10 percent in 2004 but increased slightly to 11.6 percent at the end of 2005" (Okonjo-Iweala, Osafo-Kwaako, 2007, p.10). The table reflects some economic indicators of the country between 1992 and 2006.

	1992-1998 (avg.)	1999-2001 (avg.)	2002	2003	2004	2005	2006 (est.)
(Annual percentage change; unless otherwise specified)							
Real GDP (at 1990 factor cost)	1.8	3.5	1.4	10.9	6.1	6.2	5.1
Oil GDP	0.9	2.9	-11.6	26.5	3.5	2.6	-1.6
Non-oil GDP	2.4	3.8	8.0	4.4	7.4	8.2	8.2
Inflation rate (year-on-year)	39.3	10.4	12.2	21.8	10.0	11.6	12.2
Money supply (M2) (% change)	…	35.0	21.6	24.1	14.0	16.0	…
Exchange rate (IFEM/DAS) (N/US$, average)	…	102.3	121.3	129.5	133.5	131.8	126.5
External reserves (US$ billion)	3.6	8.4	7.7	7.5	17.0	28.3	46.5

Table 1.1 Selected Economic Indicators *Source: CBN, 2006 Annual report; Federal Ministry of Finance (Nigeria), and IMF(2001; 2003; and 2005) via Okonjo-Iweala N. and Osafo-Kwaako, P. (2007*

There is a long way to go if Nigeria wants to get rid of the traces of the Dutch disease in her economy but it is safe to say that she is well on her way and hopefully one day, this goal will be accomplished.

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Growth Analysis And Performance Ranking Of Select Indian Fertiliser Companies

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Abstract

Empirical evidences from the developed and few emerging economies have shown that the producing unit of the economy tends to influence the entire economy's performance and stability. But, without adequate finance, incentive of operations, business friendly environment, effective management and operation structure, growth-oriented governmentpolicies and regulations, the manufacturing firms' will not perform as expected. The degree to which firm growth ismore/less random is studied in the context of how the size composition of firms and innovation patterns change. This paper was designed to study the performance of selected Indian Fertiliser Industry. To achieve this objective, performance of selected companies on five key parameters over the period from 2002 -2011 was taken into account for ranking viz: size (a function of the total assets and net revenue), growth in net revenue, growth in net profits, profitability (profit margins) and total average returns. The results showed that irrespective of the size of the company the profitability and returns were on the good record. Content flabby, large companies had increasingly seen their businesses melt in the face of competition from small players who change the dynamic and rules of the market through boldness. The empirical research has suggested that firm growth is determined not only by the traditional characteristics of size and age but also by other firm-specific factors such as indebtedness, internal financing, future growth opportunities, process and product innovation, and organisational changes.

Key Words: Growth Analysis; Equity Base, Performance Score, Profitability Score.

INTRODUCTION

The fertilizer industry presents one of the most energy intensive sectors within the Indian economy and is therefore of particular interest in the context of both local and global environmental discussions. The purpose of the study is to know about the fertilizer sector, to study the growth of fertilizer industry in India. Chemical fertilizers have played a vital role in the success of India's green revolution and consequent self-reliance in food-grain production. The increase in fertilizer consumption has contributed significantly to sustainable production of food grains in the country. The Government of India has been consistently pursuing policies conducive to increased availability and consumption of fertilizers in the country.

The Indian fertilizer industry had a very humble beginning in 1906, when the first manufacturing unit of Single Super Phosphate (SSP) was set up in Ranipet near Chennai with an annual capacity of 6000 MT. The Fertilizer & Chemicals Travancore of India Ltd. (FACT) at Cochin in Kerala and the Fertilizers Corporation of India (FCI) in Sindri in Bihar were the first large sized -fertilizer plants set up in the forties and fifties with a view to establish an industrial base to achieve self-sufficiency in food grains. Subsequently, green revolution in the late sixties gave an impetus to the growth of fertilizer industry in India. The seventies and eighties then witnessed a significant addition to the fertilizer production capacity. The growth of the fertilizer industry was at its peak in the 1970s and 1980s. The growth was a bit stagnant in the last decade of the 20th century. But, with many radical steps been taken by the Government of India, the industry is expected to grow again.

Today, India stands as the third largest fertilizer consumer and producer of the world. It has been observed that the subsidies on Indian fertilizer have been rising at constant rate. This is due to the rise in the cost of production and the inability of the government to raise the maximum retail price of the fertilizers. The population of the country is rapidly increasing at 1.5% annually. This requires higher production of food grains. The total cropped area is only 30% of the net geographical area, which is not enough for increasing the agricultural productivity. Now, the main focus is on the improvement of the farm income, for which the fertilizer industry needs to lay more stress on the agricultural activities in the country. This will also help to improve terms between the government agencies and the fertilizer industry in India.

Literature Review

The growth and performance of an industry is an important dimension, irrespective of its significance in the macro perspective. Optimization of growth may be the goal or an instrument to achieve some other goals like maximization of profit, sales, economies of scale etc.

Baumol(1962) in his growth model argues that growth is primarily desired as a means to greater profitability. The industry seeks to achieve higher growth in the short run and that will ensure sustainable return in the long run. For a small company, survival depends on efficiency, agility, ability to grasp new opportunities and implementing them effectively.

Growth in volume of business represents the changes similar to capacity utilization in a manufacturing enterprise. Growth in volume of business is likely to generate more revenue and hence a direct bearing on profitability of the organization. A review of empirical literature **(Dessand Robinson, 1984)** shows that the most used measures for growth have been compounded annual growth rate of sales and total assets.

Vijaya Kumar (1998) examined the “Determinants of corporate size, growth and profitability of Indian Corporate Sector”. The objective of the firm was profit maximization and the firm which expanded its output earned the highest profit and was therefore, considered the optimum firm. Each firm had several objectives and each decided its own policies. An attempt had been made in this paper to study the relationship between the size, profitability and growth.

The techniques of average, correlation and linear and multiple regression analysis had been used in this study. It can be concluded from the analysis that growth is found to be significantly associated with profitability during the study period. The outstanding influence of size, return on networth, retention and long-term borrowings / net assets is highlighted.

Size is expected to be an important determinant of firm's performance. Size can have a positive effect on firm's performance, since larger firms can leverage their size to obtain better deals in financial as well as product or other factor markets **(Mathur and Kenyon, 1998)**. This variable may be important if economies of scale operate. Size as measured refers to total assets employed in the business. Growth in size is expected to reflect the direction of change in operating efficiency.

Sridevi (2002) studied the variability in profit ratios, growth in profitability of public sector manufacturing industries belonging to steel, minerals, metal, coal and power industry after liberalization. Globally, particularly since the 1970's large corporations have primarily focused on turning themselves into oligarchs and reducing competitions to the point where profits are easy and the future assured as **John Ralston Saul(June, 2005)** writes in "The Collapse of Globalism".

The availability and cost of finance are often twin factors that affect the ability of a business to grow**(Binks &Ennew, 1996)**. The growth of firms, both large and small, is constrained by the quantity ofinternally generated finance available **(Oliveira &Fortunato, 2006).**

Buffers andLintner (1945) providesome of the earliest research to support this theory. They conclude that many large and small companies-even companies with promising growth opportunities find it extremely difficult or impossible to raiseoutside capital on reasonably favourable terms and that most firms finance their growth almostexclusively through earnings. Financial factors (such as liquidity constraints, availability of external finance and access to foreignmarkets) can have a significant impact on firm's investment decision. If financial factors significantlyimpact on firms' investment decisions, then they are likely to affect firm size and growth as well **(Fagiolo&Luzzi, 2004).**

Aregbeyen (2007) in a related research investigated the determinants of firm growthselected from the Nigerian firms that are quoted on the Nigerian Stock Exchange (NSE). Thestudy sampled 188 firms for the period of 1995-2005. The results obtained reveal that for themanufacturing firms, size of the firms, capital intensity, foreign equity holding, governancestructure, inflation, financial constraints and vertical integration are significant in explainingthe firms' growth rate. Contrary to postulations of the theory the result obtained showed thatthe more financially constraints the manufacturing firms are, the better the growthperformance.

METERIALS AND METHODS

To construct the sample, all the listed and unlisted Indian Fertiliser Companies in CAPTALINE database (63 companies) were taken into consideration. From the total population the following companies were excluded:

➢ The public sector companies - as their policies are highly influenced by a large number of social obligations and policy decisions of the government, which may be difficult to account for.

➢ Unlisted companies - because they do not follow the norms set by SEBI for financial reporting

➢ Those companies which do not have the financial coverage in database over the period of study

➢ Those companies, which have undergone merger and demerger during the study period.

So, after the above exclusions the final sample consisted of only 17 companies. The study covers a period of ten years from 2001-2002 to 2010-11. However for the sake of simplicity, financial year 2001-2002 will henceforth be referred to as 2002 and financial year 2010-11 will accordingly be referred to as 2011. The study is based primarily on the secondary data collected from the electronic corporate database CAPTALINE. The data for the fertiliser industry as obtained from database has been supplemented with information from various financial dailies, business magazines, reports of the companies, websites and so on. Editing, classification and tabulation of the financial data collected from the above mentioned sources have been done as per the requirements of the study.

Variables and Statistical Tools Used

For measuring the growth of select companies, the following parameters were used.

Growth in Total Assets
Growth in Equity Base
Growth in Revenue
Growth in Operating Profit
Growth in Net Profit
Growth in ROCE
Growth in RONWThe simple mathematical tools like ratios and percentages had been used for analyzing the growth of Indian fertilizer industry. Further Annual Compound Growth Rate (ACGR) of each parameter for the period of 10 years was computed.

The underlying model to identify the best performing companies - is analogous to the process of ranking a student on the average of scores obtained in a typical class examination. For calculating the performance score the following five key parameters over the study period were taken into account.

Size score: It was calculated by averaging the asset multiple and revenue multiple

Average of a company's past ten years' total assets

--x100=Asset Multiple (1)

Sum of past ten years' average total assets of all companies in the sample

Average of a company's past ten years' net revenue

--x100=Revenue Multiple (2)

Sum of past ten years' average net revenue of all companies in the sample

Size Multiple = Average of asset multiple and revenue multiple (3)

Revenue Growth score: Cumulative average net revenue growth.

Size-adjusted net revenue CAGR=Net revenue CAGR x Revenue multiple

Profit growth score: Cumulative net profit growth.

Average of a company's past ten years' net profits

-- X100 =Profit Multiple (4)

Sum of past ten years' average net profits of all companies in the sample

Size-adjusted net profit CAGR=Net profit CAGR x profit multiple. (5)

Profitability score: Average of operating profit and net profit.

Return score: It was calculated by averaging the average return on capital employed and average return on net worth.

Performance score: To determine performance ranking, average value of individual parameters were first converted into respective scores. Companies were then ranked on the basis of a weighted-average score of individual scores to arrive the order of best companies.

RESULTS

Growth Dynamics of the Fertilizer Industry – An Analysis of (a) growth in total assets, equity base and revenue

Value of the total assetsat the end of the year includes net fixed assets, net current assets and investments.Equity base consists of equity share capital of the company. Revenue means revenue earned from the main line of business. It excludes other incomes, non-recurring and extraordinary income. The total value of assets, equity base and revenue of the sample companies for each year are considered for the computation of growth indices which are depicted along with annual compound growth rates in Table No. 1.

Table No. 1: Growth in Total Assets, Equity Base and Revenue

(Rs. in crores)

Year	*Total Assets Rs*	*Growth Rate (%)*	*Equity Capital Rs*	*Growth Rate (%)*	*Revenue Rs*	*Growth Rate (%)*
2002	834.56		105.11		577.88	
2003	828.23	- 0.76	104.84	- 0.26	522.52	- 9.58
2004	844.72	1.99	107.95	2.97	666.75	27.60
2005	894.50	5.89	111.41	3.21	823.28	23.48
2006	883.17	- 1.27	111.41	0	891.84	8.33
2007	961.24	8.84	97.99	- 12.05	969.33	8.69
2008	1156.15	20.28	99.88	1.93	1176.55	21.38
2009	1346.03	16.42	100.21	0.33	2143.31	82.17
2010	1422.71	5.70	101.07	0.86	1554.51	- 27.47
2011	1513.98	6.42	100.80	- 0.27	1955.09	25.77
ACGR		**6.84%**		**- 0.46%**		**14.50%**

From Table No.1 it is observed that the growth rate of total assets had increased from – 0.76 % (2003) to 5.89% (2005). The maximum growth rate was 20.28% in the year 2008 and it was negative in the years 2003 and 2006 showing – 0.76% and – 1.27% respectively. The maximum growth rate of equity base was 3.21% in the year 2005 and it was zero in the year 2006. The growths of revenue during the study period show the negative growth of – 9.58% and – 27.47% in the years 2003 and 2010 respectively. The maximum growth rate was 82.17% in the year 2009. The annual compound growth rates of above three variables were 6.84%,- 0.46% and 14.50% respectively.

(b) Growth in profitability

The profitability variables selected for this analysis are operating profit, net profit ROCE and RONW. Operating profit is taken as the difference between net revenue and total operating expenses. The reported net profit of sample companies is considered as the net profit for this study. ROCE is obtained by dividing profit before interest and tax (PBIT) by average capital employed. It is the average of capital employed of all sample companies. PBIT is net income and expense of sample companies after adjusting extraordinary income and expense before interest and tax. RONW is calculated by dividing the mean net profit of the sample companies by average net worth of sample companies. Net profit is adjusted for extraordinary income and expense. The growth index of profitability variables of the sample companies along with its annual compound growth rates are given in Table No.2.

Table No. 2: Growth in Profitability

(Rs.in crores)

Year	*Operating Profit Rs.*	*Growth Rate (%)*	*Net Profit Rs.*	*Growth Rate (%)*	*ROCE (%)*	*Growth Rate (%)*	*RONW (%)*	*Growth Rate (%)*
2002	136.12		18.94		1.48		6.36	
2003	99.51	- 26.90	3.68	- 80.57	7.29	- 36.50	2.16	- 66.04
2004	116.16	16.73	13.92	278.26	9.01	23.59	4.26	97.22
2005	122.86	5.77	28.53	104.96	9.25	2.66	6.46	51.64
2006	155.62	26.66	60.14	110.80	12.25	32.43	4.21	- 34.83
2007	163.08	4.79	80.31	33.54	13.38	9.22	11.42	171.26
2008	207.49	27.23	110.18	37.19	14.89	11.29	13.20	15.59
2009	220.15	6.10	90.98	17.43	13.42	- 9.87	12.76	- 3.33
2010	220.20	0.02	95.92	5.43	12.36	- 7.90	12.17	- 4.62
2011	266.74	21.14	127.81	33.25	14.62	18.28	14.76	21.28
ACGR		**7.76%**		**23.63%**		**2.72%**		**9.81%**

Table No.2 shows the growth of operating profit and net profit with negative growth in the first year and tremendous growth rate of 278.26% during the year 2004. The growth of ROCE had shown negative in the first year and also in 2009 and 2010. The maximum and minimum ROCE in percentage was 14.89% (2008) and 7.29% (2003) respectively. RONW exhibited the same trend in tune with ROCE. The annual compound growth rates of these variables were very reasonable at 7.76%, 23.63%, 2.72% and 9.81%.

PERFORMANCE RANKING

Companies' performance on five key parameters over the period from 1998 to2007 was taken into account for ranking viz., size (this was a function of the total assets and net revenue),growth in net revenue, growth in net profits, profitability (profit margins),and total average returns. Size of the company was deduced by taking a simple average in net revenue and total assets. In case of the sales and profit growth parameters , compounded annual growth rate(CAGR) for the ten years was taken into account. While calculating profitability, a simple average of net profit margins operating net margins were taken. Similarly, to calculate the returns, a simple average return on capital employed (ROCE) and return on net worth (RONW) was used.

Table No. 3 PERFORMANCE RANKING - FERTILISER COMPANIES

		COMPANY SIZE				GROWTH DYNAMICS				PROFITABILITY		RETURNS		
**P. Rank	Name of Companies	Total Assets 2010-11	Total Revenue 2010-11	Avg. Asset &Rev	Size Rank	Revenue Growth Adjusted CAGR%	Rank	Net Profit Growth Adjusted CAGR%	Rank	Average Profit Margin%	Rank	Total Avg Returns%	Rank	*P Score
1	Coromandal	3397.24	3789.74	13.68	2	578.33	1	738.29	1	323.81	3	135.015	2	357.83
2	Tata	7536.28	4219.38	2399	1	394.56	2	588.47	2	892.69	1	72.87	7	318.46
3	Chambal	4242.46	2876.99	13.19	4	189.44	4	303.14	5	375.05	2	72.18	9	184.72
4	Zuari	2140.79	2889.26	11.14	5	268.82	3	306.66	4	143.52	6	68.59	10	159.75
5	Oswal	1934.33	562.34	8.33	6	-94.38	17	478.23	3	95.63	7	79.84	5	113.54
6	Deepak	1651.05	917.562	4.83	8	65.94	7	156.76	6	158.37	5	105.83	3	98.35
7	Nagarjuna	3171.03	1697.98	13.16	3	111.91	6	79.33	7	105.46	4	35.89	15	85.13
8	Mangalore	698.75	1406.29	5.09	7	129.24	5	72.96	8	53.99	8	62.18	12	64.69
9	Aries	205.72	93.78	0.43	13	8.87	10	14.93	9	9.33	11	153.52	1	37.36
10	phosphate	17.37	33.83	0.51	12	2.09	15	0.23	12	0.81	17	99.92	4	28.71
11	TStanes	62.93	131.88	0.53	11	4.64	12	6.86	10	5.71	12	72.22	8	17.99
12	Basant	111.49	86.78	0.17	16	7.91	11	6.72	11	5.59	13	64.95	11	17.87
13	Teesta	55.05	52.10	0.24	14	2.67	14	-5.19	13	3.25	14	43.96	14	8.99
14	Shiva	72.31	56.18	0.23	15	3.15	13	-15.25	14	2.08	15	52.08	13	8.46
15	Bharat	23.18	7.77	0.05	17	0.64	16	-25.54	15	1.98	16	21.63	17	-0.26
16	Kaltan	270.52	266.53	0.75	9	17.05	9	-165.58	17	17.64	9	79.13	6	-10.19
17	Liberty	147.13	151.56	0.55	10	19.93	8	-163.24	16	12.15	10	34.24	16	-19.28

*** P. Score: Performance Score** **** P.Rank: Performance Rank**

Table No.3 portrays the performance in terms of total assets, net revenue, net profit, return on capital employed and return on net worth. As per the revenue grouping Coromandal International ranked first followed by Tata Chemicals and Zuari Industries. Aries Agro had the good returns among the companies even though it ranked nine out of seventeen companies. Tata Chemicals had the good asset base (7536.28 croes) among the companies.

Other Aspects of Excellence

In orderto identify and acknowledge companies, which have recorded outstanding performance in competition and wealth creation perhaps the key business differentiators today, ranking has been done on wealth creation and competition aspects also.

Wealth Creators

Outstanding and consistent wealth creators among the sample companies were determined based on growth in their market capitalization over the past seven years. The process involved for ranking the companies is on the basis of absolute wealth created each year. The main ranking was then determined from the weighted average of individual rankings for the period under consideration.

Table No. 4

Top Wealth Creators

(Rs. in crores)

Name of the Company	2005	2006	2007	2008	2009	2010	2011	Avg.
Tata	3619.56	3851.35	3614.91	6023.84	7331.20	7182.04	7536.28	5594.17
Chambal	2389.00	2124.99	3001.34	2605.38	3758.74	4207.85	4242.46	3189.97
Coromandal	727.87	933.75	1121.47	1908.94	2898.71	3424.98	3397.24	2058.99
Zuari	949.47	1204.97	1641.07	1701.94	1254.61	2125.04	2140.79	1573.98
Deepak	585.10	571.60	836.92	860.47	1231.88	1309.53	1651.05	1006.65
Kaitan	100.45	152.23	176.68	180.81	176.61	199.85	270.52	179.59
Aries	30.72	39.44	55.73	109.45	149.59	175.23	205.72	109.41
Liberty	27.96	41.9	43.03	47.63	80.06	98.63	147.13	69.48
Basant	31.55	35.62	49.39	62.95	78.05	84.77	111.49	64.83
Teesta	32.52	35.96	35.69	43.56	34.63	47.66	55.05	40.72
Shiva	13.75	13.72	23.88	30.89	39.34	55.29	72.31	35.60

Table No. 4 shows Tata Chemicals has grown well its wealth during the year 2008, Chambal during 2009. Aries has doubled its wealth of Rs.109.45 crores in the year 2008. Other companies started their wealth creation from 2006 onwards.

CONCLUSION

The following are the specific observations of the study:

Coromandal International ranked first followed by Tata Chemicals and Zuari Industries.

Aries Agro had the good returns among the companies even though it ranked nine out of seventeen companies

Tata Chemicals had the good asset base among the companies.

Increases in productivity through the adoption of more efficient and cleaner technologies in the manufacturing sector will be most effective in merging economic, environmental, and social development objectives. A historical examination of productivity growth in India's industries embedded into a broader analysis of structural composition and policy changes will help identify potential future development strategies that lead towards a more sustainable development path.

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A study of Human Resource Management practices in Information Technology and ITES units in Mumbai

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Introduction

The process of globalization led competition within and beyond the nation. The extension of the global competition to Indian industry is source of both a threat and opportunity. There is a free flow of modern technology. Indian industry has accepted the challenge of technology and competition along with the free flow of foreign capital. Foreign companies are coming to India because labour is cheap and cost of production is low as compared to their country; they are coming with the new technology and huge capital .These companies are outsourcing in different activities.

The Indian IT success story has also highlighted India's attractiveness as an investment destination-not only in the IT sector but another key impact of the global sourcing model popularized by the growth of IT-ITES has been the reversal of the brain drain as people of Indian origin as well as young experts are now being attracted to worth in India. .

Importance of IT and ITES Industry

The growth of the Indian IT\ ITES sector in dollar terms and as a share of the gross domestic product [GDP] has been impressive.The IT-BPO sector in India is estimated to aggregate revenues of USD 88.1billion in FY2011,with the IT software and services sector(excluding hardware) accounted for USD 76.1 billion of revenues.

During FY 2011 direct employment is excepted to reach nearly 2.5 Million,an addition of 240000 employees.While indirect job creation is estimated at 8.3 Million.As a proportion of national GDP the revenue have grown with 1.2 per cent in FY1988 to an estimated 6.4 per cent FY2011.The share of IT-BPO Industry in the total Indian exports increased from less than 4 per cent in FY1988 to 26 per cent in FY 2011.Seven Indian cities account for 95 per cent of export revenues, focus on developing 43 new locations to emerge as IT-BPO hubs. Higher growth in European/Asian market is predicted. [NASSCOM 2011].

The sector is largely driven by the larger firms and multinationals For instance ,in 2007-08 ,out of top 20 IT firms 12 are multinationals and among top 200 firms ,34 per cents are multinationals [Dataquest 2008].

Selection of the problem

The information technology industry is growing fast in India .The impact of this industry is experiencing in the society as a whole .Social and economic life of the people is affected .Young youth are getting an opportunity for employment in the country and abroad also there is continuous demand from local as well as foreign market .Youths are getting good salary and other benefits. Customers are expecting, more satisfaction by way of product and services. The processes of production is also continuously changing .There is more scope of upgradation of technology employees are also trying to cope with new technology but they are finding it difficult with the space of modernization.

Employees are paid good salary as well as other amenities. The work culture is different with the traditional industry .Young boys and girls are attracted, working hours are more flexible, it extends late in the night, the nature of work is unique and new .There is hardly any scope for the personal interaction. The industry is functioning day and night because transactions are taken place with the local as well as global market.

There is competition among the IT companies to attract people as a result, high attrition rate is observed. In this sector employees are experiencing less job security and tension .The system is new and difficult to adjust .To attract people monetary and non-monetary benefits are provided .Employees expectations are very high and hence they change job frequently. This being service industry the benefits are offered on the basis of capacity and skill of an individual employee .There is low level of unionization and work force is organized on the line of unorganised sector. The practice of collective bargaining is absent and individual level bargaining is experienced. The salary package is offered comparatively very high.

This industry has challenge to attract, develop and retain talented people. Many companies have started innovative H.R. practices, which are unique .There is impact on quality of work and quality of life .Problems relating to health are also experienced with the youth, eating habits are also changed, and new lifestyle is observed with the IT people .Management has started new policies and practices relating to H.R.D. These practices are varying with the one region with another .Another small company outsources company's activities .Technology has to be adopted for the effective utilization of human resources.

The study of this research proposal is restricted to information technology industry within the metropolitan area of Mumbai .This sector is important and big in terms of financial turnover, size of the employment, rate of growth, contribution to export, and very fast changes. In the wake of the changing global services landscape Indian I.T. and IT enabled services [ITES/BPO] continues to chart remarkable double –digit growth with industry.

Objectives of the study

The new economic policy of 1991 was introduced to cope with the problem of our economy i.e. economic crisis .Industrial policy was liberalized to develop competitiveness in local and foreign market .The changes in the industrial policy made employees to initiate measures pertaining to cut down cost of the production .Employer started to take steps to reduce wage cost and other related costs .Many Employers started to change their human resource policy for growth and survival. Resrarcher has selected some areas for research relating to employers and employee's concern.

1] The Information technology and ITES services being an important segment in national economy therefore, wanted to have scientific and rational investigation into H.R. policies with a view to understand Human Resources working in the vital sector with a proper perspective. The following area has been identified for detailed investigation.

[a] Recruitment and selection

[b]Retention of talented people

2] To understand the sources of manpower in the local labour market in relation to Information Technology industry. This is with a view to understand employment opportunities for local population.

3] To understand the impact on working life vis-à-vis work practices in IT industry.

4] To explore and investigate management philosophy of IT companies in relation to compensation benefits to their employees.

5] To benchmark H.R. practices in the above listed areas –so as to develop a set of model practices for IT companies.

Research Methodology

In the present study domestic as well as Multi-National companies constitute the universe and hence stratified as well as systematic sampling method is followed. The list of IT & IT Enabled services has been collected from NASSCOM and is being referred for the proper sampling .This list includes Information Technology companies, IT Enabled services plus Business Process Outsourcing companies operated in Mumbai metropolitan area.Researcher has selected 26 companies through the sampling method out of which 19 are domestic and 7 are multinational companies

Exact Size of the Sample:

- Total no of companies as per the list of NASSCOM – 222
- Total no. of companies selected for sampling-126

Final List of IT/ITES Companies for Sampling

Type of Companies	Total No.	Selected	per cent
Domestic	90	19	21
Multinational	36	7	19
Total	126	26	20.5

Source: survey data

For this purpose researcher has used the stratified as well as systematic sampling method for the research. The pre-designed schedule has been prepared and administered for the collection of data along with in-depth personal interviews of managers. The data has been subsequently analyzed with the help of computer analysis and interpretation and conclusions have been drawn.

At the time of pilot study, respondents had suggested to the researcher that at the time of designing the questionnaire/schedule, preference may be given to open ended questions, so as to elicit maximum information from them. Accordingly questionnaire was suitably modified and hence researcher has adopted qualitative technique for analysis. Researcher has enabled use of field work to focus on the cultural attributes of a setting based on the perceptions and perspectives of those are studied and where the findings are reported in a non-judgmental way. Unstructured and conversational interviews have been evaluated by the researcher in the study.

Data presentation, analysis, interpretation in relation to sample unit

As per the sample design, researcher contacted the unit company H.R. professionals on telephone. Researcher personally went to the company with questionnaire for administering with them. They shared their own experience and helped me to get relevant information. Later on, Researcher tried to fill up questionnaire at home in detail. These interactions helped me to learn practical knowledge with reference to my study. The questionnaire was classified into two categories i. e. Domestic company and Multinational Company. The data presentation, analysis and interpretation were done separately.

In the questionnaire, there were about 40 questions. The information relating to each question was presented in tabular form as well as in pie chart. Then each table's analysis and interpretation was done simultaneously few of them as given below.

Recruitment and Selection

Table -1 : Sources of Recruitment

Type of response	No of respondents	percentage
a) JOB SITE	19	100
b) EMPLOYEE REFERENCE	19	100
c) RECRUITMENT AGENCY	15	79
d) ADVERTISEMENT	14	74
e) HEAD HUNTING	12	63
f) COMPANY WEBSITE	14	74
g) WALK-IN-INTERVIEW	11	58
h) ENGG. INSTITUTE	08	42
i) ANY OTHER	01	5

(Source; Survey Data)

The data of my research indicates that all respondent companies use Job-site and Employee reference as a major recruitment source for their company. Out of 19, 79 per cent companies go to Recruitment Agency as a source of recruitment. Out of 19 companies, 74 per cent companies have opted for advertisement and company website. Out of 19 companies, 63 per cent companies have preferred head hunting process for recruitment. Out of 19 companies, 58 per cent companies have Prefered walk-in-interview process for recruitment. Out of 19 companies only 42 per cent companies have gone for campus recruitment to the engineering institutes. The above table reveals that companies give more preference for recruitment through job-site and employee reference because it is cost effective method as well as time saving as compared to other processes of recruitment. Another important reason for recruitment through job-site and employee reference is high attrition rate in IT companies. For example if you go for campus recruitment, it is very long, time consuming and lengthy process.

Table -2: Parameters for Selection Process

Type of response	No of respondents	Percentage
Functional Knowledge	17	89
Leadership Skill	12	63
Attitude	15	79
People Management Skill	11	58
Potential for Growth	13	68
Good Academic Qualification	15	79
Any Other (Based on Job Profile, as per requirement)	02	10.

(Source; Survey Data)

It is also observed that the functional knowledge is important for deciding selection process as per 89 per cent respondents. The attitude and good academic qualification are also important parameters for selection process as per 79 per cent respondents. The 68 per cent respondents identify the potential for growth as an important parameter for selection process. According to 58 per cent respondents, people management skill is one of the major criteria for selection process. The respondents see leadership skill also important parameters for selection process. Only 10 per cent respondents say that job profile and requirement will decide parameters for selection process in different circumstances.

The functional knowledge, good academic qualification, attitude, potential for growth leadership skill, people management skill is the important parameters for adopting selection process. The one of the parameter i.e. job profile is not important from respondents point of view. The selection process is very important that, if the right candidates are not properly selected, the attrition rate may be high, the cost of which will have to be borne by the companies concerned. In the selection process management prefer good academic record at the entry level where they can mould them in systematic way.Candidates intelligence, analytical ability and logical reasoning is tested in the process.

Table -3: Why do people leave the organization?

REASONS	NUMBER OF RESPONDENTS	percentage
a) Increase in Salary	08	42
b) Higher Education	07	37
c) Career Opportunities	12	63
d) Brand name of Company	03	16
e) Non-listed company in market	01	5
f) Overseas Opportunities	02	11
g) Personal reason	04	21
h)Relocation	01	5

(Source; Survey Data)

The data reveals that, the most important reason for leaving the organization is better career opportunities as per 63 per cent respondents. As per 42 per cent respondents, employee leaves the job for getting higher pay package. According to 37 per cent respondents, employee leaves the job for further higher education. According to 21 per cent respondents, employees leave the job on personal grounds. According to 16 per cent respondents, candidates leave the job on the basis that companies' products are not branded. Only 11 per cent respondents indicate that candidates leave organization for overseas opportunities. According to 2 candidates employee leave the organization due to non-listing of the Company in the Share Market and change of location.

The data can be interpreted; the employees are leaving the organization for better career opportunities because of the characteristics of the IT industry the brand name and want to grow very fast and that is why the young generation is acquiring good positions in IT industries. The IT industries pay high salaries and provide lot of welfare facilities, so employees are changing job frequently. The employees leave the organization for higher education because they feel they must get stability in life through good career and opportunities. Another important aspect is that the technology is changing very fast and they want to cope up with the new technology otherwise they will be loosing the job.

The exit interview is one of the major instruments from the management side to curtail attrition rate, this process helps the management to get real picture from the outgoing employee through one to one interview. This is very effective in IT Company because through this process they can analyze the drawbacks/ loopholes in the organization. They can improve through the counselling, that's why they have either the prepared questionnaire or exit interview form. It will help them to reduce the cost for further recruitment and selection process. They can also benchmark with the competitors about the compensations and other facilities. This process helps them to get right information from the candidates about competitors, their policy of compensation and relevant activities.They can modify company's policy according to the situaton.

According to the majority respondents, monetary benefit is the crucial factor from the management side to retain the talented people. So it is observed that people are leaving the job even though there is a small rise in the salary. As a result more attrition rate is observed in the IT industry. People are not attracted towards the non-monetary benefits offered by the companies. Career development, recognition and rewards are also one of the important aspects of management policy to retain talented people.

With regard to innovative HR policies, 7 companies have performance link reward system as a major monetary benefit policy. The 4 respondents say that there is no specific policy in regard as far as monetary benefit is concerned. Very few companies have responded to monetary benefit provided with regard to ESOP scheme, loyalty bonus, Group insurance, Loan policy, leave enhancement policy, incentive, special rewards, market driven compensation, high salary, night shift allowance and conveyance etc.

With regard to non-monetary facilities 5 respondents give more weightage to recognition award. At the same time 5 respondents have replied that there is no specific non-monetary scheme in the organization. According to majority respondents the non-monetary benefits like higher education, IPR- patents, promotions, quarterly project policy, get-together, picnics, conducive working environment, cultural programmes and food-coupon. In house medical treatment, flexible working hours has not been given more importance in the organization.

The data reveals that performance link reward system and incentive scheme is the major HR policy adopted by the companies to retain talented people. Other monetary factors are not given weightage by the respondents. With reference to non-monetary policies recognition award and get-together contribute to large extent as HR innovative policy to retain talented people. Other factor as far as the non-monetary is concerned has not given more weightage to retain talented people.

MAIN FINDINGS

Main findings have been presented in relation to hypothesis which is framed in my research work.

1] Innovative H.R. practices are emerging in IT sector.

The respondents of both categories have stated that work culture in IT industry is friendly, open and transparent. There is a lot of variation in the observation of the respondents in both the categories. It is also stated that work culture in IT industry is more vibrant, professional, competitive work environment and more scope for knowledge upgradation. This industry provides more attractive and healthy environment. This industry is employing young workforce. Therefore the work culture is very unique and attractive. The work culture in this industry cannot be compared with that of any other industry.

All the respondent companies are initiating Innovative human resource practices to attract and retain talented work force. There is a shortage of skilled manpower. The practices like work-life balance, recognition and reward system, flexi work time concept, employee of the month are more effective in the I T industry. The flexi work concept is very unique because company is allowing employees to work from home. The company is saving cost on infrastructure like cafeteria, power, transport etc. Flexible work schedules are initiated by employees and approved by management to meet business commitments while supporting employee personal life needs. The factors on which Flexi time is allowed to an employee include: Child or Parent care, Health situation, Maternity, Formal education program. This hypothesis is proved to a great extent.

2] The practices of individual bargaining are based on Individual skill and being followed in IT industry.

Individual employee is evaluated by the supervisor on the basis of individual skill and experience. Domestic as well as multinational companies decide compensation through individual bargaining. There is always shortage of skilled manpower. Therefore; salaries of the IT employees are not identical. The process of collective bargaining is being replaced by individual bargaining based on the individual skills.

3] The change in technology is so fast that both i.e. employers and employees are finding it difficult to cope with the speed of technology. As a result of which the industry faces the problems like high turnover and the lack of job security for the employees.

The majority of respondents from both the categories have stated that management as well as employees is trying to learn new skills by way of training so that they will not encounter any problem in future. The employee's turnover is not so high in case of normal skilled employees in both the categories but in case of highly skilled employees, turnover is observed to be higher.

The employee while evaluating their role to cope up with the changing technological needs perceive it may positively, on the whole the attitude of the employee in respect of changing technology is incourageous and pro-active. Some of them are more positive as they have enlisted the response is very positive. Of course in this perception they do not necessarily look towards technology which can provide them better opportunity .However employees has been seeing and taking periodical review of the changing technological needs and pro actively take up the initiative on their own in respect of upgrading their skills .This is with the hope to get more monetary benefits and better carrier opportunities .on the whole it has been observed that the employees in IT sector are very eager to cope of with the changing technological needs.

The majority of respondents from both the categories have stated that there is job security for the employees. A few of them have stated job security is not there. In the present study, all the respondents are the managerial staff. According to them, they do have their job security but generally employees are scared of losing their jobs.

4] The social life of the employees is disturbed due to stress, working environment and job timings.

The majority of domestic as well as Multinational company respondents have observed that there is an impact on social and economic life of employees in the IT industry. The economic status has been improved, at the same time due to busy schedule, long hours of work, permanent night shift, incredibly high work targets, loss of identity, fast life, junk food, lack of social participation; new social environment and odd timings have resulted in negative impact on work-life. The life styles have been affected to a great extent.

About 30-40 per cent of the employees working in the call centre had complained of eye problems, Soreness, dryness, blurred vision, light sensitivity, headache, all these put together is labeled as the computer vision syndrome. This problem is more acute with the team leaders who need to come in early and go back late. Digestive disorders are common among employees in the call centre. Thirty-four percent of employees had complaints on this point as revealed by the HR managers. This hypothesis is proved to a great extent.

General Observations

Besides specific findings in relation to pre-decided area, the researcher would like to share general observations, since he had spent a considerable amount of time with practicing executives in the IT sector.

It is significant to note that all the MNC respondents have stated that there is job security to the employees whereas out of 19 domestic respondents 84 per cent of them have stated that there is job security. The majority of MNC and domestic company respondents have stated that the grievances are resolved through one to one discussion, at the same time other methods are also used as per their needs. The majority MNC respondents have stated that health hazard in IT industry has been observed. In case of domestic company respondent a few of them have observed health hazard. As a result high stress and physical problems are experienced. It is significant observation in both the categories that there is impact on Social and economic life of employees in IT industry. The social and economic status has improved. At the same time some negative impact on social and family life has also been observed.

The majority MNC and domestic respondents have stated that the work culture in IT industry is very different, open, friendly and more scope for personal development. The nature of work in IT industry is unique but no common factor is emerging out of the same. It is a technology driven, fast growing organization. It is significant observation in both categories that innovative HR practices have been observed in IT industry as compared to other industries such as Engg, pharma and services. The majority MNC and domestic companies respondents have stated that there is impact of long working hours on health of employees that is high stress, physical ailments etc. It is very significant that majority MNC and domestic companies trying to initiate steps to attract develop and retain talented people in the competitive environment.

MAJOR RECOMMENDATIONS:

1) Recommendations with reference to recruitment and selection

It has been observed that both domestic and multinational companies covered in the survey follow systematic manpower planning i.e. short-run planning covering 3-6 months based on the project requirements. This may result in to complacency and hence it is suggested that the companies may develop long term perspective covering the period of 2-3 years. This will help them to sustain in global competition.

The attrition rate is always high in respect of IT companies. However, our survey findings indicate it is in the normal range of 10-15 per cent. Since, attrition rate is related in the high cost of recruitment, it is suggested that there may be upgradation of the skills program in the beginning so as to reduce the further cost of recruitment.

It has been found that local employment market is sufficient to fulfill the future demands of the companies. It is advisable and necessary to upgrade the skills of the candidates in the beginning for future prospects.

Job site and employee reference scheme are the major source for recruitment which is easy, fast, low cost and more effective. Therefore it is suggested that companies will have to effectively utilise the recruitment process under which job-site and employee reference scheme is given more importance due to cost effectiveness.

If recruitment process is planned, systematic and cost effective, it will reflect into reduction in attrition rate in the organisation.

It is observed that parameters for the selection process are different but functional knowledge and attitude is more important. As a result employee may be properly trained at the entry level so as to reduce attrition in the company.

It is suggested that medical examination may be conducted at the time of entry. This is necessary because of the type of work expected to be done by the candidate is quite different.

It is found that companies are having central talent pool of employees to fulfill future needs of the projects. It is advisable that companies should have planning for talent pool for short term as well as long term needs.

2) Recommendations with reference to retention of talented people

It is found that attriton rate in both the type of companies is about more than 10 per cent. The attrition rate measuring formula is used by the domestic as well multinational companies. The attrition measuring process may be evolved in such a way that it will help them to measure in a systematic way.

It is observed that younger generation feels that career planinng is very important. They are ready to accept more responsibilities and challenging tasks, therefore it is suggested that a proper career path may be explained to them initially so that they will not leave organisation at the initial stage.

As far as exit interview feedback process is concerned in both the categories, feedback is measured through one-to-one discussion. The exit interview process may be followed rigourously so that it will help to understand interdepartmental relationship in the company. The strong exit interview process will help management to reduce the cost of recruitment process.

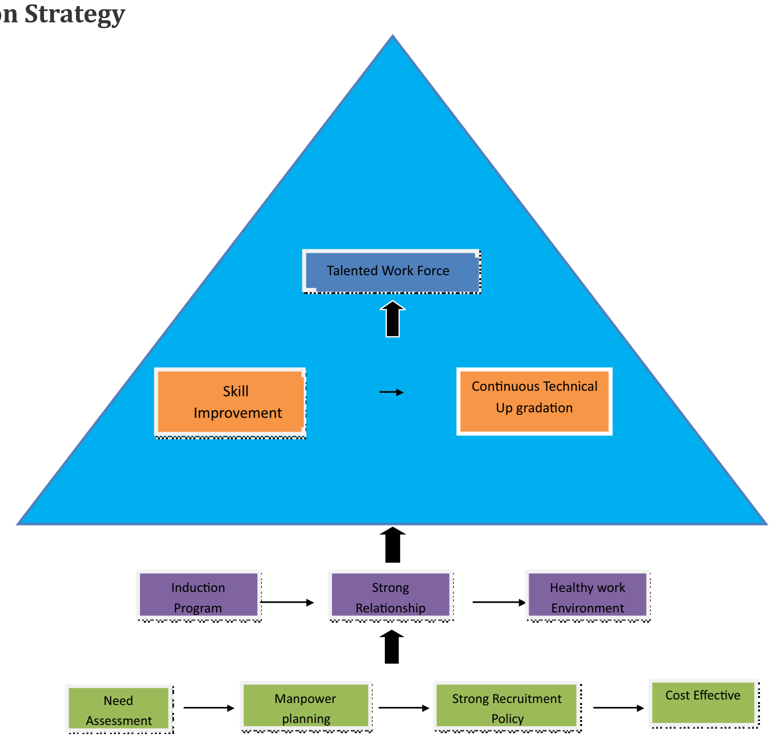
The domestic companies as well as the MNCs adopt differnet innovative HR practises and policies to retain talented people. Compensation is not only the factor but the reward and recognition policy may be suitably modified to retain talented people. The non-monetory benefits are more important than monetory benefits to retain talented people. It is strongly recommended that work environment may be healthy and attractive to the employees.The company can create employees' benevolent fund and every employee should contribute a certain percentage of his/her salary to the same. In case of unexpected situation or financial contingency they can apply for assistance from the fund and the request for the same should be approved by a committee of employees. As we all know, employees love having potential safety net to fall back upon during difficult times.It is suggested that safety net shoud be properly evolved.

Effective succession planning that is tried to employee career plans has been found to improve morale and productivity. Organizations that support career development by allowing employees to explore new opportunities within the organization and encouraging job mobility are more likely to have employees who actively participate in their career development. Because, there employees are more likely to seek opportunities within the organization and as a result employee retention and overall satisfaction increases while knowledge drain and loss of critical knowledge decreases.

The companies must develop proactive, dynamic and committed strategy for building long term relationships with employees and clients. Further, from core values communication and listening to genuine view and concern about the company and community, the companies must focus on the objectives, while deciding the businesses strategy. This makes the, employees and clients to stay with the company.

The exit interview process should be formal and systematic so that feedback will help to monitor the attrition rate.
In all 60 innovative Human Resource policies are listed by respondents of employers in I.T industry out of which the following practices are unique in stability and growth of the industry

Talent Retention Strategy



Human Resource Management practices Ideal Model

The above Human Resource practices ideal model is developed on the basis of research carried out in the information technology industry in the Mumbai metropolitian area. If the above model is experimented in the IT industry, the organisations' capability is going to be developed to attract and retain talented people.

The model is designed to suit any IT and ITES organisation which is flexible to suit different types of organisations. The IT organisation needs talented workforce and they are moving towards the talented workforce. To reach the destination, management should have strong foundation of manpower planning at the initial stage. At the first, organisation should carry out need assessment survey then accordingly individual needs and organizational needs must be aligned together. The need assessment process will help to design proper manpower planning for short term as well as long term. After the planning process, execution will go further through the strong recruitment policy which will be worked out with suitable steps. This process is going to be useful for reducing costs in the global competitive environment. It is fast, easy and cost effective recruitment process.

Once the foundation of the organisation is strong, new employee may undergo very systematic induction program which will focus on orientation on management as well as about their career in the organisation, which will help them be more comfortable in the organisation at the entry level. It will help in developing a strong relationship between the employee and the management. Then we have to take steps for creating conducive working environment for employee. The work culture is very important in IT industry to attract, nurture and retain talented workforce which will create healthy working environment.

At the third stage, organisaton as well as the employee are passing through process of skill development. In IT industry technology is changing very fast therefore, both are trying to improve skill for sustainability. The skill improvement depends upon new technology. Management as well as employees are trying to upgrade their skill to the latest technology through training, which is a continuous process of technology development. All the efforts will lead the organisation towards the talented work force for sustainable development of the organisation.

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Determinants Of Profitability Of Public Sector Banks By An Empirical Estimation Of Profit Function Models

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ABSTRACT

The present work is an attempt to analyze the profitability and its determinants in banking sector in India. Profitability in the bank is a function of several variables that may be called as different determination of profitability. Now the question arises what are the factors that contribute to the improvement in profitability and mainly what are the factors responsible for deterioration in profitability of banks. Therefore, an attempt has been made in this study to estimate the impact of selected factors on bank profitability. Therefore, State Bank of India was chosen to critically examine the determinants of profitability of the banks for the present study. An empirical estimation of profit shows that credit deposit ratio, NPA as percentage to net advances, provisions and contingencies, operating expenses and business per employee are the significant determinants of profitability of SBI during the study period. To conclude, banking industry in the new millennium is never going to be like what it was in the last century. Banks in India have marched ahead during the post-banking sector reforms period in fostering economic growth of the country and have shown tremendous resilience and vibrancy in their strategies, processes and operating to remain competitive in the globalized environment.

Keywords:
Public Sector Banks, State Bank of India, Associate Banks, Efficiency, Bank Profitability and Profit Trend.

DETERMINANTS OF PROFITABILITY OF PUBLIC SECTOR BANKS BY AN EMPIRICAL ESTIMATION OF PROFIT FUNCTION MODELS

Introduction

Capital is one of the factors which invigorate the economic development of a nation. Capital is the consequence of investment. Higher the investment, higher is the growth of economy. The rate of investment is directly proportional to the savings of the general public. It is in regard of mobilizing people's savings the financial institutions come into play a very important role. Among the financial entities, commercial banks are the predominant financial intermediaries. Commercial banks are the kingpin of all economic activities.

The growing importance of these banks is reflected in business, agriculture and industries in India. These banks are most important in terms of their strength and sweep among the financial institutions. It is well recognized that the commercial banks are instrumental in shaping the economic destiny of a country. They are considered as the nerve centers of economic and finance of a nation and the parameters of its economic prospective. The role of commercial banks in achieving balanced regional development can hardly be over emphasized. They help in this direction by suitably designing their policies in favour of backward and unbanked areas. By opening their branches in backward areas, banks make credit facilities available to the disadvantage sectors. Also, the funds collected from developed regions, may be channelised for investment in underdeveloped regions of the country. Since the banks have stupendous investment potential, they can make a significant contribution in eradicating poverty and unemployment and can bring about a progressive reduction in inter-regional/state, inter-sectoral and inter-personal disparities.

As a result of globalization of financial markets banking institutions face today a fast paced, dynamic and a competitive environment at the global scale. Within such a competitive environment, banking institutions are forced to examine their performance because their survival in the dynamic economics of Twenty-first century will be dependent upon their productive efficiencies. Hence, in response, banking firms have been trying to adapt and to adjust themselves to improve their productive efficiencies in the changing social and economic environment. The present work is an attempt to analyze the profitability and its determinants in banking sector in India.

Review of Literature

There are a number of cross sectional studies that provide direct evidence about the determinants of profits. Those studies includes Mishra (1992), Satyamurthy (1994), Mohini (1994), Sarkar and Das (1997), Bhattacharya (1997), Das (1999), Singla & Arora (2005), Manish Mittal and Aruna Dhade (2007), Siva Reddy Kalluru and Sham Bhat (2008), Manjappa and Mahesha (2008) and Uppal (2009). The review of empirical works facilitates understanding of various structural and non-structural variables that determine profitability. It gives an idea of extensive and diversified works on determinants of profitability.

Statement of the problem

Narasimham Committee 1991 observed that banks' profitability since nationalization has been under severe stress. The committee viewed that system of direct investment in terms of minimum Statutory Liquidity Ratio and the system of direct credit program in the form of rural banking and priority sector lending have been the major factor which constricted operation flexibility of banks and depress their earnings.

Thus, Public sector bank managements in India are at present confronted with the twin challenge of achieving greater efficiency on the one hand and improving profitability on the other. Allocative efficiency to a greater extent is associated with profitability. Profitability in the bank is a function of several variables that may be called as different determinants of profitability. Now the question arises what are the factors that contribute to the improvement in profitability and mainly what are the factors responsible for deterioration in profitability of banks. Therefore, an attempt has been made in this study to estimate the impact of selected factors on bank profitability.

Selection of the State Bank of India and its Associates

The State Bank of India is the biggest commercial bank in whole of Asia. It has occupied a unique place in the Indian money market, as it commands more than one-third of India's banking resources. It commands resources of public confidence through its dedicated service. The State Bank of India extends its co-operation to the government in its pursuit of building up an egalitarian society with a rising standard of living by designing its lending policies accordingly. Already developed sector but towards the under-developed and neglected sector of the economy. It helps the nation in the removal of poverty, creation of more employment opportunities and in overcoming the disparities in the distribution of income and wealth. In the present era of banking sector reforms, the State Bank of India has witnessed deregulation with a strong capital base and expenses-to-income rate which is comparable with world class banks. Moreover, the State Bank of India continued to retain its position of the pioneer in the Indian Banking Industry by reorienting itself in terms of market strategies, organizational structures systems and processes to enable it to meet the emerging challenges surely.

In the area of developing banking, the State Bank of India has eminently fulfilled its pioneering role during the five decades of its existence. The development banking considerable changes are in the offering. A large part of the priority sector lending has been de-regulated for interest rate purposes and is displaying some commercial characteristics, participating the growing financial sectors as an efficient and responsible player, the State Bank of India represent no less contribution to national economic development. To retain the banks position as the premier Indian financial services group with the world class standard and significant global business committed to excellence in customer and diversifying financial services sector, while continuing to emphasis on its development of banking role. Therefore, SBI have been chosen to critically examine the determinants of profitability of the banks for the present study.

Significance of the study

In the process of financial intermediation, banks have come to acquire the nature of multi-product firms. However their primary functions remain same and these form the most remunerative functions of banks. The performance of these functions pre-supposes that after various cost of such functions are met, a margin of profit is left and level of profit should be taken as an index of the efficiency of working of organization. For that matter, profit as an indicator of working efficiency is applicable to any business unit. Depending on their size, banks are multi-product firms and they compare with each other for profits. There is growing evidence of concern by the authorities on the declining profitability of the banking system due to unsecured loans and advances. The approach of policy makers towards profitability has changed, with the result that low profits have become a fact of life. Therefore, it is high time to concentrate on analysis of the profitability performance and factors leading to profitability. A sound, efficient and profitable banking sector would be able to resist negative shocks and contribute to the stability of the financial system by making financial resources accessible to economic needs. Therefore, the determinants of bank performance have attracted the attention of the academic researchers as well as of the policy makers.

It is to the credit of Indian banks that the adjustment process to the reform measures has been smooth and bereft of any major eventuality. Today, most of the Indian banks can boast of moving progressively towards international benchmarks in terms of accounting standards, transparency, profitability and compliance with other important international norms. It is also to the credit of these banks, and the regulatory and supervisory climate that the Indian financial system by the large proved immune to the spate of recent contagions. As a result of reforms, attempts are now visible to right size of the operations, tone up the functional skills and build up a cushion against possible shocks from within and overseas. The most redeeming features of the reforms relate to its gradual nature as a result of which, banks have been afforded the necessary lead time to tide over possible adversities. There is a flip side as well to the success of banking reforms especially relevant to the Public Sector Banks.

More specifically, in connection with the profitability, last few years have seen many of the Public Sector Banks posting handsome profits and improving profitability levels. However, sustaining the profit momentum is best with issues like progressive of decline in interest spread, volatile business environment, fierce competitive pressures and the negative externalities associated with the large size of these banks.

The ensuing banking sector will presuppose a shift in focus from size-related issues to concern about profitability, profit monitoring and efficiency in operations. Thus, the financial sector reforms made by the Government of India in 1991 and 1998, as per the recommendations of Narasimhan Committee, have brought significant improvement in the strength, resilience and competitiveness of the Indian Banking system. It is, therefore, relevant to study the efficiency with reference to the profitability of Public Sector Banks in general and State Bank of India and its Associates in particular in the post reform era of banking sector.

Hypothesis

The hypotheses of the present study are

(I) Spread, Non-interest Income, Credit/Deposit ratio, Business per Employee and Profit Per Employee were positively associated with the profitability of Bank.

(ii) NPA/Advances ratio, provisions and contingencies and operating expenses were negatively associated with the profitability of bank.

Sample Design

It is nearly more than 20 years since reform process has been started in Indian Banking Industry. It is necessary to know whether the reforms are being fruitful or not keeping in this view, it is decided to analyze the performance of public sector banks in globalized economy. The review of various study on literature on banking revealed that there is not enough study that covered the performance of State Bank of India and its Associates bank in relation to financial aspects. State Bank India is the biggest commercial bank in whole of Asia. It has occupied a unique place in the Indian banking system as it commands more than one-third of India's banking resources. Moreover even in the present era banking sector reform, State Bank of India continue to retain its position as the pioneer in the Indian banking industry by re-orienting itself in terms of market strategies, organizational structures, systems and process to enable it to meet the emerging challenges squarely. Therefore, this study is primarily based on financial performance of State Bank of India and its associates.

Period of study

The period 1996-97 to 2009-10 is selected for this study. This 14 year period is chosen in order to have a fairly long, cyclically well balanced period, for which reasonable homogeneous, reliable and up-to-data financial data would be available. Further, the span chosen for the study is the period of the beginning of reform measures introduced by the Government of India. Hence, the period 1996-97 to 2009-10, is era of growth of performance in the banking sector and has got genuine economic significance of its own.

Sources of data

This study is primarily based on secondary data. The major source of data analyzed and interpreted in this study related to all those selected banking companies is collected from PROWESS database, which is the most reliable on the empowered corporate database of Centre for Monitoring Indian Economy (CMIE). The database provides financial statements, ratio analysis, funds flow and cash flows etc. Besides the prowess database, relevant secondary data have been collected from capitaline database of Bombay Stock Exchange, Bombay Stock Exchange Official Directory, CMIE publication, various publications of RBI – Banking Statistics Research's (BSR's), Banking Statistics, Statistical tables relating to banking in India and Report on trends and progress of banking in India, Reports on Currency and Finance, Economic Survey, Libraries of various research institutions, Indian Banks Association bulletin, Indian Institute of Bankers Report and various Internet resources.

Data Analysis

The role of statistical tool is important in analyzing the data and drawing inferences there from. In order to derive the open handed results from the information collected through secondary data, various statistical tools like mean, standard deviation, variance, compound annual growth rate, regression, testing of hypotheses have been accomplished through Excel, SX and SPSS software. Some of the statistical techniques particularly t-test and ANOVA have been used to interpret the sense of mathematical relationship amongst values of different variables so computed in the study. The hypothesis has been tested separately on the sample. This can be done via the mechanism of the F test and t- test.

Determinants of Profitability

Since the initiation of economic reforms in 1991-92, the banking sector in India has seen numerous developments and policy changes. The more important reforms initiated in the banking sector includes adoption of prudential norms in terms of capital adequacy, assets classification and provisioning, deregulation of interest rates, lowering of Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR), opening of the sector to private participation, permission to foreign banks to expand their operations through subsidiaries, the introduction of Real Time Gross Settlement (RTGS) and liberalization of FDI norms. The main thrust of the banking sector reforms has been the creation of efficient and stable financial institutions and development of the banking industry.

Introduction of banking sector reforms have changed the face of Indian banking industry. The national, institutional and international boundaries are becoming less important. The globalization of operations and development of new technologies are taking place at a rapid place. A paradigm shift in marketing philosophy of banks is visible from the rising focus towards quality of service for customers. All this has led to the increase in resource productivity, increasing level of deposits, credits and profitability and decrease in non-performing assets. However, the banks are now facing a number of challenges such as frequent changes in technology required for modern banking, stringent prudential norms, increasing competition, warring level of NPA's, rising customer expectations, increasing pressure on profitability, assets-liability management, liquidity and credit risk management, rising operating expenditure, shrinking size of spread and so on. The reforms in banking sector have also brought the profitability under pressure. RBI's efforts to adopt international banking standards have further forced the banks to shift the focus to profitability for survival.

Hence, profitability has become major areas of concern of banks in addition to productivity, financial and operational efficiency. An efficient management of banking operations aimed at ensuring growth in profits and efficiency requires up to date knowledge of all those factors on which the bank's profit depends. This is only possible through research studies conducted by researchers, economists and analysts.

The objective of this part is to examine determinants of profitability of State Bank of India during the study period of 1996-2010. Determinants of profitability are analyzed using the techniques of ordinary least squares. Based on existing theories and relevant economist empirical works variables are selected. The variables occurring in the models and their measurement and their expected relationship with net profit are described in Table 1.

Table 1

Variable Definition and Expected Relationship

Variables	Definition	Measurement	Expected Relationship with Profit After Tax
S	Spread	Interest income (-) Interest Expenses	+
NII	Non-Interest Income	Total Income (-) Interest Income	+
C / D	Credits / Deposits	Advances / Deposits	+
NPA / Net Advances	Non-performing Assets / Advances	NPA/Advances	-
P&C	Provisions and Contingencies	Provisions and Contingencies	-
OE	Operating Expenses	Includes establishment expenditure salary expenditure and expenditure on technology upgradation.	-
BPE	Business Per Employee	Business (Deposits + Advances) / Total number of Employees	+
PPE	Profit Per Employee	Net Profit / Total number of Employees	+

Source: Constructed.

Specification of the Profitability Model

The variables considered for the present study include Spread (S), Non-interest Income (NII), Credit / Deposit Ratio (C/D), NPA as percentage to Net Advances (NPA/advances), Provision and Contingencies (P&C), Operating Expenses (OE), Business Per Employee (BPE), Profit Per Employee (PPE) and Net Profit (NP). The data relating to these variables have been collected from the annual reports of banks, Journal of Banking Association, RBI's Bulletin and Internet (www.rbi.org.in.). In order to identify the variables that have explanatory powers and are therefore, more important in managing the operations of a bank, Multiple Regression Model is applied.

$$Y=a+b_1x_1+b_2x_2+b_3x_3+b_4x_4+b_5x_5+b_6x_6+b_7x_7+b_8x_8+u$$

Where,

Y	=	Net Profit (Profit After Tax PAT)
a	=	Constant term,
b_1 to b_8	=	Regression Co-efficient for the respective variables,
X_1	=	Spread,
X_2	=	Non-Interest Income (NII),
X_3	=	Credit / Deposit Ratio (C/D),
X_4	=	NPA as percentage to Net Advances (NPA/Net Advances),
X_5	=	Provision and Contingencies (P&C),
X_6	=	Operating Expenses (OE),
X_7	=	Business Per Employee (BPE),
X_8	=	Profit Per Employee (PPE),
U	=	Error term.

Here, Y (i.e.Net Profit) is the dependent variable, while the rest x_1 to x_2 are independent variables. The test of significance of overall multiple regression models were made through F-test. This test has been used to answer the basic question: Is there a linear relationship between dependent variable and any of the independent variables under consideration? To carry out the F-test, the Analysis of Variance (ANOVA) is performed. Further multiple co-efficient of determination (R^2) and adjusted multiple co-efficient of determination (Adjusted R-Square) were also compiled to measure the explanatory power of multiple regression model used herein. With the aim of evaluating the significance of individual regression co-efficient (b_i), t-test is performed at 0.01, 0.05 and 0.10 levels of significance. While using the regression techniques efforts made to reduce the problem of multi-collinearity and auto correlation. The data collected is processed and analyzed with the help of SPSS software. The nature of relationship expected between the dependent variable (i.e. Net profit) and the independent variables considered for the present study for State Bank of India is presented in the Table 2.

Analysis of results

The model described above has been estimated for State Bank of India during the study period. The results of beta co-efficient and 't' values of the variables are presented in the Table 2.

Table 2

Determinants of Profitability in State Bank of India-Multiple Regression Model

[Dependent variable: Profit After Tax]

$$[PAT= -315.77+0.32x_1+0.28\ x_2+11.43\ x_3-9.97x_4+0.38x_5-0.35\ x_6+7.93\ x_7+3.68\ x_8]$$

Variables	Co-efficient	t-value	Significant / Not-Significant
Constant	-315.77		Significant *
Spread (X_1)	0.32	2.72	Significant *
Non-Interest Income (X_2)	0.28	3.96	Significant *
Credit / Deposit Ratio (X_3)	11.43	4.37	Significant *
NPA as percentages to net Advances (X_4)	-9.97	2.98	Significant *
Provisions and Contingencies (X_5)	0.38	3.97	Significant *
Operating Expenses (X_6)	-0.35	1.25	Not Significant
Business per Employee (X_7)	7.93	3.62	Significant *
Profit per Employee (X_8)	3.68	2.54	Significant **
R^2 = 0.99 Adj R^2 = 0.96 F = 35.32 Significance = 0.006			

* - Significant at 0.01 level

** - Significant at 0.05 level

Source: Computed

For the State Bank of India, Table 2 reveals that F value is significant at one per cent level. This result clearly indicates that variation caused by independent variables in the net profit of State Bank of India is significant and cannot left to chance factor. It is also noteworthy that the model explained 99 percentage of variations in the net profit of State Bank of India. The analysis shows that all the variables except operating expenses are found to be statistically significant in explaining profits of State Bank of India. It is evident from the result that credit / deposit ratio is the strongest determinants of profits followed by business per employee, profit per employee, provisions and contingencies, spread, non-interest income, NPA as percentage to net advances and operating expenses . The spread, non-interest income, credit / deposit ratio, NPA as percentage to net advances, operating expenses, business per employee and profit per employee did support hypothesis with expected sign. However the co-efficient of provisions and contingencies did not support our hypothesis rather appear with opposite sign. It is evident from the result that co-efficient of spread shows an increase of 0.32 units in profits as a result of one unit increase in spread which is statistically significant at one per cent level. The co-efficient of non-interest income and credit / deposit ratio indicates that the increase of 0.28 units and 11.43 units in profits as a result of one unit increase in non-interest income and credit / deposit ratio which is also significant at one per cent level.

Correlation Matrix

	Spread	NII	C/D	NPA	P&C	OE	BPE	PPE
Spread	1							
NII	0.114	1						
C/D	0.300	0.486	1					
NPA	-0.486	-0.162	-0.370	1				
P&C	0.503	0.274	0.255	-0.562	1			
OE	0.380	0.466	0.524	-0.603	0.377	1		
BPE	0.709	0.384	0.573	-0.4772	0.402	0.635	1	
PPE	0.484	0.495	0.429	-0.345	0.344	0.373	0.549	1

Source: Computed

The co-efficient of provisions and contingencies, business per employee and profit per employee shows that the increase of 0.38 units, 7.93 units and 3.68 units increase in profits respectively during the study period. All these co-efficient are statistically significant. It is also apparent from the table that co-efficient of NPA as percentage to net advances and operating expenses shows that 9.97 units and 0.35 units decrease in profits as a result of one unit increase in these variables respectively. However, the operating expenses turn as insignificant during the study period. The overall explanatory power of the regression appears to be good. This may be inferred from the co-efficient of determination (R^2) which is the measure of extent of movement in the dependent variable and that is explained by the independent variables. It is 99 per cent and adjusted explanation is around 96 per cent.

Conclusion

The analysis of determinants of profitability of SBI has brought out that the explanatory power of some variables significantly high. Such variables includes credit deposit ratio, NPA as percentage to net advance and business per employee. However, some variables namely spread, non-interest incomes, provisions and contingencies and operating expenses are found with low explanatory power. Among them one variable i.e., operating expenses found to have negative relationship. An empirical estimation of profit shows that credit deposit ratio, NPA as percentage to net advances, provisions and contingencies, operating expenses and business per employee are the significant determinants of profitability of SBI during the study period. To conclude, banking industry in the new millennium is never going to be like what it is in the last century. Banks in India have marched ahead during the post-banking sector reforms period in fostering economic growth of the country and has shown tremendous resilience and vibrancy in their strategies, processes and operating to remain competitive in the globalized environment. Although, public sector banks are lagging behind in many efficiency parameters, but they has also started to modernize their activities to compete with their counterparts. Therefore, SBI should expand their market base in rural sector and at the same time in the global market with modern techniques. Their survival will dependant upon their change in mind-set and competitive new vision.

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Companies Performance And Cost Of Capital An Interrelationship Study Of Indian Companies

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ABSTRACT

Finance is the lifeblood of the business. It is well known that finance is required besides the requirement of fixed and working capital for undertaking the program of extension, reorganization or expansion. Now a days market is open and finance is raised through issue of shares, debenture/bond from domestic as well as international capital market in the form of GDR (Global Deposit Receipts), ADR (American Deposit Receipts) and FCCB (Foreign Currency Convertible Bonds) and from the wide range of financial institutions. But, the finance is not free of cost. The suppliers of various sources of funds have a charge on the income of organization, like; dividend for shareholders, interest for bond/debenture holders; dividend /interest for non-banking financial companies, foreign investors and so on. This charge on each source capital is known as cost of capital. The present study focuses on whether cost of capital has any relationship with financial performance of companies like capital structure. For this purpose 151 top Indian companies on the basis of market capitalization 2007 have been selected and classified under different industrial groups. The statistical tools of ANOVA, correlation and multiple regression method have been applied. The study found that change of cost of capital affects the company's profitability position. The higher cost of capital adversely affects the profitability position of the companies. Specially, Indian larger companies should necessary to give proper emphasize at the time of procuring the funds. Again the relationship between cost of capital and companies performance is not specific rather depends on nature of industry as different companies are regulating under different regulations.

COMPANIES PERFORMANCE AND COST OF CAPITAL: AN INTERRELATIONSHIP STUDY OF INDIAN COMPANIES

During the last 40 years or so, the role of financial management has undergone a tremendous change. The ownership structure, size of business firms, security markets, financial system and instruments have greatly changed. As a result, the role of a finance manager has become far more important than merely a fund raiser. The finance manager is expected to maximize the economic welfare of the owners, which is represented by the market value of the firm. To achieve this objective, one has to take a number of decisions, the most important being the investment, financing and dividend decisions. Do changes in capital structure affect the companies' performance- *size of business, growth of business, liquidity of business, dividend payout of the business, profitability of the business*? This question has been puzzling the minds of both the finance managers and academicians for the last 40years.

Moreover, it is well-recognized fact that finance is necessary for every business concern. However, finance can be raised through issue of shares, debenture/bond from domestic as well as international capital market in the form of GDR (Global Deposit Receipts), ADR (American Deposit Receipts) and FCCB (Foreign Currency Convertible Bonds) and from the wide range of financial institutions. However, the finance is not free of cost. The suppliers of various sources of funds have a charge on the income of organization, like; dividend for shareholders, interest for bond/debenture holders; dividend /interest for non-banking financial companies, foreign investors and so on. This charge on each source of capital is known as ***cost of capital***. Again, whether cost of capital affects the companies' performance in terms of growth, size, profitability, dividend, liquidity? This question has confusing the academician as well as business policy maker while taking business decision.Inthis paper a humble attempt has been madeto empirically test whether there exists any relationship betweencost of capital and companies performance.

I. Statement of the problem

Studies in Indian context revealed that irrespective of nature of industries, *cost of capital* does not hold a prime factor in the financial decision making process in true sense and most of Indian companies have not considered the *cost of capital* as pre-requisite for capital structure decisions and financial managers are only emphasizing on available sources of finance in the market. However, *optimum capital structure* is sine- qua -non for sustainable growth of any industry. It is therefore, argued that *optimum capital structure* helps to maximize the market value of the firm as well as to minimize the overall cost of capital (Pandey: 1999). It has also been observed from a number of research investigations undertaken abroad that cost of capital has an impact on capital structure decision. But literature in this respect in Indian context is in the nascent stage. Here lies therefore, an essence of investigating the interrelationship between costs of capital and companies financial performance including financing decision of the firms with reference to India.

II. Review of Literature

A comprehensive review of literature in respect of interrelationship between cost of capital and companies' performance both in the domestic and international level was carried out. The major observations are summarized as under:

Cost of capital declines with leverage due to the tax deductibility of interest charges, (Modigliani and Miller, 1962). The cost of capital is affected by debt apart from its tax advantages (Sarma and Rao, 1968). Age, retained earnings, and profitability were negatively correlated while total assets and capital intensity was positively related to debt- equity ratio (Chakroborty, 1977).

There is an impact of size, growth, business risk, dividend policy, profitability, debt service capacity and the degree of operating leverage on the leverage ratio of the firm (Bhat, 1980). The practicing Indian corporate managers generally preferred to borrow instead of using other sources of funds because of low cost of debt to the interest tax deductibility and the complicated procurers for raising the equity capital (Pandey, 1984). 72 to 80 percent of the assets of sample companies were financed by external debt, including current liabilities (Pandey, 1985). The weighted average cost of capital of a company will fall with the increased borrowing until a point is reached where the higher cost of share and loan capital force the average up. The overall cost of capital should be viewed only as the first step in the development of divisional and specific project's cost of capital (Brigham & Gapenski,1988). The cost of capital must be equal to the rate of return on a project, which is necessary to maintain the current market price of the company's share (Srivastava, 1997). The cost of capital is playing significant role for determining the capital structure of multi National Corporation also. The multi national corporation is assumed to finance its foreign subsidiaries in such a way as to minimize its incremental weighted cost of capital (Bhalla, 2000). The firms are mainly concerned about financial flexibility and credit ratings when issuing debt and per share dilution and recent stock appreciation when issuing equity. The most firms have target debt-equity and issue-equity to maintain a target-debt ratio (Graham and Harvey, 2001). A project that requires highly specific assets would initially be financed by equity. However, as the debt to equity ratio decreases in line with agency theory, the demand for debt falls and equity rises (Vialasuso and Minkler, 2001). Cost of capital is a central concept in financial management linking both investment and financing decision. The Indian companies faced a high relative cost of capital as compared to their international counterparts (Chadha, 2003).

In most of the studies, it is been seen, no serious and systematic efforts have been made by the researcher in regard to relationship between cost of capital and companies financial performance.

III. Research Methodology

To attain the aforesaid objectives top 500 companies selected on the basis of rank of market capitalization as on March 2007. Finally, on the basis of availability of data, 151 companies were incorporated in the study and classified under 13 industrial groups. The study covers for the period of 6years from the year 2003 to 2008. For the analyses of data financial tools and statistical tools has been used. The financial tools like ratio analysis and statistical tools such as average, ANOVA, correlation coefficient and multiple regressions were used. Since, the study is based on secondary data therefore; the result has been statistically tested by using t-test, F-test. The data are collected from the Capitalline database 2007.

IV. Methodology of Computation Cost of Capital:

Following are the steps that are used in evaluating the Cost of Capital (WACC) for the companies taken for study

Estimation of the cost of the specific sources of funds. Due to the non availability of data Earning Price method is applied to evaluate cost of equity.

Cost of Equity (K_e) = (EPS/ MPS)+Growth of EPS

Where, EPS= Earning per Share, MPS= Market price per share

The Cost of Equity of both sample companies and the industry as a whole pertaining to individual year has been calculated at first and then simple average of the same has been taken. Cost of debt is calculated in the following way.

Cost of Debt (K_d) = r (1-t)

Where, t= tax rate of the firm and r= interest payable.

Where discounts or premium and flotation are involved, the cost of debt capital is to be computed as under, K_d= (C/I) (1-t)

Where, C= fixed interest cost, I = net processed of the issue, t =applicable tax rate of the firm

Then, their respective proportions in the capital structure are multiplied by these costs of sources. The book value weight of each source of finance used in calculating WACC because in practice ,the firm are using book value weight due to the book values are readily availability from the published records of the firm. (Khan& Jain,2004) *KrKdKe* **VRVDVEðð** Weighted Average Cost of Capital (WACC)= $\frac{E}{V}Ke \quad \frac{D}{V}Kd \quad \frac{R}{V} + \leq$

Where, V= (equity capital+ debt capital+ retained earnings), K_e= cost of equity, K_d= Cost of debt capital, K_r= cost of retained earnings, E= equity capital, D= debt capital R= retained earnings.

V. Conceptual Framework (Variables of measuring companies' performance)

Financial Leverage: Financial leverage is usually measured by the ratio of long term debt to the long term capital. The debt equity ratio is calculated to measure the extent to which debt financing has been used in business. Geometric Mean of debt-equity ratio calculated for the study period.

Growth (G) – Growth of companies measures the rate at which a firm is growing. It is one of the determinants of financial performance of the company. Due to the non availability of data, growth of profit after tax (RPAT) is used for measuring growth of companies. The rate of growth is the simple annual growth rate over the previous year of profit after tax. Geometric Mean of the ratio calculated for study period.

Size: The "capital employed" at the balance sheet value is used as a measure of the firm size. Capital employed comprises share capital plus reserves and surplus, long term debt, plus short-term loans. This measure is preferred over other measures of size, viz total assets, fixed assets, or employment and also, its magnitude indicates the confidence and attitude of investors towards the firm in providing financial resources. In other words, a firm can grow only when investors to provide finance to it. For study purpose average value of the capital employed for the period considered.

Profitability: Profitability implies profit-making ability of business unit. Howard (1961) articulated that the term profitability is a combination of two ward profits and ability. Profitability may be defined as the ability of a given investment to earn a return from its use. The ratio of Return on Net worth (RNW) is considered as determinants of profitability and Geometric Mean of the ratio considered for study period.

Liquidity: Liquidity refers to the ability of a concern to meet its current obligation as and when these become due. Therefore to account for the short-term risk of the firms, liquidity ratio has been included in the models. It is calculated by dividing current assets by current liabilities. Geometric Mean of the current ratio calculated for the study period.

Dividend pay out ratio: - It measures the relationship between the earnings belonging to the ordinary shareholders and the dividend paid to them. Dividend pay out ratio is calculated by using the following formula. DPR= (Equity Dividend/ Adjusted Profit after Tax – Preference Dividend – Dividend Tax) × 100. Geometric Mean of the ratio calculated for the period 2004-2008.

VI. Analysis and Findings

A. Interrelationship between WACC (Cost of Capital) and variables determining companies' performance

From the earlier literature reviewed, it has been emerged that the financial performance of the company is measured by different financial parameters like *size, growth, liquidity, profitability, leverage and growth of dividend of the companies*. In this respect, the financial tools such as *capital employed, growth of profit after tax, current ratio, return on net worth, debt equity ratio and dividend payout ratio* are considered to represent companies size, growth, liquidity, profitability, leverage and growth of dividend of the companies respectively. However, management endeavor relates to have optimal capital structure to some extent to achieve the goal of wealth maximization through better financial performance. It is worth mentioning in this respect that the financial cost of capital plays vital role in the level of earnings as well overall financial performance of the firms. This warrants studying the impact of WACC on financial performance of the company or vice-versa. Analysis of *correlation coefficient* between WACC and other variables measuring financial performance is necessary. The following table exhibits the results.

Table 1 Correlation Coefficient: WACC Vs Other Variables

Industry	Size	leverage	liquidity	growth	dividend	Profit.
Aggregate	.366*	-.320*	-.090	.004	.030	-.355*
	(.042)	(.042)	(.272)	(.595)	(.716)	(.034)
Energy	-.107	-.447*	-.522*	-.186	.478	-.516*
	(.742)	(.024)	(.042)	(.564)	((.116)	(.036)
IT	.169	-.528*	-.090	-.231	-.137	.361
	(.599)	((.048)	(.782)	(.470)	(.315)	(.240)
Construction	.385	-.066	-.086	-.080	-.186	.295
	(.217)	(.840)	(.791)	(.805)	(.562)	(.354)
Pharmaceutical	.088	-.508*	-.157	.116	.251	-.065
	(.745)	(.045)	(.560)	(.668)	(.347)	(.812)
Cement	-.049	-.591*	-.538*	-.289	-.191	.267
	(.892)	(.042)	(.039)	(.417)	(.597)	(.455)
Electricity	-.270	-.123	.387	-.166	-.360	-.596*
	(.395)	(.704)	(.214)	(.606)	(.250)	(.041)
Engineering	.197	.115	.125	-.540	-.138	-.446*
	(.586)	(.753)	(.721)	(.1070	(.703)	(.036)
Steel	-.032	.074	-.029	-.186	-.213	-.001
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Auto	.018	-.425*	.010	.101	-.286	.004
	(.954)	(.038)	(.975)	(.742)	(.343)	(.991)
Chemical	-.366	-.419*	-.195	-.019	.492	-.405*
	(.268)	(.041)	(.567)	(.955)	(.125)	(.001)
Personal care	.232	-.075	-.070	-.530	.651	.003
	(.580)	(.859)	(.870)	(.177)	(.080)	(.994)
Finance & Inv.	-.228	.489	.119	.347	.529*	.058
	(.527)	(.151)	(.744)	(.326)	(.016)	(.873)
Diversified	.389	-.205*	.428	-.511*	.221	-.186
	(.237)	(.048)	(.189)	(.012)	(.514)	(.585)

Figures in bracketsindicate p value

The table exhibited that there is a linear relationship between *size and WACC* and *leverage and WACC*. The sample of 151 companies as a group representing Indian industry shows that the correlation coefficient between *size and WACC* is 0.366 and *leverage and WACC* is -.320, and *WACC and profitability* is -.355, which are statistically significant at 5% level. This implies that size, leverage and profitability are affected by overall Cost of capital of the companies. The value of correlation coefficient between the variables revealed that with the increase of size of the organization the over all cost of capital is also increasing and vice-versa. The leverage is indirectly associated with WACC. One significant result obtained from the aforesaid correlation analysis that positive "r" against the "a priori", profitability and WACC are inversely related in the sector like IT, Construction Cement, Auto, personal Care and Finance & Investment. The reasons of such positive relationship can be attributed to the growth of EBIT of the companies irrespective of growth of capital structure. Moreover, these companies have efficiently used their capital and attempted to expedite their bottom-line. Thus, growing firms and firms with perennial demand do not bother much about WACC; rather they concentrate on expanding the business opportunities.

Now to study whether performance of the company has any impact on the cost of capital we have fitted regression line taking WACC as dependent variable. Following table exhibits the result.

Table 2 Regression Result: Weighted Average Cost of Capital (WACC) as dependent variable

Industry	size	leverage	liquidity	growth	dividend	profitability	R^2	F
Aggregate	3.65* (1.970) [.041]	-.108* (-1.227) [.024]	-.069 (-.810) [.419]	.034 (.418) [.677]	.029 (.346) [.730]	-.490* (-1.061) [.041]	.452	1.334* [.024]
Energy	-.557 (-2.57) [.052]	-.677* (-2.993) [.030]	-.614* (-2.717) [.042]	-.342 (-1.46) [.202]	.121 (.551) [.605]	-.267* (-1.263) [.039]	.834	4.195* [.049]
IT	-.193 (-.504) [.636]	-.786* (-1.748) [.041]	-.127 (-.406) [.701]	.444 (.869) [.424]	-.581* (-1.798) [.032]	.382 (1.240) [.270]	.616	1.334* [.049]
Construction	.543 (1.634) [.163]	-.603 (-1.656) [.159]	-.154 (-.424) [.690]	-1.041 (-1.97) [.105]	-.545 (-1.522) [.189]	1.134 (2.235) [.076]	.413	1.320 [.449]
Pharmaceutical	.188 (.543) [.600]	-.910* (-2.952) [.016]	-.761 (-2.226) [.053]	.494 (1.530) [.160]	-.148 (-.393) [.704]	.391 (1.275) [.234]	.593	2.189* [.040]
Cement	-.095 (-.287) [.793]	-.701* (-1.791) [.045]	-.408* (-.883) [.042]	-.244 (-.720) [.524]	-.424 (-.806) [.479]	-.129 (-.228) [.834]	.746	1.466* [.036]
Electricity	-.096 (-.332) [.753]	-.082 (-.286) [.788]	.463 (1.491) [.196]	-.094 (-.299) [.777]	.034 (.103) [.922]	-.669* (1.996) [.048]	.617	1.343* [.049]
Engineering	-.116 (-.333) [.761]	-.107 (-.207) [.849]	.462 (1.260) [.297]	-.878 (-2.26) [.108]	-.388 (-.833) [.466]	-.443* (1.438) [.046]	.332	1.492* [.049]
Steel	-.119 (-.356) [.731]	.549 (1.008) [.343]	-.524 (-1.024) [.336]	-.430 (-1.15) [.281]	-.380 (-1.110) [.299]	-.067 (-.174) [.866]	.221	1.379 [.749]
Auto	-.105 (-.310) [.767]	-.535 (-1.736) [.133]	-.577 (-1.277) [.249]	.039 (.101) [.923]	-1.040 (-1.904) [.106]	.417 (.949) [.379]	.523	.997 [.649]
Chemical	.020 (.122) [.909]	-.296* (-1.451) [.042]	-.197 (-1.393) [.236]	-.097 (-.429) [.690]	.271 (1.175) [.305]	-.987** (4.740) [.009]	.732	9.096* [.025]
Personal care	-.519 (-.545) [.682]	-.488 (.722) [.602]	-1.307 (-.586) [.662]	-1.482 (-.769) [.583]	.076 (.056) [.964]	-.255 (-.450) [.731]	.343	.559 [.844]
Finance & Inv.	-.476 (-.563) [.613]	.134 (.296) [.786]	.396 (.392) [.721]	.251 (.292) [.789]	.601* (1.505) [.048]	.080 (.142) [.896]	.421	1.284* [.047]
Diversified	.507 (1.948) [.123]	-.700* (-1.129) [.037]	.985 (1.530) [.201]	-.576* (-2.05) [.039]	-.161 (-.481) [.656]	-.257 (-.861) [.438]	.542	2.395* [.044]

Figures in **first** indicate t value and figures in **third bracket** indicate value at $\mathbf{t_{.05}}$ **or** $\mathbf{t_{.01}}$

The econometric analysis reveals that, leverage becomes one of the major influential factors of the cost of capital. Except Construction, Electricity, Engineering, Steel, Auto, Personal Care and Financial Service, it has been seen that leverage is negatively related to the cost of capital and statistically significant. It signifies the cost of capital has declined with significant increase of debt capital in the capital structure. The sectors like Construction, Electricity, Steel, Auto group are found to be highly geared company even in some case debts in form of borrowed capital are double to equity capital in the capital structure. Where as the sector like Engineering and personal care are maintaining low level of borrowed capital in the capital structure resulting into no affect on cost of capital. It implies capital structure decision plays an important role for minimizing overall cost of capital of the companies. But the companies must have to maintain optimum level of capital structure (debt-equity mix) based on its nature and risk zone where it operates. The statistically significant value of "F" at 5% level of significance indicates the regression equation is significant. While, value of R^2, indicates the extents or influence of independent variables on dependent variable, WACC. In aggregate term, it is observed that regression is significant. However, independent variables explain variation only 45% (R^2 = .452) of dependent variable. Thus, WACC is not significantly affected by financial performance of the firms as far as sample is concerned. Only, size (β =3.65) has positive while leverage (β = -0.108) and profitability (β = -0.490) has negative impact on WACC. However, such interpretation differs in case of individual sector. Thus, WACC is firms specific. The factors mainly qualitative are; business risk, financial risk, management risks appetite and fiscal policy as a whole. Similar views were expressed by (K.B. Hari: 2006) that Indian large firms are not using resources effectively in comparison to their smaller counterparts even not taking advantage of cheaper funds available over the years.

It is evident from the above table that a few, not all variables were detected as explanatory for the WACC across industrial sectors. Much of this is accountable to the nature of the industry.

B. Study of effect of change of Cost of Capital on financial performance of sample companies (Micro Level Analysis)

To know the effect of change of cost of capital on financial performance of Sample Company over the years, we calculated correlation coefficient of cost of Capital with different intervening variable. The correlation matrix results are exhibited in the following table.

Table 3 Correlation Coefficient Results: WACC Vs Intervening Variables

Sector	Name of the companies	Lever	Size	Growth	Profit	Liq	Dividend
ENERGY	Relience Industries Ltd	-.775*	-.014	.798*	.291	-.241	-.258
	Oil & Natural Gas Corporation Ltd	.219	-.251	.236	.177	.136	.273
	Indian Oil Corporation Ltd	-.480	-.218	-.290	-.238	.514	.172
	Bharat Petroleum Corporation Ltd	-.731*	-.365	-.232	-.666*	.710**	.863**
	Hindustan Petroleum Corporation Ltd	-.772*	-.493	-.704*	-.245	.124	-.188
	Mangalore Refinery And Petrochemicals Ltd	-.771*	-.711*	.291	-.333	-.341	-.033
	Chennai Petroleum Corporation Ltd	.288	-.548	-.225	-.325	-.433	.293
	Bongaigaon Refinery & Petrochemicals ltd	-.330	-.011	.442	.442	.062	.220
	Sterlite Industries (india) Ltd	.492	-.257	.288	-.565	-.510	-.893*
	Hindustan Zinc Ltd	-.898*	.662*	.310	.084	.006	.045
	Sesa Goa Ltd	-.452	.387	.362	-.164	-.781*	-.795*
	Gujrat Mineral Development Corporation Ltd	.305	.472	.682*	-.376	-.500	.266
	Wipro ltd	-.363	-.467	.078	-.300	.058	-.288
COMPUTER	HCL Technologies Ltd	-.256	.165	-.158	-.805*	-.234	.350
	Moser Baer (India) Ltd	.449	-.454	-.257	-.772*	-.812*	-.799*
	Rolta India Ltd	.240	.259	-.225	-.402	.048	-.419
	HCL Infosystems Ltd	-.370	.439	.242	.315	-.532	.129
	Cranes Software International Ltd	.272	-.090	-.279	-.111	-.188	.297
	KPIT Cummins Infosystems Ltd	-.122	-.277	-.130	.216	.411	-.305
	IGATE Global Solutions Ltd	.251	.411	.243	-.364	-.491	-.685*
	Zensar Technologies Ltd	.145	.121	.670*	.059	.489	-.322
	Geometric Ltd	-.484	-.254	-.223	.330	-.768*	.204
	CMC Ltd	.338	.223	-.890**	-.406	-.012	.415
	3i Infotech Ltd	.441	.446	.251	.699*	.262	.280
CONST	DLF Ltd	-.892*	-.678*	-.140	-.656*	-.525	-.696*
	Unitech Ltd	.484	.689*	.699*	.797*	.795*	-.245

Continued.......

Sector	Name of the companies	Leverage	Size	Growth	Profit	Liqui	Dividend
CEUTICAL	Wockhardt Ltd	.223	-.115	.276	.378	-.160	.163
	AurobindoPharma Ltd	-.698*	-.362	-.205	-.253	-.680*	.276
	Panacea Biotec ltd	.395	.248	.174	.173	.218	-.374
	Dishman Pharmaceuticals and Chemicals Ltd	.245	-.379	.252	.599*	-.507	-.683*
	Pfizer Ltd	-.339	-.420	.264	-.244	.681*	.169
	Torrent Pharmaceuticals Ltd	-.179	-.056	-.199	-.320	-.534	.298
	Ipca Laboratories ltd	-.177	.182	-.696*	.239	.081	-.002
CEMENT	Ambuja Cements Ltd	-.318	.166	.295	.241	-.696*	-.357
	ACC Ltd	-.681*	.475	.477	.686**	.695*	-.791*
	Shree Cement Ltd	-.276	-.452	-.249	-.425	-.593	.674*
	Madras Cements Ltd	-.418	-.431	-.284	-.426	-.436	.880*
	Birla Corporation Ltd	-.336	.770*	-.166	.368	-.687*	-.320
	Dalmia Cement (Bharat) Ltd	.245	.788*	.272	.340	.114	-.112
	Chettinad Cement Corporation Ltd	.026	.406	.128	.424	-.199	-.314
	JK Lakshmi Cement Ltd	-.784*	.354	.263	.799*	.513	-.445
	OCL India Ltd	.176	.435	-.117	.358	-.461	.373
	Ultratech Cement Ltd	.245	.534	.381	.697*	-.282	-.378
ELECTRICITY	Bharat Heavy Electricals Ltd	-.344	.448	.323	.427	-.697*	.342
	ABB Ltd	.205	.820*	.205	.496*	-.522	-.883*
	Siemens Ltd	-.305	-.101	-.228	-.217	.457	.122
	Bharat Electronics Ltd	-.316	-.102	.288	.353	-.218	-.493
	Videocon Industries Ltd	-.821*	.357	.282	-.246	.261	.242
	Crompton Greves Ltd	.361	.346	.303	-.324	-.231	.408
	Areva T & D India Ltd	-.117	.432	.366	.221	-.428	-.324
	Asian Electronics Ltd	-.488	-.211	.331	-.205	.192	.339
	Bharat Bijlee Ltd	-.080	.172	.253	.126	.306	-.678*
	EMCO Ltd	-.236	.382	.275	.175	.382	.129
	Voltamp Transformers Ltd	-.319	-.315	-.361	-.378	.677*	-.380
	Havells India Ltd	-.176	.042	.005	-.065	-.687*	.457
ENGINEERING	Cummins India Ltd	-.130	.449	.880*	.476	.496	-.698*
	Alstom Projects India Ltd	-.481	.556	.766*	.233	.306	.224
	BEML Ltd	-.130	.439	.268	.682*	.347	-.880*
	Kirloskar Oil Engines Ltd	-.179	.327	-.891*	.259	-.763*	.166
	Alfa-Laval (India) Ltd	-.250	.044	.423	.335	.761*	-.329
	Texmaco Ltd	-.006	.430	.770*	.015	-.574	.268
	Reliance Industrial Infrastructure Ltd	-.032	.893**	-.204	-.799*	.093	.386
	Sanghvi Movers Ltd	.128	.371	.178	.257	.512	-.442
	Walchandnagar Industries Ltd	.247	.599	.368	.231	-.655*	-.434
	Kennametal India Ltd	-.318	.415	.444	.343	-.344	-.383

Continued.......

Sector	Name of the companies	Leverage	Size	Growth	Profit	Liquid	Dividend
STEEL	Steel Authority of India ltd	-.446	.780*	.277	-.175	.668*	.465
	Tata Steel Ltd	-.436	.101	-.425	.227	-.112	-.337
	Jindal Steel & Power Ltd	-.449	.118	.522	.301	-.058	-.291
	Maharashtra Seamless Ltd	.284	.411	.034	-.219	.290	.206
	Easar Steel Ltd	-.117	.322	.266	.390	.495	.147
	WelspunGujrat Stahl Rohren Ltd	.299	.028	.395	-.261	-.594	-.331
	Jindal Saw Ltd	-.376	-.474	.360	-.380	.258	-.230
	Bhushan Steel Ltd	.186	.475	.265	.899*	.366	.111
	Jindal Stainless Ltd	.224	-.354	.206	.245	-.694*	.028
	Kalyani Steels Ltd	-.129	.279	-.278	.391	-.487	-.354
	Usha Martin Ltd	-.875*	.734*	-.276	.137	-.494	.080
	PSL Ltd	-.891*	-.259	-.880*	-.694*	.682*	.570*
	Monnet Ispat Energy Ltd	.247	.080	.437	.799*	.131	.020
	Ratnamani Metals & Tubes Ltd	.270	.345	-.389	.276	.665*	-.203
	Man Industries (India) Ltd	-.176	.468	.227	-.341	.466	-.336
AUTO	Motor Industries Company Ltd	-.338	-.223	.763*	-.389	-.799*	.364
	Amtek Auto Ltd	-.286	-.336	-.310	.311	-.512	.239
	Exide Industries Ltd	-.436	.422	.445	.356	.799*	-.373
	MothersonSumi Systems Ltd	-.200	.369	.098	.248	630	-.187
	Tata Motors Ltd	-.169	-.167	.161	.222	-.359	.042
	Maruti Suzuki India Ltd	.402	-.382	.096	-.796*	-.467	.245
	Bajaj Auto Ltd	-.156	-.282	-.478	-.234	.200	-.104
	Mahindra & Mahindra Ltd	-.176	-.337	-.340	.319	-.797*	-.311
	Hero Honda Motors Ltd	.201	-.214	.264	.180	-.795*	.046
	Amtek India Ltd	-.435	-.440	-.253	-.299	-.779*	.145
	Sundaram Clayton Ltd	.089	-.163	-.440	-.010	-.791*	-.312
	TVS Motor Company Ltd	-.132	-.175	.899*	.684*	.209	-.426
	Bosch Ltd	.138	-.109	.216	.698*	-.590	-.008
CHEMICAL	Godej Industries Ltd	.381	-.332	-.262	.202	.698*	-.190
	United Phosphorus Ltd	-.446	.003	.039	.235	.455	.137
	Tata Chemicals Ltd	-.327	.899*	.342	.382	.539	.682**
	Jubilant Organosys Ltd	-.121	-.408	.407	.240	-.438	.156
	Sterling Biotech Ltd	-.192	-.575	.233	.236	-.630	-.333
	Pidlite Industries Ltd	.211	.280	.076	-.133	-.538	.208
	Castrol India Ltd	.212	-.669*	.481	.310	-.799*	.354
	Rashtriya Chemicals &	.109	.488	-.185	-.308	-.040	-.101

Continued…….

Sector	Name of the companies	Leverage	Size	Growth	Profit	Liqui	Dividend
	Emani Ltd	.057	.472	-.009	-.389	-.639	-.162
	Gillette Company Ltd	-.223	-.793*	.413	-.794*	-.518	.696*
F	IL & FS Investment Managers Ltd	-.216	-.446	.410	.461	-.539	-.872**
I	Cholamandalam DBS Finance Ltd	.012	-.432	.486	.448	-.299	-.896**
N	Geojit Financial Services Ltd	-.392	-.277	-.491	-.462	-.330	-.782*
&	Shriram City Union Finance Ltd	.169	-.880**	-.684*	.113	.225	.193
I	SREI Inffrastructure Finance Ltd	-.361	.187	-.140	-.436	.241	.091
N	Sundaram Finance Ltd	-.240	-.363	.798*	.156	.460	.131
V	Bajaj Auto Finance Ltd	.331	-.459	.294	.476*	.507	-.102
	Reliance Capital Ltd	.245	-.431	-.396	-.401	.882*	.130
	Infrastructure Development Finance Company Ltd	.088	-.121	.160	.241	-.284	-.127
	Shriram Transport Finance Company Ltd	-.269	-.374	-.866*	.278	-.233	.105
D	Grasim Industries Ltd	-.332	-.166	-.257	.030	-.281	-.228
I V	Century Textile & Industries Ltd	-.251	.203	.882**	.195	-.428	-.168
E R	Voltas Ltd	.252	.304	.779**	.195	-.428	-.168
S	Sintex Industries Ltd	-.213	-.171	.439	-.013	-.535	.423
I F	Kesoram Industries Ltd	.183	.491	.450	.245	.678*	-.359
I	Nava Bharat Ventures Ltd	-.451	.386	.257	.233	.466	.290
E	NESCO Ltd	.169	-.798*	.069	.379	-.429	.353
D	BalmarLawrie& Company Ltd	-.678*	-.330	.465	.821*	-.598	.204
	Prakash Industries Ltd	-.217	-.296	-.502	.249	-.443	-.351
	DCM Shriram Consolidated Ltd	-.339	-.378	-.026	-.258	.443	-.339

** indicates 'r' is significant at 1% level and * indicates 'r' is significant at 5% level

Findings

(i) In all most all cases it is seen that there is a negative relationship between cost of capital and leverage but in few cases the value of correlation is statistically significant. Negative relationship implies with the increase of leverage cost of capital decreasing and statistically not significant suggesting that the value of debt capital is moderately increasing.

(ii) In general, with the increase of volume of capital over the years, cost of capital tends to decrease because of the expansion of the business. But a positive relationship is seen in case of companies like Hindustan Zinc Ltd (.622), Unitech Ltd (.689), Birla Corporation Ltd (.788), ABB Ltd (.820), Reliance Industrial Infrastructure Ltd (.893), Steel Authority of India Ltd (.780), Usha Martin Ltd (.734), Tata Chemicals Ltd (.899), Gujrat Narmada Valley Fertilizers Company Ltd (.766) which signifies that with the increase volume of capital over the years the companies' cost of capital also increasing. The reason of positive correlation is attributed to companies' inability to mobilize the funds from proper sources leading to minimizing the cost of capital.

(iii) A significant negative relationship between growths of profit and cost of capital is seen in the case of companies like Ipca Laboratories Ltd (-.696), Kirloskar Oil Engines Ltd (-.891), PSL Ltd (-.880), Shriram City Union Finance Ltd (-.684), Sriram Transport Company Ltd (-.866). The negative relationship is established that growth of the profit is significant factor for minimizing the cost of capital of the companies. On the other hand a significant positive relationship is observed in case of the companies like Cummins India Ltd (.880), Alstom Projects India Ltd (.766), Texmaco Ltd (.770), Motor Industries Company Ltd (.763), TVS Motor Company Ltd (.899), Bombay Dying and Manufacturing Ltd (.671), Sundaram Finance Ltd (.798), Century Textile and Industries Ltd (.882), Voltas Ltd (.779). This implies that although over the years the growth of profit was increasing but companies are unable to take the advantage of the factors related to the positive growth rate in mobilizing the fund from the market. This signifies that particularly for these companies; the growth factor is not influencing to reduce the cost of capital.

(iv) Statistically significant and positive correlation between cost of capital and Profitability is found in case of sample companies; 3i Infotech Ltd (.699), Unitech Ltd (.797), Dishman Pharmaceuticals and Chemicals Ltd (.599), ACC Ltd (.686), JK Laxhmi Cement Ltd (.799), Ultra (.697), ABB Ltd (.496), BEML Ltd (.682), Bajaj Auto Finance Ltd (.476), BalmerLawrie& Company Ltd (.682), Bhushan Steel Ltd (,899), Monnet Ispat Energy Ltd (.799), TVS Motor Company Ltd (.684), Bosch Ltd (.689), Gulf Oil Corporation Ltd (.688), Marico Ltd (.677), Procter and Gamble Hygine& Health Care Ltd (.698). It implies either with the increase of cost of capital, companies' profitability is increasing or with the decrease of cost of capital over the years profitability is decreasing. In case of increase of cost of capital with the growth of profitability, the companies are not in a position to take due advantages of profitability at the time of raising the capital from different source of finance. Where as, decrease of cost of capital with the fall of profitability implies that companies' effort towards minimizing the cost of capital does not help to improve the pace of profitability. In other words, there are other qualitative and quantitative factors besides cost of capital for strengthening the profitability position of the companies.

On the other hand, significant negative relationship between the profitability and cost of capital observed in case of Bharat petroleum Corporation Ltd (-.666), HCL Technologies Ltd (-.805), Moser Baer (India) Ltd (-.772), DLF Ltd (-.656), Jaiprakash Associates Ltd (-.822), Reliance Industrial Infrastructure Ltd (-.7990, PSL Ltd (-.694), Maruti Suzuki India Ltd (-.796), Gillette Company Ltd (-.794). Negative relationship suggests that increase in cost of capital is associated with the decrease of profitability or vice-versa signifying that either because of increasing cost of capital, profitability of the companies decreasing or decrease of cost of capital improves the profitability position of the company.

(v) A positive and statistically significant relationship between liquidity and cost of capital is seen in case of Bharat Petroleum Corporation Ltd (.710), Unitech Ltd (.795), Mahindra Life Space Developers Ltd (.682), Dr. Reddy's Laboratories Ltd (.697), Pfizer Ltd (.681), ACC Ltd (.695), Voltamp Transformers Ltd (.677),Alfa-Labal (India) Ltd (.761),Steel Authority of India Ltd (.688), PSL Ltd (.682), Ratanmani Metals and Tubes Ltd (.665), Exide Industries Ltd (.799), Godrej Industries Ltd (.698), Reliance Capital Ltd (.882), Kesoram Industries Ltd (.678). This implies either with the increase of liquidity, cost of capital is increasing or with the decrease of liquidity cost of capital is decreasing. In other words, higher degree of solvency affects in increasing in cost of capital. The reverse case was noticed in case of company like Sesa Goa Ltd (-.781), Moser Baer (India) Ltd (-.812), Geometric Ltd (-.768), Gammon India Ltd (-.898), Hindustan Construction Company Ltd (-.654), Cipla Ltd (-.681), Glenmark Pharmaceuticals Ltd (.697), Lupin Ltd (-.693), AurobindoPharma Ltd (-.680), Amulya Cements Ltd (-.696), Birla Corporation Ltd (-.687), Bharat Heavy Electrical Ltd (-.697), Havells India Ltd (-.687), Kirloskar Oil Engine Ltd (-.763), Walchandnagar Industries Ltd (-.655), Jindal Stainless Ltd (-.694), Motor Industries Company Ltd (-.799), Mahindra & Mahindra Ltd (-.797), Hero Honda Motors Ltd (-.795), Amtek India Ltd (-.779), Sundaram Clayton Ltd (-.791), Castrol India Ltd (-.799), Gujrat Narmada Valley Fertilizers Company Ltd (-.698), Marico Ltd (-.795), Godrej Consumers product Ltd (-.880). Higher degree of liquidity means companies are less risky from the point of view of investors and such solvency enables the company to raise capital from the market at cheaper cost.

(vi) Dividend payout is significantly and positively related with the cost of capital and the relationship seen in case of Bharat Petroleum Corporation Ltd (.863), Shree Cements Ltd (.674), Madras Cement Ltd (.880), PSL Ltd (.570), Tata Chemicals Ltd (.682), Gillete Company Ltd (.696).On the other hand, a negative relationship observed in the companies like Sterlite Industries (India) Ltd (-.893), Sesa Goa Ltd (-.795), Moser Baer (India) Ltd (-.799), Igate Global Solutions Ltd (-.685), BLF Ltd (-.696), Dishman Pharmaceuticals Chemical Ltd (-.683), ACC Ltd (-.791), ABB Ltd (-.883), Bharat Bijlee Ltd (-.678), Cummins India Ltd (-.698), BEML Ltd (-.880), IL (-872), Cholamandalam DBS Finance Ltd (-.896), Geojit Financial Services Ltd (-.782). Thus, dividend pay out has no significant impact on the cost of capital.

Major Findings of the study

The correlation coefficient between *WACC* and size (0.366), *leverage* (-.320), and *profitability* (-.355), are found to be statistically significant at 5% level. This implies that *size, leverage and profitability* are affected by overall Cost of capital of the companies.

In IT, Construction, Cement, Auto, personal Care and Finance & Investment sector profitability is found to be positively related with *WACC*. The reasons of such relationship can be attributed to the growth of *EBIT* of the companies irrespective of growth of capital structure, efficient utilization of capital to expedite the pace of growth of bottom-line. Thus growing firms and firms with perennial demand do not bother much about WACC; rather they concentrate on expanding the business opportunities.

The econometric analysis reveals that, leverage becomes one of the major influential factors of the cost of capital. Except Construction, Electricity, Engineering, Steel, Auto, Personal Care and Financial Service, it has been seen that leverage is negatively related to the cost of capital and statistically significant. It signifies the cost of capital has declined with significant increase of debt capital in the capital structure. The sectors like Construction, Electricity, Steel, Auto group are found to be highly geared company even in some cases borrowed capital are double to equity capital in the capital structure. On the other hand, the sectors like Engineering and personal care are maintaining low level of borrowed capital in the capital structure showing no affect on cost of capital. It implies capital structure decision plays an important role for minimizing overall cost of capital of the companies. But the companies must have to maintain optimum level of capital structure (debt-equity mix) based on its nature and risk zone where it operates. The statistically significant value of “F” at 5% level of significance indicates the regression equation is significant. While, value of R^{2}, indicates the extents of influence of independent variables on dependent variables, WACC. In aggregate term, it is observed that regression is significant. However, independent variables explain variation only 45% (R^2 = .452) of dependent variable. Thus WACC is not significantly affected by financial performance of the firms as far as sample is concerned. Only, size (β =3.65) has positive while leverage (β = -0.108) and profitability (β = -0.490) has negative impact on WACC. However, such interpretation differs in case of individual sector. Thus WACC is firms specific. The factors mainly qualitative are; business risk, financial risk, management risks appetite and fiscal policy as a whole. Similar views were expressed by (K.B. Hari: 2006) that Indian large firms are not using resources effectively in comparison to their smaller counterparts even not taking advantage of cheaper funds available over the years.

In aggregate terms, relationship between *size of the companies and WACC* (β = 3.65) indicates with the increase of size of the companies cost of capital is also increasing as far our sample is concerned. The statistical result shows that size of the companies is not significantly influenced the overall cost of capital of the companies while analyzing the *cause-effect* relationship within industrial group. The regression coefficient value of size of the companies under the sample industrial group excluding construction, pharmaceuticals, chemical and diversified signifies that with the increase of size the company's cost of capital are declining. Where as, in case of the industry like construction, pharmaceuticals, chemical and diversified group a positive relationship has been seen between WACC and size of the companies. This implies that the companies under these sectors do not give attention much on the increasing trend of WACC.

As far as sample is concerned no significant relationship has been observed between *WACC and growth* of the companies since the regression coefficient value of growth is not statistically significant.But, in the diversified sector, it is found that the correlation coefficient between growth and WACC is -.511and statistically also significant. Further, the beta value (-.576) found to be statistically significant implying, there is negative impact of growth of companies on WACC i,e with one unit of change of growth component the cost of capital (WACC) will be declined by .576 unit.

The regression analysis indicates that the beta value of dividend is negative in the case of IT (β = -0.581) and positive in case of financial service sector (β = .601). This implies that dividend has emerged as significant factor in the cost of capital.

The aggregate result suggests that there exists a relationship between WACC and profitability of the companies. The profitability of the companies (β = -0.490) has negative impact on overall cost of capital and the relationship is statistically significant at 5% level. Furthermore, the value of F = 1.334 statistically significant at 5% level implying that the regression equation is also significant. The relationship shows that as far as sample is concerned, with the increase of profitability of the companies, the overall cost of capital will automatically fall. The similar statistically significant and negative influence was observed between the cost of capital and profitability in case of energy (β = -0.267), electricity (β = -0.669) , engineering (β =-0 .443) and chemical (β = -0.987) respectively.

VII. Conclusion

The change of cost of capital affects the company's profitability position. Again, the higher cost of capital adversely affects the profitability position of the companies. The comparatively big companies should therefore give proper emphasize on this aspect while procuring the funds. There are insufficient evidences to deny the fact that the cost of capital has no relationship or no affect on companies' performance like companies growth, liquidity, dividend pay out although the relationship is industry specific. Similarly, cost of capital is not only influenced by only capital structure decision but also influenced by host of factors depending on nature of business as well business environment.

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Consumer Perception And Brand Loyalty: An Empirical Study Of Smartphones In India

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ABSTRACT

In the present macro-environment of increasing global competition, rapid introduction of innovative products, on one hand, and maturity conditions in some markets, on the other, the task of managing loyalty is becoming focal managerial challenge. The marketers have to focus on developing, maintaining and enhancing loyalty towards their brand of product or service. The loyalty of the customers towards the brand is a strategic construct for the organization and creates long term competitive advantage. The brand also represents the organization in the market and makes an association in the minds of the consumers. The brand loyalty however is influenced by several factors. These include recognition of the brand, consumers' association with the brand, perception about brand image and brand trust. The objective of present research is to study the influence of brand recognition, brand association, brand image and brand trust on brand loyalty of smartphones in Indian market. The questionnaire for the study was developed after in-depth review of literature. The instrument was evaluated for reliability and the data was collected via self-administered, structured undisguised questionnaire. The results of statistical analysis show that brand association, brand trust, brand recognition and brand image influence brand loyalty towards smartphones.

Key Words: Brand Loyalty, Brand Image, Brand Recognition, Brand Trust, Brand association, Smartphones

INTRODUCTION

The firms create brands for providing an identity to their products and services. The brands represent the organization in the market and association in the minds of customers. American Marketing Association (AMA) defines brand as a name, term, sign, symbol or design, or a combination of these, intended to identify the goods or services of one seller or a group of sellers and to differentiate them from those of competitors. The brand may be a product, service, shop, famous personality, place, organization or idea (Keller, 2003). It can also be a "set of expectations and perceptions that rose from the experience of the product or the organization" (Davis, 2002). The brand enhances the capital value of the organization and trust in the product, leading to stronger customer preference when making a choice. Effective brand management is essential for achieving overall company goals of satisfaction, loyalty, and profitability.

The globalization of markets and consumers presents a dynamic and very challenging environment to businesses today. The marketers not just have to attract the prospective customers but also strive to keep the existing set. The thrust of the marketing activities of firms thus revolves around developing, maintaining and enhancing customer loyalty toward their products or services. The task of creating and managing loyalty is emerging as a focal managerial challenge. Brand loyalty provides sustainable advantage to busineses and is very crucial for the survival and continuity of the organization. The brand-loyal consumers provide several opportunities to the organization including repeat purchases, increasing association – by increasing the quantum of purchase or procuring new products, by conveying positive feedback to others, etc. The brand loyal consumers may be willing to pay more for the brand. Brand loyalty hence leads to greater market share when the same brand is repeatedly purchased by loyal consumers.

The brand provides differentiation to the products and services and loyalty towards the brand provides sustainable advantage. However, there are certain features of the brand which may influence consumers' perception (brand image). The consumers' perception in turn positively or negatively influences customer loyalty. These brand attributes include recognition of the brand, consumers' association with the brand, the perceived quality about the products offered by the brand leading to trust and an overall image about the brand. The consumers recognize established brands, associate with them and they trust the products or services offered by them. Supported by the above rationale, this paper is designed to carry out an empirical study with the core objective of investigating the influence of brand recognition, brand association, brand image and brand trust on brand loyalty of smartphones in Indian market. The subsequent sections of this empirical paper are arranged in the following manner –Literature Review; Need for the present study; Methodology; Data Analysis, Interpretation and Discussion of the Findings; Managerial Implications and Limitations and Directions for Future Research.

LITERATURE REVIEW

The brand plays a vital role in the process of customer preference and choice of products. A famous brand can spread the benefits of the product and lead to delivery of information related to these benefits more than uncommon brands (Keller, 1993). Although there are a lot of unfamiliar brands in the market, customers prefer famous and known brands. A preferential famous brand, is not only attractive for customer to buy the product, but also brings the behavior of repetitive purchase and reduces the behavior resulting from the price volatility (Cadogan and Foster, 2000). In addition, brand allows the development of the product identity (Kohli and Thakor, 2000). In sum, brand is important for a company because it helps the organization attract customers to buy the product, influences the customer behavior and encourages him or her to repeat the purchase process.

Branding efforts create a feeling of involvement, a sense of higher quality, and an aura of intangible qualities that surround the brand name, mark, or symbol (Aaker, 1991). Brand awareness refers to the strength of a brand's presence in the consumer's mind" (Aaker, 1996). It is a measure of the percentage of the target market that is aware of a brand. Marketers can create awareness among their target audience through repetitive advertising and publicity (Stryfom et al., 1995). Brand awareness can provide a host of competitive advantages for the marketer including - sense of familiarity; sign of presence, commitment and substance; recall at during purchase process; inordinately durable and sustainable asset, etc.It may be extremely difficult to dislodge a brand that had achieved a dominant awareness level (Aaker, 1996). Brand equity is initially built on the foundation of brand awareness — eventually forming positive brand images — and is ultimately maximized by high levels of brand loyalty. Kotler (2001) defined image as "the set of beliefs, ideas, and impression that a person holds regarding an object". Keller (1993) considered brand image as "a set of perceptions about a brand as reflected by brand associations in consumer's memory". Aaker defined brand image as "a set of associations, usually organized in some meaningful way". Biel (1992) defined brand image as "a cluster of attributes and associations that consumers connect to the brand name". It is thus noteworthy to study the influence of brand image on brand loyalty. Vazquez-Carrasco and Foxall (2006) in their studies found that relation benefits which consisted of social, confidence and special treatment benefit have a direct influence on passive loyalty.

The more the realization of the brand by customer, the more is the possibility for the growth of trust relationship and powerful positive attitudes towards the brand. Trust can be defined as a consumer's confident beliefs that he or she can rely on the seller to deliver promised services, whereas a relational value can be defined as consumer's perceptions of the benefits enjoyed versus the cost incurred in the maintenance of an ongoing exchange relationship (Agustin and Singh, 2005). Barney and Hansen (1994) suggested that trust is the mutual confidence that no party in an exchange will exploit another's vulnerability. Morgan and Hunt (1994) suggested that trust exists "when one party has confidence in an exchange partner's reliability and integrity." Trustworthy parties are associated with qualities such as honesty, benevolence, fairness, responsibility, and helpfulness. Consumers develop trust in a brand based on positive beliefs regarding their expectation for the behavior of the organization and the performance of products a brand represents (Ashley and Leonard, 2009). The dimension of brand trust may include : "I trust this brand," "I rely on this brand,""This is an honest brand," "This brand meets my expectations," and "This brand is safe" (Chaudhuri, and Holbrook, 2001)

The marketing literature proposes many definitions of brand loyalty and majority of these definitions are based on measurement of loyalty. Traditionally, brand loyalty research has used various behavioral measures including proportion of, purchase sequence, and probability of purchase (Dick and Basu, 1996). Jacoby and Chestnut (1978) criticized these behavioral measures for lacking conceptual basis and capturing only the static outcome of a dynamic process like loyalty. These definitions make no attempt to understand the factors underlying repeat purchase. High repeat purchase may reflect situational constraints, such as brands stocked by retailers, whereas low repeat purchase may simply indicate different usage situations, variety seeking, or lack of brand preferences within a buying unit. The behavioral definitions, consequently, are insufficient to explain how and why brand loyalty is developed and/or modified. Day (1969) viewed brand loyalty as consisting of repeated purchases prompted by a strong internal disposition. Thus attention is drawn to characteristics of an individual's attitude and conditions that lead to attitude congruent purchase behavior in conceptualizing loyalty. Oliver (1999) defined customer's loyalty as "a deep held commitment to repurchase or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts that have the potential to cause switching behavior". From the review of literature it is clearly understood that it is extremely vital for organizations to create brands. The features of the brand that influence attraction and retention of the consumers include – brand recognition, brand association, brand image and brand trust. The retention of the consumers is defined as customer loyalty and hence this study endeavours to study the influence of brand recognition, brand association, brand image and brand trust on customer loyalty. He main objectives of the study were:

1. To study the present market scenario for smart phones in India
2. To study the consumers' perception about the smart phones owned by them
3. To study the influence of brand recognition, brand association, brand image and brand trust on customer loyalty towards smart phones owned by them.

NEED FOR THE STUDY

Simon Personal Communicator, often touted as the first smart phone, was introduced in 1994 by IBM and BellSouth. With introduction of Black Berry in 2002 this category became popular, amassing huge audience over the years. A smart phone may be defined as 'a cellular telephone with built-in applications and Internet access'. Smartp hones provide digital voice service as well as text messaging, e-mail, web browsing, still and video cameras, MP3 player, video viewing and often video calling. In addition to their built-in functions, smart phones can run many applications. The Convergence Catalyst estimated that between 9 Million to 9.5Million smartphones were sold in India in 2011. They also estimate that smartphone sales are likely to grow 100% in 2012. This is primarily due to multiple factors including availability of devices across price points and availability of multiple handset brands and models promoted with a strong marketing push. The share of smartphones is expected to be 12% to 14% of total mobile handset sales in 2012. Considering the strong growth prospects of this category the present research work, endeavors to understand consumers' perception about the smartphones, their association with the brand owned and finally the influence of brand recognition, brand image and brand trust on brand loyalty.

METHODOLOGY

Sampling Method - The questionnaire was administered to postgraduate students enrolled in a private university. The technique used was random sampling. A total of 107 complete questionnaires (complete in all respects) were obtained. The reasons for obtaining feedback from the postgraduate students were easy accessibility, budget constraints and quality responses. The demographic data was obtained to generate a profile of the respondents.

Instrument Design and Data Collection - A structured non-disguised questionnaire was prepared. The questionnaire consisted of three parts. The first part of the questionnaire contained questions relating to ownership of smartphones, preference for specific brands etc. and the second part of the questionnaire contained questions relating to brand image, brand recognition, brand trust and brand loyalty. The third part of the questionnaire contained questions related to demographic characteristics.

DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULTS

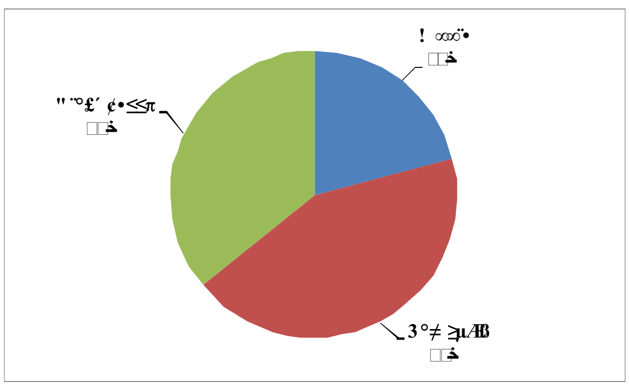
The demographic profile of the respondents is presented in Table 1. About 61 per cent of the respondents were males, 43 per cent of males were between 22 years and 28 years old and 49 per cent of them had an annual household income in the range of Rs 4 to 8 Lakhs. 43 percent females were in the age group of 22 years to 25 years and 43 percent females had an annual household income between Rs. 8 to 12 lakhs. Also, as mentioned earlier the data was collected from postgraduate students of management enrolled in a private university. The majority of the respondents were professional graduate with B.E./ B.Tech. being their highest educational qualification.

Table 1: Demographic Profile of the Respondents

	Gender	Male	Female
	Total respondents	65	42
Age profile	18 – 22 Years	26%	33%
	22 – 25 Years	17%	43%
	25 – 28 Years	26%	19%
	28 – 32 Years	19%	5%
	Above 32 Years	12%	-
Annual Household Income	Upto 4 Lakhs	19%	2%
	4 to 8 Lakhs	49%	31%
	8 to 12 Lakhs	15%	43%
	12 Lakhs and above	17%	24%

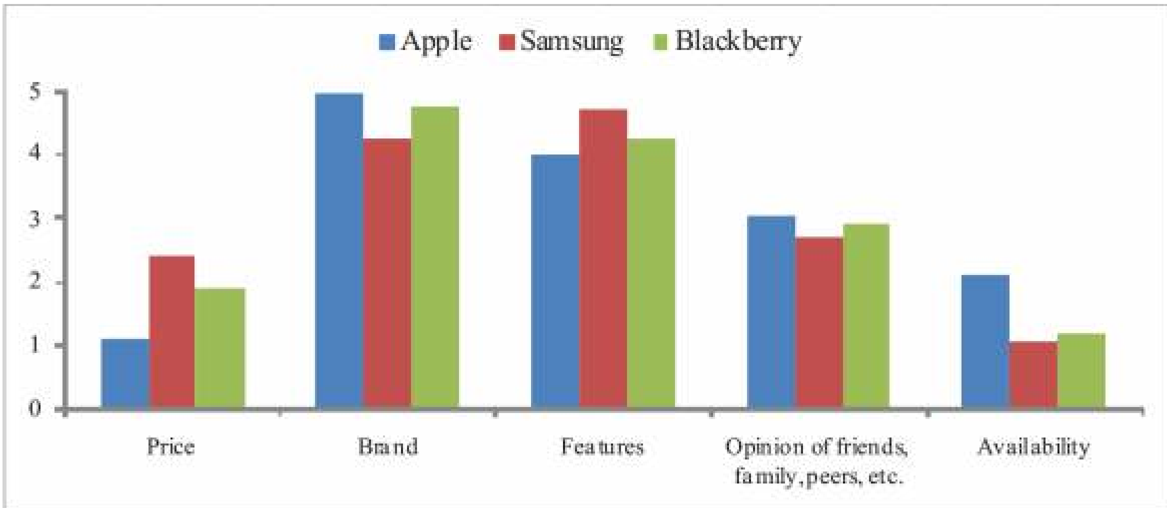
This study focused on the perception of smartphone users. A filter question was used to identify the respondents. The respondents were owners of smartphones. The total number of complete questionnaires obtained was 107. The respondents' brand ownership of smartphones is presented in Figure 1. Among the total 107 owners, 43 percent owned Samsung, 36 percent owned Blackberry and 21 percent owned Apple.

Figure 1: Brand Ownership of Smartphone



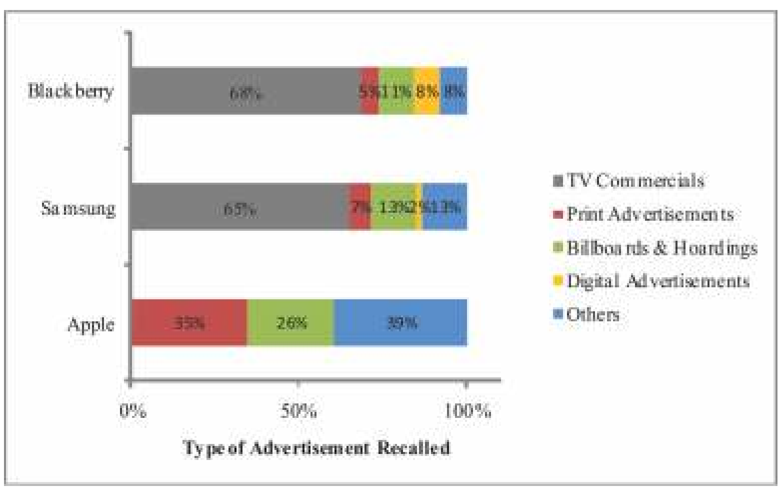
It is interesting for marketers to know why the owners prefer their brand over the others. Figure 2 presents data regarding smartphone owned and reasons for preference. The reasons highlighted by Apple owners in order of importance are – brand, features, opinion of reference group, availability and price. Similarly, Samsung users suggest that features of the smartphone is the most important reason for preferring this product followed by brand, opinion of reference group, price and finally availability. Blackberry users cite that the reasons for using this smartphone include – brand, features, opinion of reference group, price and finally availability. Though Apple is perceived to be an established brand yet availability is a concern. In case of Samsung features of the product and the price contribute to buying the smartphone.

Figure 2: Brand Owned and Reasons for Preference



The respondents were asked to recall the medium in which they had seen the advertisement of the brand owned. The results are presented in Figure 3. Blackberry's TV commercial had maximum recall followed by Samsung. The respondents suggested that they had seen advertisement of Apple in print media and on billboards and hoardings.

Figure 3: Medium of Advertisement



The review of marketing literature suggests that if the customers perceive strong association with the brand they are also likely to own the same. Hence the hypothesis may be written as follows:

H_0: There is no relation between perceived association with the brand and brand ownership.

H_A: There is positive relation between perceived association with the brand and brand ownership.

The results of Chi-square test are presented in Table 2 and Table 3 below.

Table 2: Relationship between Perceived Association with the Brand and Brand Owned

		Perceived Association with Brand			Total
		Apple	Samsung	Blackberry	
Brand Owned	Apple	23			23
	Samsung	13	17	16	46
	Blackberry	7	3	28	38
	Total	43	20	44	107

Table 3: Chi-Square Tests

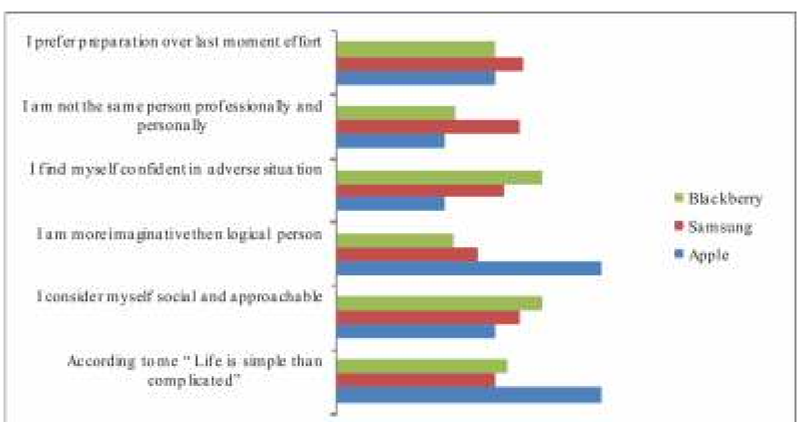
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	61.168[a]	4	.000
Likelihood Ratio	67.171	4	.000
Linear-by-Linear Association	39.799	1	.000
N of Valid Cases	107		

a. 1 cells (11.1%) have expected count less than 5. The minimum expected count is 4.30.

The results of Chi-square test are significant at 95% level of confidence, indicating that we can reject the null hypothesis and accept the alternative hypothesis. Hence there is a strong positive relationship between the perceived association with the brand and brand owned.

We further tried to find out the reasons for perceived association with the brand. The questionnaire had statements based on the positioning of the smartphones by the companies. The respondents were asked to rate the statements. The results are presented in Figure 4.

Figure 4: Positioning of Smartphones



The positioning of the brands can be gauged from Figure 4. It is observed that Apple users believe that the brand makes their day to day activities simple and also provides imaginative solutions. The Blackberry users feel that the device helps them maintain social presence and makes others approachable. It is also believed to be associated with confident and go getter professionals. The respondents feel that Samsung provides greatest use for prepared perfectionist minds.

We further tried to examine the association between attitudinal statements on brand recognition, brand image, brand trust and brand loyalty. The reliability statistics related to the attitudinal statements is presented in Table 4. The value of Cronbach's alpha indicates high degree of reliability of the attitudinal statements used in the present research.

Table 4: Reliability Statistics

Cronbach's Alpha	N of Items
.893	14

From the review of literature it can be hypothesized that:
H_{01}: The recognition of the brand has no influences on brand loyalty.
H_{A1}: The recognition of the brand positively influences brand loyalty.

Chi-square tests were done and the results are presented in Table 5.

Table 5: Relationship between Brand Recognition and Brand Loyalty

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	303.674	36	.000
Likelihood Ratio	212.148	36	.000
Linear-by-Linear Association	26.896	1	.000
N of Valid Cases	107		

Table 5 clearly indicates that brand recognition by the customers is associated with brand loyalty and it positively influences brand loyalty. Hence we reject the null hypothesis and accept the alternative hypothesis. The result is significant at 95% level of confidence.
H_{02}: Positive perception about brand image does not positively influence brand loyalty.
H_{A2}: Positive perception about brand image positively influences brand loyalty.
Chi-square tests were done and the results are presented in Table 6.

Table 6: Relationship between Brand Image and Brand Loyalty

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	248.496	42	.000
Likelihood Ratio	205.472	42	.000
Linear-by-Linear Association	30.925	1	.000
N of Valid Cases	107		

Table 6 clearly indicates that positive perception about brand image by the customers influences brand loyalty positively. Hence we reject the null hypothesis and accept the alternative hypothesis. The result is significant at 95% level of confidence.

H_{03}: The trust of consumers in a brand does not positively influence brand loyalty.
H_{A3}: The trust of consumers in a brand positively influences brand loyalty.

Chi-square tests were done and the results are presented in Table 7.

Table 7: Relationship between Brand Trust and Brand Loyalty

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	202.545	48	.000
Likelihood Ratio	179.531	48	.000
Linear-by-Linear Association	40.698	1	.000
N of Valid Cases	107		

Table 7 clearly indicates that consumers' trust in a brand positively influences brand loyalty. Hence we reject the null hypothesis and accept the alternative hypothesis. The result is significant at 95% level of confidence.

MANAGERIAL IMPLICATIONS

Samsung is owned by majority of respondents followed by Blackberry and Apple. This data is similar to the actual ownership statistics provided by the Convergence Catalyst. Samsung is the market leader in this category and sold maximum number of handsets in 2011. Apple users suggest that the reasons to own smartphone were the brand and the features of the product; Samsung users bought the product because of features and price and the Blackberry users felt that the product was good value for money spent. Availability is a concern in case of Apple and Samsung users prefer the product also because of right price perception. Apple was primarily recalled in print advertisements whereas the recall of TV advertisements was high for both Samsung and Blackberry. The results of hypothesis testing regarding brand ownership and perceived association with the brand suggests that customers are likely to own the brand with which they perceive greater level of association. Apple is associated with innovative yet simple solutions. Blackberry is associated with business sophistication and Samsung with perfectionist attitude. The results of hypothesis testing suggest that brand recognition, brand image and brand trust influence loyalty towards the brand. The marketing efforts should be directed to ensure higher product recall, creative positive and elite brand image and also ensure that the consumers trust the products offered by the brand.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The scope of present research is limited to studying the perception of consumers about smartphones in Indian market. Also, this research was conducted only in the North of India and therefore future studies can be conducted in other parts of India to improve the reliability of the study. A detailed study regarding the usage of mobile phones and characteristics that influence brand loyalty could be undertaken by other researchers.

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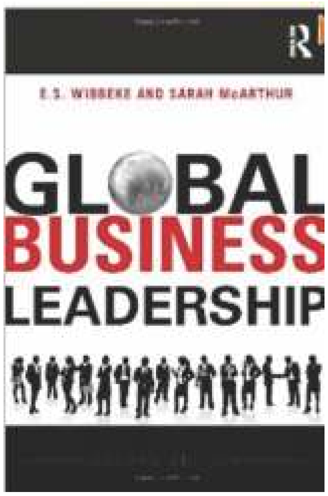
Book Review **M. S. Rao***



Global Business Leadership (second edition)
Sarah McArthur and E. S. Wibbeke's,
Published by Routledge, Oct 2013
304 pp,

(*****_An internationally recognized Leadership guru and prolific writer and speaker on the subject)_

"A hero is born among a hundred, a wise man is found among a thousand, but an accomplished one might not be found even among a hundred thousand men." – Plato

Acclaim about the Book

"A new door has opened for leaders at every level, in every culture, in every sector, in every country. Sarah McArthur and E.S. Wibbeke have opened the door to a powerful new concept of culture and leadership. The authors have delivered a new definition, a new appreciation of the global leadership challenges that lie ahead, with even greater opportunities. Global Business Leadership delivers a powerful new concept of a global workforce and cultural road map." - Frances Hesselbein, President & CEO, The Frances Hesselbein Leadership Institute

What are the Details of the Book?

If you want to acquire enormous knowledge about global leadership, read this book. If you want to explore global leadership from multiple perspectives, read this book. If you want to know various ideas and insights from influential CEOs and management thinkers, read this book. If you want to excel as a global leader, and as a successful CEO, read this book.

What is Inside?

This second edition has been fully updated with a synopsis of the latest changes in the fields of intercultural communication and leadership development. It contains inspiring interviews from esteemed scholars and practitioners who are mostly CEOs. The interview contains a template asking questions where these scholars and practitioners shared their ideas and insights to grow as successful leaders in the current global business environment. It outlines leadership challenges and lessons the leaders must learn from these thought leaders to minimize mistakes and maximize leadership effectiveness and success. In a nutshell, this edition offers as a resource for designing, delivering, and evaluating successful leadership theories and practices to both students and practitioners.

Leadership Lessons from Scholars and Practitioners

First and foremost, a leader has to articulate a vision.

At least 30 percent of a leader's time should be spent on people.

Every global leader needs to develop learning agility, which is the ability to make meaning from their experience.

Great leaders are needed to make organizations thrive in a world characterized by volatility. Uncertainty, Complexity, and Ambiguity (VUCA) described by futurist Bob Johansen in his newly updated book '*Leaders Make the Future*'.

An ability to innovate and align talent does not matter much if you're aligning around the wrong strategies.

Never rest on your laurels. It is critical to practice continuous dissatisfaction, which means taking time to celebrate accomplishments but never getting complacent about them.

Spend enough time on talent acquisition, onboarding, development, and retention.

If you hire the wrong people, you have greatly compromised your ability to execute your strategy now-and compromised the future of the organization. So take the extra time needed to find the right women and men for your key roles and get them on board and then work hard to develop and keep them.

Globalization and other changes create a new business climate, which requires different competencies from leaders. The risk of not becoming competent at leading global organizations and business is a costly failure.

Masculinity stands for a preference for heroism, assertiveness, and material success; femininity stands for a preference for relationships and modesty. Overall, masculine countries strive for a performance society, while feminine countries strive for a well-being society.

Establishing a strong corporate culture is important when you start, but even more important as you grow, with a workforce and customers in many countries.

A successful leader must be open to inputs from around the organization, delegating reasonable levels of authority to those close to the action and who can play the role of first responders.

Every global leader should possess humility. Today, the tasks are huge, the terrain is uncertain, and global leaders face significant challenges of an unpredictable future.

While leadership theories largely agree that there is no one-size-fits all leadership model that can fully prepare a leader for the journey, some do argue that there can be more standardization of leadership practice.

Credibility is the foundation of leadership. If people don't believe in the messenger, they won't believe the message.

Successful global leaders are collaborative and team-oriented.

Leaders need to be sensitive to multi-cultures, not just their own culture, there are universal principles that govern effective leadership across the world.

One quality that has paradoxical consequences for leaders working in intercultural contexts is perspective taking; the ability to empathetically understand someone else's perspective and worldview.

A leader today should accept that occupying a leadership position will never enable any kind of comfort zone.

Dealing with ambiguity calls for a better understanding of the larger environment. It appears that people who are comfortable with higher levels of ambiguity are also more interested and comfortable with contexts that feature diverse groups of people. People with low tolerance for ambiguity, who find themselves in intercultural situations, can make costly mistakes.

Leaders who are able to cope well with situations of high contrast and ambiguity without undue stress also tend to value a diversity of people to challenge and inform their thinking. Conversely, leaders with low tolerance for ambiguity those who prefer the comfort of more stable environments tend to prefer to work with people who are like them.

The most successful societies and people will be those who harness those forces to their benefit, as opposed to resist them by trying to build walls to prevent increased trade or increased exchanges of information or persons or data out of their society.

Leadership, the action of leading a group of people or organization, is a social construct. We construct leader and follower relationships as we interact with each other and the environment to create our future through our visioning and actions in the present. The truth is, everyone is born with potential to lead, and everyone must choose when and where s/he will take the initiative, step forward, and lead.

The capacity to inspire, communicate trust, passion and vision are fundamental ingredients for leadership.

Vision and passion are indispensable to motivate people, to give them a sense of a common goal and willing to give the best of themselves to challenge their own creativity.

Opposition to your ideas as a leader is not necessarily resistance but possible a lack of understanding of how they might play out in someone else's context and culture. If you have the patience to allow others to explore an idea or approach to see how they can make it work, in their environment, you will be much more successful.

Business is a team sport, and you're not going to “win” with a B-grade team. You want to have the best people. So, when hiring people, first we look for the right skill set for the position, and then we look for a series of character core values that define a person's character.

Strive for excellence, but don't push people into a corner.

Understanding and adaptation are the elements business leaders require on an individual and organizational level.

Essential Qualities for Global Leaders

Here are some of the qualities the leaders must possess to excel as global leaders:

If you start something, finish it. Do your work well or don't do it at all.

Acquire the competence to recognize, respect, reconcile, and realize the integration of opposing orientations.

Acquire international experience as a subordinate.

Lead by example not by fiat. He or she must set an example of integrity, of openness to new ideas, of understanding details as well as the larger picture, of communicating well, and of not shooting the messenger when a problem arises but helping find a solution.

Know where and how the organization is headed and how that can be directed both for the general good and for the welfare and success of the organization itself.

Have stamina and endurance for the long haul.

Possess adaptability. To be a successful global leader it's not just about how many degrees you have, how many years of experience you have, or how many awards you have won, it's how adaptable you are as a global leader.

Possess empathy, humility, honesty, integrity, and trustworthiness. Equip with a global mindset.

Possess moral courage. In other words you cannot please everybody, and if you try to you will likely make some very bad calls. Leadership isn't about being liked. It's about doing the right thing. Sometimes it's uncomfortable and not everyone is behind it. But, again, it's not about getting votes; it's about doing the right thing.

Possess a clear vision for the goals that are trying to be achieved and the determination to deliver results. Many organizations go astray because of lack of clarity around what they are really trying to achieve. Without that clarity, resources are not deployed consistent either mission trying to be attained.

Be passionate about what you are doing. If you are going to lead, you have to feel a very strong sense of commitment to your vision and convey this to the people who work for you.

Possess patience. Global leaders who lead across so many different cultures and geographies need to be patient with people from different places doing, thinking, and being differently. It's important for leaders to be patient enough to listen, to learn, and to understand, also very important to be tolerant.

Vision and integrity are the two characteristics that business leaders, political leaders, “movement” leaders, and leaders of any stripe must possess.

Above all, be decisive. Decisiveness is often the difference between success or failure. Even if you make the wrong decision at first, you're more likely to get to the right answer more quickly than if you get stuck in analysis-paralysis.

Challenges for Global Leaders

Here are the biggest challenges the global leaders facing today:

1. Clinging to the status quo. Leaders tend to cling to business models, even more than technology!
2. Don't assume that other people think the same way you do. They don't! Overcoming this mindset is really hard.
3. Development of products without a clear business model around how the technology will be monetized and without a clear path as to how you are solving a customer's problem.
4. Accelerating pace of change and the platform paradigm shift. The pace of change has to be accelerated in the last ten years to understand the Internet that companies are at risk of complete failure to understand their customers and their needs. Digital netizens-those those born in the digital/Internet age have a different set of norms that generations before them.
5. Appreciating that the world is small and getting smaller. Every day there are more ways to connect physically and virtually.
6. Trust in business has been on a steep decline since the beginning of the Great Recession.
7. Overcoming difference in values. Differences in values can create significant misunderstandings.
8. Dealing with very fast change and technological innovations-and keeping up with the complexity of data.
9. Dealing with people, both internally and with customers and clients and the broad range of people who now consider themselves stakeholders in any given organization's business, is being able to meet people's need to feel as if they are part of something that is important, that matters, and that has real consequences in the world. People want to feel that they are part of a joint effort that makes a difference.
10. Decide when to act yourself but also when and where to delegate.
11. There is not enough leadership talent in organizations, and the talent that does exist needs to work more interdependently.
12. Global economic environment is a major challenge. Debt is a significant problem. The expectations are out of kilter with reality. Other challenges include economic decline, uncertainty and sustainability of businesses.

What is the Recommendation?

It is a widely researched book containing lots of references, examples, illustrations, and inspiring interviews from CEOs and thought leaders. It is an inspirational and invaluable resource for all leaders who intend to excel as global leaders, and who are already working as leaders in the global environment. It provides valuable takeaways for global leaders, CEOs, educators, and coaches. Enjoy reading this book!

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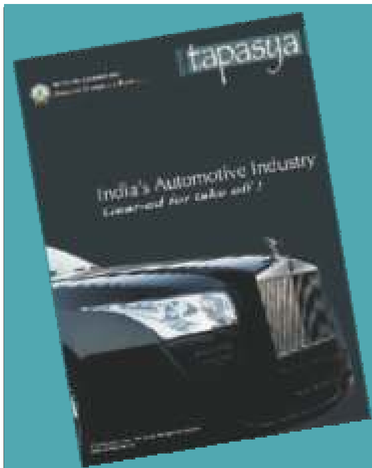

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